The Australian National Aviation Safety Plan

2024 - 2027

Contributing Agencies

- Department of Infrastructure, Transport, Regional Development, Communications and the Arts
- Civil Aviation Safety Authority
- Airservices Australia
- Australian Transport Safety Bureau
- Australian Maritime Safety Authority
- Bureau of Meteorology
- Department of Defence
- Department of Home Affairs

Executive Summary

Air transport is essential to Australia's economy, community, and market access. A safe aviation system contributes to Australians' confidence in our air transport network. It is important the Australian aviation industry grows in a safe and sustainable way, and we strengthen our safety oversight capabilities. Australia recognises the need for suitable air navigation services, airport infrastructure and safety governance systems supported by qualified personnel and resources.

This Australian National Aviation Safety Plan (NASP) details Australia's commitment to continuously improve aviation safety management capabilities, reducing aviation operational safety risks. It complements the Australian State Safety Programme (SSP) and National Air Navigation Plan (NANP) supporting a desired level of safety performance.

The NASP represents a key element of ensuring Australia takes a proactive approach to aviation safety risks, even as our aviation industry and operational context evolves at an unprecedented rate; both domestically and internationally. This NASP captures how we respond to and prioritise safety activities and actions to continually improve and enhance Australia's aviation safety performance.

Through the NASP and SSP, aviation stakeholders affirm their commitment to the ongoing improvement of aviation safety, sufficient resourcing of activities and increased collaboration at the global, regional, and State level.

The NASP establishes Australia's safety goals, safety objectives, performance indicators and enhancement initiatives consistent with the International Civil Aviation Organization's Global Aviation Safety Plan and the Asia Pacific Regional Aviation Safety Plan.

Australia's six aviation safety goals for the three year period commencing from 1 July 2024 are:

1. improve the safety of Australian aviation operations across all sectors,

2. strengthen Australia's safety oversight and investigation capabilities,

3. enhance the effectiveness of Australia's State Safety Programme through safety intelligence,

4. increase collaboration at global and regional levels to enhance safety,

5. enhance greater safety programme collaboration between Australian industry, industry associations and State agencies; and

6. ensure Australia has the appropriate aviation infrastructure to support safe operations.

To achieve these goals, Australia has developed operational and organisational roadmaps comprising a range of defined safety objectives, safety performance indicators and safety enhancement initiatives with supporting actions.

The Aviation Policy Group (APG), comprising the chief executives of Australia's key aviation agencies, endorsesthe NASP. The APG is directly supported in this role by the Aviation Implementation Group (AIG) of senior aviation officials and the State Safety Programme Cross Agency Team (SSP-CAT). While individual SSP agencies are responsible for monitoring the performance of their relevant Safety Performance Indicators (SPIs) and Safety Enhancement Initiatives (SEIs), reporting their performance into the SSP-CAT enhances cross agency collaboration and accountability.

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Definitions

Accident	As per the *Transport Safety Investigation Regulations 2021* means an aircraft is involved in an accident if:
	(a) a person suffers a fatal aircraft-related injury in relation to the operation of the aircraft; or
	(b) a person suffers a serious aircraft-related injury in relation to the operation of the aircraft; or
	(c) the aircraft sustains damage or structural failure, or there are reasonable grounds for believing that the aircraft has sustained damage or structural failure, which:
	     (i) adversely affects the structural strength, performance, or flight characteristics of the aircraft; and
	     (ii) would normally require major repair or replacement of the affected component;
	     except for any of the following:
	     (iii) engine failure;
	     (iv) engine damage limited to a single engine (including damage to its cowlings or accessories);
	     (v) damage to propellers, wing tips, antennas, probes, vanes, tyres, brakes, wheels, fairings, panels, landing gear doors or windscreens;
	     (vi) damage such as small dents or puncture holes to the aircraft skin;
	     (vii) minor damage to main rotor blades, tail rotor blades or landing gear;
	     (viii) minor damage resulting from hail or bird strike (including holes in the radome); or
	(d) the aircraft is missing; or
	(e) the aircraft is completely inaccessible.

