Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, Innovation and Technology

# Austrian Plan for Aviation Safety 2024

Volume I – Strategic priorities

Vienna, 2024

### Legal notice

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# 1 Introduction

# **1.1 Overview of the Austrian Plan for Aviation Safety**

Austria is committed to enhancing aviation safety and to the resourcing of supporting activities. The purpose of the Austrian Plan for Aviation Safety (APAS) is to define a strategic direction for the management of aviation safety, identification of national safety issues (NSIs), definition of Austrian aviation safety goals and targets, and to present a series of national safety enhancement initiatives to address identified safety deficiencies and to achieve the Austrian safety goals and targets. A safe aviation system contributes to the economic development of Austria and its industries.

The APAS provides the framework for the proactive management of safety related activities at national level. It promotes the effective implementation of the Austrian Safety Oversight System, a risk-based approach to safety management and a coordinated approach to cooperation between Austria and other States, regions, industries and regional safety oversight organisations (EASA). While Safety Management at the State level is defined in the Austrian Aviation State Safety Programme document, at the aviation industry level this systemic approach is implemented by means of respective Safety Management Systems (SMS). All stakeholders are encouraged to support the implementation of the APAS as the strategy for the continuous improvement of aviation safety in Austria.

Risk management activities at State and industry level result in the identification of such risks, which may impact the Austrian civil aviation safety system. Consequently, suitable safety actions and/or mitigating measures are developed, followed by expert evaluation of their effectivity.

Furthermore, the APAS comprises risks and associated actions/mitigating measures, which are included in the ICAO European Regional Aviation Safety Plan (RASP) and the European Plan for Aviation Safety (EPAS) as Member State Tasks (MST) and Safety Promotion Tasks (SPT), as applicable.

The Austrian Plan for Aviation Safety is in alignment with the ICAO Global Aviation Safety Plan (GASP, Doc 10004), the ICAO Regional Aviation Safety Plan (ICAO EUR RASP) as well as the European Plan for Aviation Safety (EPAS). It is established in conformity with Article 8

of Regulation (EU) 2018/1139, to accompany the Austrian Aviation State Safety Programme (AASSP).

# **1.2** Relationship between GASP, RASP, EPAS and APAS

# 1.2.1 ICAO Global Aviation Safety Plan (GASP)

The Global Aviation Safety Plan<sup>1</sup> (GASP) has been established by the International Civil Aviation Organization (ICAO) in order to support the prioritization and continuous im-provement of aviation safety worldwide. It promotes coordination and collaboration among international, regional and national initiatives aimed at delivering a harmonised, safe and efficient international civil aviation system.

The GASP assists ICAO Member States and regions around the world in their air navigation safety policies, planning and implementation by

- setting out global air navigation safety objectives;
- providing a planning framework, timetable and guidance material for States and regions; and
- outlining implementation strategies and best practice guidance materials.

The GASP requests the establishment of a National Aviation Safety Plan in order to describe the strategic direction for the management of aviation safety at the national level, for a set time period. It outlines to all stakeholders, where the Civil Aviation Authorities (CAAs) and other entities involved in the management of the respective State's aviation safety should allocate resources for the upcoming years.

<sup>&</sup>lt;sup>1</sup> ICAO Doc 10004, Global Aviation Safety Plan

# **1.2.2 ICAO Regional Aviation Safety Plan (RASP)**

The regional aviation safety plan is the master planning document containing the strategic direction for the management of aviation safety at the regional level for a set time period (ICAO EUR Region). It outlines to all stakeholders where the different regional entities involved in the management of aviation safety should target resources over the coming years. RASP is based on GASP and influenced by EPAS.

# 1.2.3 EASP/EPAS

In the European aviation system, rulemaking, safety oversight and safety promotion activities are shared between the EU Member States and the European Institutions. The European Aviation Safety Programme<sup>2</sup> (EASP) describes the roles and responsibilities of the Institutions of the European Union, of the European Union Aviation Safety Agency and of each of the Member States while performing these functions. The European Plan for Aviation Safety (EPAS) is a component of the EASP and provides a framework for safety at the Union level. As an important part of the EPAS, Member State Tasks (MST) are defined and all Member States should strive to implement them.

# 1.2.4 AASSP/APAS

The aim of this Austrian Plan for Aviation Safety (APAS) is to provide a systematic overview of the strategic priorities, identified safety risks and actions and/or mitigating measures taken. The document allows for the effective communication of relevant information to all stakeholders and for joint efforts to improve safety continuously. It outlines safety risks and actions/measures taken pertinent to the year 2023 and before. These actions/measures have been identified together with analyses of safety performance at the national level, taking into account European, regional, and global levels.

The APAS complements the AASSP document in pursuing a strategic perspective with respect to the implementation of Safety Management at both State and industry levels, em-

<sup>&</sup>lt;sup>2</sup> Report from the Commission to the European Parliament and the Council, "The European Aviation Safety Programme", COM(2022) 529 final and COM(2022) 529 final - Annex

phasizing risk-based and performance-based approaches. In this context, Austria is in the process of developing meaningful risk profiles for all relevant industry stakeholders.

Furthermore, the APAS delineates activities, such as safety promotion, aiming at improving safety at the operational level, also considering lessons learnt from occurrences, hazards identification and other available sources.

# **1.3** Relationship between the Austrian Plan for Aviation Safety (APAS) and the Austrian Aviation State Safety Programme (AASSP)

Through an effective State Safety Programme, Austria identifies and mitigates national operational safety risks. The Austrian Aviation State Safety Programme document provides safety information to the Austrian Plan for Aviation Safety. The AASSP allows Austria to manage its aviation activities in a coherent and proactive manner, it measures the safety performance of its civil aviation system, monitors the implementation of the National Safety Issues<sup>3</sup> (NSIs) and addresses any identified hazards and deficiencies. The APAS is one of the key documents produced as part of Austria's Aviation State Safety Programme documentation. Austria defines and drives the implementation of NSIs generated by the Austrian Hazard Identification and Risk Management Process drawn from the GASP, RASP and EPAS by the mean. It also allows Austria to determine initiatives to strengthen its Aviation State Safety Programme or otherwise needed to achieve its safety objectives.

Further information on Austria's State Safety Programme are published in the Austrian Aviation State Safety Programme document, which is available at <u>bmk.gv.at</u>.

# **1.4 Structure of the Austrian Plan for Aviation Safety**

The APAS consist of two Volumes. Volume I presents the strategy for enhancing aviation safety and comprises of the following five chapters:

- Introduction,
- Purpose of the Austrian Plan for Aviation Safety,

<sup>&</sup>lt;sup>3</sup> The National Safety Issues (NSIs) are described in Volume II of the APAS.

- Austria's Strategic Approach to Managing Aviation Safety,
- Safety risks, and
- Monitoring of the Implementation

APAS Volume II contains all Austrian safety actions to enhance safety of the Austrian civil aviation system. These national safety actions are stemming from the European Plan for Aviation Safety, the so called Member State Task (MST), the ICAO Regional Aviation Safety Plan (RASP) for the ICAO EUR Region with its Rulemaking Tasks (RMT) and Safety Promotion Tasks (SPT) and from the Austrian Hazard Identification and Risk Management Process (HIRMP). Volume II is aligned with the structure of EPAS 2023-2025 Volume II and is devided into the following 15 chapters:

- Introduction and Overview
- How the National Safety Actions are defined
- Systemic safety and resilience
- Competence of personnel
- Flight operations aeroplanes
- Flight operations Rotorcraft
- General Aviation
- Design and Production
- Maintenance and Continuing Airworthiness Management
- Air traffic Management/Air Navigation Services (ATM/ANS)
- Aerodromes and Ground Handling
- Unmanned Aircraft Systems and Manned VTOL-capable Aircraft
- New Technologies and Concepts
- Environmental Protection
- Overview of APAS Safety Actions

All Austrian safety actions are assigned to one of the twelve aviation system areas mentioned before. If more than one area is affected by a safety action the action is assigned to that chapter which is mostly affected by the safety action in question.