Advanced air mobility (AAM)	*Advanced air mobility is used to describe a new concept in air transportation most often connected to the use of electric vertical take-off and landing (eVTOL) aircraft. However, electric short take-off and landing (eSTOL) and electric conventional take-off and landing (eCTOL) aircraft may be included too. AAM is not a single technology, but rather a collection of new and emerging technologies being applied to the aviation ecosystem, particularly in new aircraft types and equipment.* *AAM is a suite of new technologies that is expected to revolutionise aviation. It encompasses a new ecosystem of aircraft types, vertiports and traffic management technologies. AAM can sometimes directly refer to a new class of aircraft, typically small (with a capacity of under 10 passengers), capable of short or vertical take-off and landing. These aircraft can be powered electrically, solely by renewable fuels, or a hybrid model that uses traditional fuel to charge batteries. It is also assumed that many AAM aircraft will be autonomous. Initially, however, in most use cases, these aircraft will be piloted.*
Commercial air transport (CAT)	From the *Civil Aviation Safety Regulations 1998* means an air transport operation being a passenger transport operation, a cargo transport operation, or a medical transport operation, which is conducted for hire or reward; and is prescribed by an instrument issued under regulation 201.025. <u>Note</u>: CAT does not include an aerial work operation.
General aviation (GA)	As per the *Aviation Green Paper* GA is a diverse sector that plays a variety of important roles in aviation including servicing regional communities, delivering education and health services, regional freight and transport, tourism, recreation, agricultural mustering and spraying, instructional flying, sport, and pleasure flying, and emergency services.

Human performance	As per *ICAO Annex 19* means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.
Incident	As per the *Transport Safety Investigation Regulations 2021* means any occurrence that: (a) is associated with the operation of an aircraft; and (b) affects or could affect the safety of the operation of the aircraft.
Industry service provider	As per the *ICAO Global Aviation Safety Plan 2023-25* means a non-governmental aviation organisation such as: aircraft operators; approved maintenance organisations; organisations responsible for the type design or manufacture of aircraft, engines, or propellers; approved training organisations; and operators of aerodromes, as well as other entities that form part of the aviation industry, as appropriate.
Non-commercial air transport (non-CAT)	Means any air transport operation that is not a commercial air transport operation, such as aerial work operation; flight training and instructional flying; private, sport, and pleasure flying; and emergency services.
Safety data	As per *ICAO Annex 19* means a defined set of facts or set of safety values collected from various aviation-related sources, which is used to maintain or improve safety.
Safety intelligence	As per *ICAO Annex 19* means an outcome of the process of analysing safety data and safety information to support decision-making.
Safety performance indicator	As per *ICAO Annex 19* means a metric or quantitative means used to measure and monitor the progress made by a State or service provider towards achieving a safety objective.
Serious incident	As per the *Transport Safety Investigation Regulations 2021* means an incident involving circumstances indicating that there was a high probability of an aircraft accident.
State agency/SSP agencies	For the purposes of the NASP, State agency or SSP agencies are Australian Government departments and agencies with SSP responsibilities but exclude industry service providers.

Abbreviations and Acronyms

AAM	Advanced air mobility
ADS-B	Automatic Dependent Surveillance Broadcast
AI	Artificial Intelligence
AIG	Aviation Implementation Group
Airservices	Airservices Australia
AMSA	Australian Maritime Safety Authority
ANS	Air Navigation System
APAC	Asia Pacific
APG	Aviation Policy Group
AP-RASP	Asia Pacific Regional Aviation Safety Plan
APRAST	Asia Pacific Regional Aviation Safety Team
ARC	Abnormal Runway Contact
ARFFS	Aviation Rescue and Fire Fighting Service
ATM	Air Traffic Management
ATSB	Australian Transport Safety Bureau
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BoM	Bureau of Meteorology
CASA	Civil Aviation Safety Authority
CAT	Commercial Air Transport
CE	Critical Element
CFIT	Controlled Flight into Terrain
CMA	Continuous Monitoring Approach
DASA	Defence Aviation Safety Authority
Defence	Department of Defence
DGCA	Director General Civil Aviation
EI	Effective Implementation
eVTOL	Electric vertical take-off and landing
FDAP	Flight Data Analysis Program
FIR	Flight Information Region
GA	General Aviation
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan
G-HRC	Global high-risk category of occurrence
GNSS	Global Navigation Satellite System
Home Affairs	Department of Home Affairs
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
Infrastructure	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
JAASACG	Joint Aviation Agency Safety Analysis Coordination Group
LOC-I	Loss of Control In-flight
MAC	Mid-Air Collision
ML	Machine Learning
NANP	National Air Navigation Plan
NASP	National Aviation Safety Plan
NCP	National Compliance Plan
NEMA	National Emergency Management Agency
NOP	National Oversight Plan
Non-CAT	Non-Commercial Air Transport