# **1.5** Responsibility for the Development, Implementation and Monitoring of the Austrian Plan for Aviation Safety

The Austrian Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation, and Technology (BMK) is responsible for the development, implementation, and monitoring of APAS in cooperation with Austro Control GmbH, the Austrian Aero-Club, the Austrian Safety Investigation Authority, the national aviation industry, and other relevant stakeholders.

# **1.6 Operational Context**

The following tables give an overview of the size and complexity of the Austrian aviation industry/system by area, dated December 2023.

Item	Number of Aircraft on an Austrian register
Sailplanes	487
Ultralight aircraft	90
Aircraft below 2000 kg	770
Aircraft from 2000 kg until 5699 kg	123
Aircraft over 5699 kg	469
Rotorcraft	261
Balloon	418
motorised Hang glider	57
motorised Paraglider	164
Total	2.839

Table 1: Aircraft Register

# Table 2: Personal Licences<sup>4</sup>

Item	Number of personal licences issued
Sailplane Pilot Licence	3004
Ultralight Pilot Licence	358
Private Pilot Licence Aeroplane	6754
Commercial Pilot Licence Aeroplane	2877
Airline Transport Pilot Licence Aeroplane	4745
Light Aircraft Pilot Licence Aeroplane	493
Light Aircraft Pilot Licence Helicopter	0
Multi Pilot Licence	116
Private Pilot Licence Helicopter	391
Commercial Pilot Licence Helicopter	556
Airline Transport Pilot Licence Helicopter	42
Balloon Pilot Licence	208
Hang-/Paraglider Licence	8756
motorised Hang-/Paraglider Licence	472
national Parachutist Licence	2255
Maintenance 1. Class Licence	35
Maintenance 2. Class Licence	63
Part 66 Licence	1122
ATCO Licence	518
Total	32.765

<sup>&</sup>lt;sup>4</sup> Does not include drone pilot licences

### Table 3: Organisations

Item	Number of licences, certificate or declaration
Maintenance	127
Production	23
Design	16
Approved Training Organisation Aeroplane, Type Rating Training Organisation Aeroplane, Flying Training Organisation Aeroplane	49
Approved Training Organisation Helicopter, Flying Training Organisation Helicopter	8
Declared Training Organisation Aeroplane	48
Declared Training Organisation Helicopter	1
Declared Training Organisation Balloons	3
Declared Training Organisation Sailplane	59
Approved National Civil Aviation School Hang- and Paragliding	40
Approved National Civil Aviation School Parachute	11
Approved National Civil Aviation School Ultralight-aircraft	8
Part 147 Training Organisation	3
Total	396

Table 4: Aero Medical

Item	Number of licences, certificate or declaration
Aeromedical Centres	2
Aeromedical Examiner	67
Total	69

### Table 5: Flight Operation

Item	Number of certificates or declarations
Aircraft	42
Rotorcraft	9
Balloons	31
Total	82

#### Table 6: Drones

51978
76262

#### Table 7: Aerodromes and Ground Handling

Item	Number of licences, certificate or declaration
Aerodromes	6

#### Table 8: Air Navigation Services

Item	Number of licences, certificate or declaration
Air Navigation Service Provider	1

# 2 Purpose of the Austrian Plan for Aviation Safety

The Austrian Plan for Aviation Safety is the master planning document containing the strategic direction of Austria for the management of aviation safety. This plan lists national, regional, and European safety issues and corresponding actions<sup>5</sup> to address identified safety deficiencies.

The APAS addresses all aspects of civil air transport at the State level, with the objective of providing a clear and comprehensive planning and implementation strategy for the future development of the entire civil aviation sector. The Austrian Plan for Aviation Safety contains in-depth information specific to aviation safety.

The Austrian Plan for Aviation Safety is developed by using international safety goals and targets and high-risk categories (HRCs) from the GASP, the EUR NAT RASP and the EPAS. The safety issues listed in the GASP, RASP and EPAS support the improvement of safety at regional and international level. These Plans include several actions to address specific operational safety risks and recommended actions for individual States. Austria has adopted these issues and the corresponding actions where relevant and has included them in Volume II of this plan. Cross-references to the individual ICAO EUR RASP safety issues and EPAS safety issues are provided, if applicable.