PQ	Protocol Question
RASG	Regional Aviation Safety Group
RASG-APAC	Regional Aviation Safety Group Asia Pacific
RASP	Regional Aviation Safety Plan
RAST	Regional Aviation Safety Team
RE	Runway Excursion
RI	Runway Incursion
RPA	Remotely Piloted Aircraft
RPAS	Remotely Piloted Aircraft System
SAF	Sustainable aviation fuel
SAR	Search and Rescue
SARPS	Standards and Recommended Practices
SEI	Safety Enhancement Initiative
SM ICG	Safety Management International Collaboration Group
SMS	Safety Management System
SPI	Safety Performance Indicator
SPT	Safety Performance Target
SSP	State Safety Programme
SSP-CAT	State Safety Programme Cross Agency Team
TAWS	Terrain Avoidance Warning System
USOAP CMA	Universal Safety Oversight Audit Programme Continuous Monitoring Approach

1. Introduction

Safety is always the primary consideration of Australian Government aviation agencies to ensure continued confidence in our aviation industry. The National Aviation Safety Plan (NASP) is the Australian Government's safety action plan for the aviation industry to address key safety risks and challenges and complements the Australian State Safety Programme (SSP).

The SSP implements safety management at a State level, setting out how Australia identifies, monitors, and maintains the effectiveness of its aviation safety performance, and sets key safety principles that underpin the system. The NASP documents plans to implement risk mitigation measures and monitors our safety performance to support the SSP, while also forming the continuous improvement element of the Australian SSP. It presents the strategic direction that informs the prioritisation and coordination of safety initiatives for the management of aviation safety in the short, medium, and longer terms.

This second edition of the NASP (2024-2026) presents our ongoing national strategy and roadmap for continually enhancing aviation safety.

While the NASP is based on Australia's operating environment and safety risks, it is strategically aligned with the International Civil Aviation Organization's (ICAO's) Global Aviation Safety Plan (GASP) and the Asia Pacific Regional Aviation Safety Plan (AP-RASP), in recognition that aviation activities are interconnected and global in nature.

The NASP is subject to a triennial review cycle, aligned to the review, development and publication of the GASP, the AP-RASP, and Australian's SSP. If critical operational safety risks are identified outside of the NASP review period, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP.

1.1 Purpose

The NASP is the master planning document containing the strategic direction of Australia for the management of aviation safety for a period of three years (from 1 July 2024 to 30 June 2027). This plan describes Australia's national aviation safety issues, sets our national response through safety goals and objectives, and presents a series of safety enhancement initiatives (SEIs) to assist in achieving these goals.

It describes Australia's priorities for enhancing aviation safety by identifying the strategic goals, initiatives and actions that collectively aim to reduce specific operational risks and manage influential organisational challenges.

The NASP reaffirms Australia's commitment to aviation safety and seeks to ensure initiatives are appropriately managed and resourced. For each safety initiative, the NASP clearly defines responsibilities, accountabilities, timelines, and deliverables, whilst ensuring alignment to GASP and AP-RASP requirements.

The first NASP (2021-2023) integrated all SSP agencies' existing corporate planning documents to present a consistent national aviation safety strategy and to develop safety enhancement initiatives. This second edition of the NASP (2024-2027) represents Australia's continuous improvement to safety performance with learnings from the initial NASP combining with our safety data intelligence to develop a more robust and informed safety plan and initiatives.

This NASP captures the way in which we respond to safety risk and prioritise action to continually improve aviation safety in Australia, between 2024 and 2026, while also enhancing our safety systems, oversight, and investigation processes into the future.

Implementing this NASP satisfies Australia's obligations under ICAO Assembly Resolution A39-12, which recognises the importance of effective national aviation safety planning consistent with the vision and goals of the GASP.

1.2   Relationship to other documents

Since 2011, the Australian SSP has been the key publication providing an overview of Australia's aviation safety system. The SSP set outs Australia's aviation safety-related activities and provides detail on relevant legislation, systems and processes that support Australia's aviation safety system.

There is a recognised connection between safety and security within the SSP, with Home Affairs being the agency responsible for the regulatory requirements and oversight designed to safeguard Australia against unlawful interference of civil aviation. Accordingly, aviation safety agencies cooperate with Home Affairs on any identified intersecting safety and security matters.