<sup>&</sup>lt;sup>5</sup> All Austrian safety issues and the corresponding actions are listed in Volume II of the APAS.

# 3 Austria's Strategic Approach to Managing Aviation Safety

# 3.1 General

The Austrian Plan for Aviation Safety presents the actions derived from Austria's Hazard Identification and Risk Management Process, the safety data collection and processing systems (ECCAIRS 2), as well as the work undertaken by service providers in the development and implementation of their safety management systems (SMS). The APAS is developed and maintained by the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, in coordination with Austro Control GmbH, the Austrian Aero-Club and the Austrian Safety Investigation Authority. The APAS will be updated on a yearly basis.

The actions in this plan are implemented through Austria's existing safety oversight capabilities and the service providers' SMS. Some of the national actions are linked to overarching actions at the regional and international levels and help to enhance aviation safe-ty globally.

The Austrian Plan for Aviation Safety also addresses emerging issues. Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical datadriven analysis. It is important that Austria remains vigilant on emerging issues to identify potential operational safety risks, collects relevant data and proactively develops mitigating actions to address them.

The full list of safety issues and the corresponding actions are presented in Volume II of the APAS.

# 3.2 Safety promotion

Noteworthy is that Austria focuses on numerous safety promotion initiatives and activities, delivered by highly qualified and experienced authority personnel. In the context of safety promotion, such as Season Opener events, Road Shows, trainings, workshops, safety briefings, folders, leaflets, surveys, self-assessment checklists, and tailored industry guidance, topics of significant impact on aviation safety are shared with the aviation community.

Overall, safety promotion is an essential mean in the enhancement of safety performance of all stakeholders. Various activities have also resulted in significant improvement of the reporting culture, whereas further efforts will be made to refine data and information quality.

Safety recommendations of Union-wide relevance within the European Central Repository for Safety Recommendations in aviation (ECR-SRIS) are now publicly accessible, which allows for direct sharing/dissemination of important information to concerned stakeholders.

# 4 Safety Risks

# 4.1 General

The Austrian Plan for Aviation Safety includes safety issues and the corresponding mitigating actions that address national operational safety risks, derived from lessons learned from operational occurrences and from a data-driven approach. These mitigating actions may include:

- rule-making;
- policy development;
- targeted safety oversight activities;
- safety data analysis and
- safety promotion actions.

As already described in Chapter 1.4, Volume II of the Austrian Plan for Aviation Safety is devided into several chapters to make the information more accessible to stakeholders.

# 4.2 ICAO's Global High-Risk Categories

The vision of ICAO is to achieve and maintain the goal of zero fatalities in commercial operations by 2030 and beyond. The GASP identifies a series of global high-risk categories of occurrences (G-HRCs) that need to be addressed to mitigate the risk of fatalities. The types of occurrences considered to be G-HRCs, in alignment with the ICAO CAST/CICTT occurrence categories, were selected based on actual fatalities, high fatality risk per accident or the number of accidents and incidents. Based on ICAO's results from the analysis of safety data collected globally from proactive and reactive sources of information, as well as from ICAO and other non-governmental organizations, five G-HRCs were identified for the 2023-2025 edition of the GASP:

- 1. Controlled flight into terrain (CFIT);
- 2. Loss of control in-flight (LOC-I);
- 3. Mid-air collision (MAC);
- 4. Runway excursion (RE); and
- 5. Runway incursion (RI).

A detailed description of the before mentioned five ICAO Global High-Risk Categories are presented in Appendix 1 of this document.

# **4.3 EPAS**

Not only ICAO addresses safety risks in aviation also the European Plan for Aviation Safety does. These safety risks/safety issues (in EASA language key risk areas, KRA) are the result of the European Safety Risk Management process. The following European KRA are mentioned in the EPAS 2023-2025:

# Human factors (HF) and human performance (HP)

- 1. Airborne collision
- 2. Collision on runway
- 3. Aircraft upset

### CAT aeroplane and NCC aeroplane operations

- 1. Aircraft upset
- 2. Runway excursion
- 3. Other injuries

### **Rotorcraft operations (all types of operations)**

- 1. Aircraft upset
- 2. Other injuries
- 3. Terrain Collision

# Non-commercial operations with other than complex motor-powered aircraft (NCO)

- 1. Aircraft upset
- 2. Airborne collision
- 3. Runway excursion

#### Initial and continuing airworthiness

No Key Risk Areas are determined by EASA so far.

#### ATM/ANS

- 1. Airborne collision
- 2. Collision on runway
- 3. Aircraft upset

### Aerodrome operations and groundhandling

- 1. Ground damage
- 2. Aircraft upset
- 3. Other injuries

For further information, please consult EPAS and the Annual Safety Review (ASR) of EASA.

# 4.4 Austria's Operational Safety Risks

The National Safety Issues in Volume II of the APAS (NSIs) are based on national High-Risk Categories (HRC), identified through a data-driven approach.

The following national High-Risk Categories are considered of the utmost priority for Austrias civil aviation system because of the number of occurrences reported and the total risk for the aviation system associated with such events. They were identified based on analyses from reports mandatoryly and voluntaryly reported via the ECCAIRS 2 system to the Austrian centralised reporting office in Austro Control<sup>6</sup> between 2015 and 2023. In addition, information stemming from other sources like oversight activities are included in the analysis as well.

With respect to those aviation stakeholders having a safety management system (SMS) in place, risk management is conducted as part of their SMS framework. Based on the suggested corrective action(s)/mitigating measure(s), decisions are taken in the context of scheduled surveillance activities. Such decisions reflect whether the proposed measures are sufficient and suitable to identify the root cause(s), potential causal and contributing factors, and therefore reduce(s) the identified risk(s) to an acceptable level.

For each of the following civil aviation system areas, the top three High-Risk Categories are identified. Coresponding safety actions and mitigating measures are developed by the responsible Austrian domain civil aviation authority and are presented in Volume II of the APAS.

#### Systemic safety and resilience

No HRCs for this civil aviation system area are defined.

#### **Competences of personnel**

- 1. Unintended flight in IMC (UIMC)
- 2. Windshear or thunderstorm (WSTRW)
- 3. Medical (MED)

<sup>&</sup>lt;sup>6</sup> Also known as "Zentrale Meldestelle" (ZMS)

#### **Flight operations**

- 1. Controlled flight into or toward terrain (CFIT)
- 2. External load related occurrences (EXTL)
- 3. Runway excursion (RE)

### **General Aviation**

#### **Sailplane Operations**

- **1**. Glider towing related events (GTOW)
- 2. Airprox/ACAS alert/loss of separation/(near) mid-air collision (MAC)
- 3. Collision with obstacle(s) during take-off and landing (CTOL)
- 4. Low altitude operations (LALT)

#### **Ballon Operations**

- 1. Collision with obstacle(s) during take-off and landing (CTOL)
- 2. Abnormal runway contact (ARC)

#### Hang- and Paragliding

- 1. Collision with obstacle(s) during take-off and landing (CTOL)
- 2. Airprox/ACAS alert/loss of separation/(near) mid-air collision (MAC)

#### **Design and Production**

No HRCs for this civil aviation system area are defined.

#### Maintenance and Continuing Airworthiness Management

- 1. System/component failure or malfunction non-powerplant) (SCF-NP)
- 2. Powerplant failure or malfunction (SCF-PP)

### Air traffic Management/Air Navigation Services (ATM/ANS)

No HRCs for this civil aviation system area are defined.

#### **Aerodromes and Ground Handling**

1. Runway Incursion (RI)

#### **Unmanned Aircraft Systems and Manned VTOL-capable Aircraft**

No HRCs for this civil aviation system area are defined.

#### **New Technologies and Concepts**

No HRCs for this civil aviation system area are defined.

#### **Environmental Protection**

No HRCs for this civil aviation system area are defined.

# 4.5 Emerging Issues

Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might affect safety in the future, for which insufficient data exists to complete typical data-driven analysis. Due to the lack of data, emerging issues cannot automatically be considered as operational safety risks. It is important that the international aviation community remain vigilant on emerging issues to identify hazards, collect relevant data and proactively develop mitigations to address any associated risks. The management of emerging issues, particularly by mitigating safety risks, can provide opportunities to foster innovation. The use of new technologies, procedures and operations should therefore be encouraged.

# 4.6 Disruption Events

A disruption event is a rare yet very significant event at a global, regional or national level, which adversely impacts aviation activities. Disruption events affect States, including safety and security authorities, as well as aircraft operators, operators of aerodromes, ATS providers, and industries dependent on aviation.

Disruption events are not typically aviation-centric but have significant impact on aviation operations. Austria is committed to develop measures to respond effectively to disruption events to maintain a safe, resilient and sustainable level of operations. These include the management of change, communication and coordination plans with all relevant stakeholders at the national, regional and international levels.

The nature of disruption events, such as the recent COVID-19 pandemic, can vary in complexity, scope, and duration and may affect the identification of hazards and management of safety risks. Recovery from a disruption event may also affect the operational safety risks. To the extent practicable, Austria shares and communicates hazards that may develop into disruption events.

# 4.7 Other Safety Risks

In addition to the national operational safety risks listed in the Austrian Plan for Aviation Safety, Austria has identified other safety issues and initiatives selected for the APAS. These are given priority since they are aimed at enhancing and strengthening Austria's safety oversight capabilities and the management of aviation safety at the national level.

# 4.7.1 ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA)

The eight critical elements (CEs) of a safety oversight system are defined by ICAO. Austria is committed to the effective implementation of these eight CEs, as part of its overall safety oversight responsibilities, which emphasize Austria's commitment to safety in respect of its aviation activities. The eight CEs are presented in Figure 1 below.



Figure 1: Eight critical elements of a State's safety oversight system

The latest ICAO activity<sup>7</sup> in 2019, which aims to measure the effective implementation of the eight CEs of Austria's safety oversight system, as part of the ICAO Universal Safety Oversight Audit Programme (USOAP), has resulted in the following scores as per December 31<sup>st</sup> 2021:

Overall EI score<sup>8</sup>: 93,35 % / 92,75%

<sup>&</sup>lt;sup>7</sup> The latest ICAO activity was an off-site validation, which took place in summer/autumn 2019.

<sup>&</sup>lt;sup>8</sup> see Note 10 and 10.

#### Table 9: EI Score by CE

Critical Element	Scores (Initial <sup>9</sup> and Adjusted <sup>10</sup> )
CE-1	100,00 % / 100,00 %
CE-2	95,92 % / 94,74 %
CE-3	96,20 % / 94,74 %
CE-4	94,52 % / 92,50 %
CE-5	82,35 % / 79,41 %
CE-6	96,96 % / 97,14 %
CE-7	93,51 % / 93,55 %
CE-8	90,70 % / 94,44 %

Table 10: EI Score by Area<sup>11</sup>

Area	Score (Initial <sup>9</sup> and Adjusted <sup>10</sup> )
LEG	95,45 % / 95,45 %
ORG	81,82 % / 77,78 %
PEL	100,00 % / 100,00 %
OPS	96,64 % / 96,97 %
AIR	100,00 % / 100,00 %
AIG	68,89 % / 66,67 %
ANS	100,00 % / 100,00 %
AGA	88,41 % / 86,84 %

<sup>9</sup> Effective Implementation (EI) result as listed in the Final Report of the activity.

<sup>&</sup>lt;sup>10</sup> Effective Implementation (EI) adjusted to the current set of Protocol Questions (PQs). The current list/set of Protocol Questions is updated from time to time, thus the content and the number of PQs may vary from year to year which results in an adjusted EI value.

<sup>&</sup>lt;sup>11</sup> Eight audit areas according to ICAO are primary aviation legislation and civil aviation regulations (LEG), civil aviation organization (ORG); personnel licensing and training (PEL); aircraft operations (OPS); airworthiness of aircraft (AIR); aircraft accident and incident investigation (AIG); air navigation services (ANS); and aerodromes and ground aids (AGA).

# 4.7.2 EASA Standardisation Inspections

Due to the shared competencies between the European Union and its Member States, several responsibilities, duties and tasks are tranfered from Austria to the European Commission (EC). The European Union Aviation Safety Agency (EASA) on behalf of the EC deals with most of these mentioned responsibilities, duties and tasks<sup>12</sup>.

Austria is committed to the effective implementation of the European civil aviation regulations. In addition, Austria supports European rulemaking activities, safety enhancement initiatives and the EASA standardisation inspections.

<sup>&</sup>lt;sup>12</sup> Confer Regulation 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91, the so called "Basic Regulation"

# 5 Monitoring of the Implementation

Each safety action is assigned to one or more responsible authority/ies in charge for proper implementation of specific safety actions and monitoring of the actions/measures.

Austria continuously monitors the implementation of the safety actions listed in Volume II of the APAS to ensure the intended results are achieved. Based on the close monitoring of the safety actions in Vollume II, the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology will update the APAS accordingly.

Since the Austrian Plan for Aviation Safety is a living document, Austria reviews the APAS every year to keep the identified safety risks, safety issues and selected actions updated and relevant as well to ensure inclusion of new emerging safety issues and safety ac-tions. In addition, the yearly update of the APAS ensures that all relevant MSTs and SPTs of the latest edition of the EPAS and the RMT and SPT actions of the ICAO EUR RASP are well addressed and that the responsible authority/ies has/have verified and updated their National Safety Actions, if required.

Austria has adopted a standardized approach to provide safety relevant information at the regional level, for reporting to ICAO Europe and North Atlantic Office and to EASA. This allows the European region to receive information and assess safety risks using common methodologies.

# Appendix 1

# 5.1 Controlled flight into terrain

CFIT is an in-flight collision with terrain, water or obstacle without indication of loss of control. Accidents categorized as CFIT involve all instances where an aircraft is flown into terrain in a controlled manner, regardless of the crew's situational awareness. CFIT accidents involve many contributing factors, including: procedure design and documentation; pilot disorientation; and adverse weather. Requirements for aircraft to be equipped with ground proximity warning systems have significantly reduced the number of CFIT accidents. Despite the absence of CFIT accidents involving transport category aircraft over the past few years, CFIT accidents often have catastrophic results when they occur, with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events.

# 5.2 Loss of control in-flight

A loss of control in-flight (LOC-I) is an extreme manifestation of a deviation from intended flight path. Accidents categorized as LOC-I involve a loss of control in-flight that is not recoverable. LOC-I accidents often have catastrophic results with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events. LOC-I events involve many contributing factors that can be categorized as being either aeroplane systems-induced, environmentally induced, pilot/human-induced or any combination of these three. Of the three, pilot-induced accidents represent the most frequently identified cause of LOC-I accidents. The number of fatalities resulting from LOC-I events involving commercial air transport aeroplanes has led to an examination regarding current training practices, such as the introduction of upset prevention and recovery training requirements for flight crew members.

# 5.3 Mid-air collision

A mid-air collision refers to a collision between aircraft while both are airborne. Mid-air collisions can be the result of a level bust due to a loss of separation between aircraft. Mid-air collisions involve many contributing factors, including: traffic conditions; air traffic controller workload; aircraft equipment; and flight crew training. Requirements for aircraft to be equipped with traffic alert and collision avoidance system/airborne collision avoidance system (TCAS/ACAS) have significantly reduced the number of mid-air collisions. However, when they occur, mid-air collisions often have catastrophic results with very few, if any, survivors. Therefore, there is a high fatality risk associated with these events.

# 5.4 Runway excursion

A runway excursion is a veer off or overrun off the runway surface. The term "runway excursion" is a categorization of an accident or incident which occurs during either the takeoff or landing phase. The excursion may be intentional or unintentional, for example the deliberate veer off to avoid a collision brought about by a runway incursion. Runway excursions involve many contributing factors, including unstabilized approaches and the condition of the runway. The high number of accidents resulting from runway excursions involving commercial air transport aeroplanes has led to several initiatives regarding runway safety. The term "runway safety" describes a series of occurrence categories, including:

- abnormal runway contact;
- ground collision;
- runway excursion;
- runway incursion;
- loss of control on the ground;
- collision with obstacle(s); and
- undershoot/overshoot.

However, runway excursions remain predominant in terms of number of occurrences. Although statistically the majority of runway excursions are survivable, the fatality risk remains significant. The outcome of a runway excursion (such as whether it is survivable) is based on several factors, including the speed at which an aircraft touches down or departs the runway end during the excursion (high energy excursions), runway contamination and the characteristics of the runway end safety area at the aerodrome.

# 5.5 Runway incursion

A runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft. Incursions produce an increased risk of collision for aircraft occupying the runway. When collisions occur outside the runway (for example, on a taxiway or on the apron), the aircraft and/or vehicles involved are usually travelling relatively slowly. However, when a collision occurs on the runway, at least one of the aircraft involved will often be travelling at considerable speed (high energy collisions) which increases the fatality risk. Runway incursions involve many contributing factors, including: aerodrome design; pilot and air traffic controller workload; and use of non-standard phraseology. Although statistically very few runway incursions result in collisions, there is a high fatality risk associated with these events. The collision between two B747s at Los Rodeos Airport, Tenerife, in 1977, was the result of a runway incursion and remains the worst accident in aviation history, with the highest number of fatalities.

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#### Abbrevations

AASSP	Austrian Aviation State Safety Programme
AASSP-SC	Austrian Aviation State Safety Programme Steering Committee
ACG	Austro Control GmbH
AeMC	Aero Medical Centre
AGA	Aerodromes and Ground Aids
AIG	Aircraft Accident and Incident Investigation
AIR	Airworthiness of Aircraft
AME	Aero Medical Examiner
ANS	Air Navigation Service
ANSP	Air Navigation Service Provider
AOC	Air Operator Certificate
APAS	Austrian Plan for Aviation Safety
ARC	Abnormal runway contact
ATCO	Air Traffic Controller Licence
ATPL	Air Transport Pilot Licence aircraft and helicopter
ATO	Approved Training Organisations for helicopter
ВМК	Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
CAA	Austrian Federal Ministry for Climate Action, Environment,
CAMO	Austrian Federal Ministry for Climate Action, Environment,
CAST	Austrian Federal Ministry for Climate Action, Environment,
CE	Critical Element
CICTT	CAST/ICAO Common Taxonomy Team
CPL	Commercial Pilot Licence aircraft and helicopter
CTOL	Collision with obstacle(s) during take-off and landing
DTO	Declared Training Organisations for aircraft
EAP	European Action Point
EASA	European Union Aviation Safety Agency
EASP	European Aviation Safety Programme

EASPG	European Aviation System Planning Group
ECCAIRS	European Coordination Centre for Accident and Incident Reporting System
ECR-SRIS	European Central Repository for Safety Recommendations in Aviation
EI	Effective Implementation
EPAS	European Plan for Aviation Safety
FFS	Aircraft Full Flight Simulator
FNPT	Aircraft or helicopter Flight Navigation Procedure Training Device
FOT	Focused Attention Topics
GASP	Global Aviation Safety Plan
HRC	High Risk Category
ICAO	International Civil Aviation Organisation
ICAO EUR NAT	ICAO European and North Atlantic Office
LAPL	Light Aircraft Pilot Licence Medical
LEG	Primary Aviation Legislation and Civil Aviation Regulations
LOC-I	Loss of control – inflight
MAC	Airprox/ACAS alert/loss of separation/(near) mid-air collision
MST	Member State Tasks
NAP	National Action Point
NASP	National Aviation Safety Plan
NAV	Navigation error
NCC	Non-commercial operations with complex motor-powered aircraft or helicopter
ORG	Civil Aviation Organisation
OPS	Aircraft Operations
PEL	Personnel Licensing and Training
PPL	Private Pilot Licence aircraft and helicopter
RASP	Regional Aviation Safety Plan
RESG	Regional Expert Safety Group
SEI	Safety Enhancement Initiative
SMS	Safety Management System
SPO	Special Operation for aircraft and helicopter

SPT Safety Promotion Tasks

USOAP Universal Safety Oversight Audit Programme

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