The NASP supports the SSP by setting out clear strategies on how we intend to meet our aviation safety goals and objectives and provides the mechanism for monitoring our overall safety performance. The NASP is informed by outputs of the SSP's safety risk management activities and international aviation developments.

Both the SSP and NASP are supported by Australia's National Air Navigation Plan (NANP), which responds to the ICAO Global Air Navigation Plan (GANP) and regional ANS planning commitments. Australia's NANP outlines our current air navigation system (ANS) in addition to the roles and responsibilities of government agencies and industry. The NANP reflects future ANS planning and investment decisions.

1.3   Key participants

Aviation safety arises from the combined efforts of all aviation stakeholders, including various State government agencies and industry service providers. Given this all Australian aviation participants play a role in establishing and maintaining a desired level of aviation safety performance.

The APG, comprising the four chief executives of the key aviation agencies, endorses the NASP. The APG is directly supported by the AIG comprised of senior aviation officials from these agencies

The SSP-CAT, chaired by the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts (Infrastructure), leads the day-to-day development, implementation, and monitoring of the NASP, associated goals and objectives.

The key stakeholders contributing to the NASP (SSP stakeholders) are:

- Department of Infrastructure, Transport, Regional Development, Communications and the Arts (Infrastructure)
- Civil Aviation Safety Authority (CASA)
- Airservices Australia (Airservices)
- Australian Transport Safety Bureau (ATSB)
- Australian Maritime Safety Authority (AMSA)
- Department of Defence (Defence); and
- Australian aviation industry participants (industry)[1].

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[1] For the purposes of the NASP, 'SSP agencies' are Australian Government departments and agencies with SSP responsibilities

Each SSP stakeholder is responsible for implementing particular NASP action items as assigned in Appendix A and Appendix B.

2. Roles and Responsibilities

2.1 Role of ICAO

ICAO is responsible for coordinating and monitoring the implementation of the GASP at a global and regional level. Through the GASP, ICAO seeks to promote its global strategy for improving aviation safety. The GASP is supported by the Global Aviation Safety Roadmap, which outlines SEIs associated with the GASP goals, as well as the global high-risk categories of occurrences.

ICAO also coordinates a series of Regional Aviation Safety Groups (RASG) and Regional Aviation Safety Teams (RAST), to facilitate the sharing of information, resources, and expertise among Member States.

2.2 Role of the region

ICAO has established a series of regions (groups of States and/or entities) around the world to promote collaboration on aviation safety enhancements within a specific geographic area. Australia is part of the ICAO Asia and Pacific (APAC) region.

Each ICAO region produces a Regional Aviation Safety Plan (RASP) that presents the strategic direction for the management of aviation safety within the region. While RASPs generally align with the GASP, they are designed to focus on regional priorities and specific risks. The AP-RASP is the chief aviation safety planning document for the APAC region.

RASGs are the main drivers of safety planning and implementation within a given region, and serve to integrate global, regional, State and industry efforts in continuing to enhance aviation safety. In the APAC region, the AP-RASP is overseen by the Regional Aviation Safety Group – Asia Pacific (RASG - APAC).

The RASG-APAC is tasked with developing, implementing, and delivering the AP-RASP. The RASG-APAC is supported by the Asia Pacific Regional Aviation Safety Team (APRAST), comprising representatives from Asia Pacific States including Australia..

2.3 Role of the State

ICAO Member States are required to develop and implement a NASP to support their SSP. The NASP must consider national challenges, emerging safety issues and priorities, GASP and RASP expectations of States, and address any significant safety concerns as a matter of priority. For Australia, responsibility for developing and implementing the NASP is shared by SSP agencies.

2.3.1 Role of governance forums and working groups

Australia's SSP provides for governance forums and working groups that are responsible for the development, implementation, and function of the SSP, including monitoring safety performance (NASP SPIs) and progress against safety process enhancements (NASP SEIs).

The overall function and responsibility of each SSP governance forum is defined in Section 1.2 of the SSP and outlined below.

- APG is the strategic leadership forum and accountable for endorsing the SSP and NASP.

- AIG is a working group of senior officials that support the APG in implementing cross-agency strategies. The AIG is responsible to the APG for SSP initiatives and milestones and provides guidance and direction to the SSP-CAT on SSP implementation.

- SSP-CAT reports to the AIG on the development and implementation of the SSP and the NASP. The SSP-CAT is responsible for monitoring implementation of the SSP and NASP and can be assisted in performing these roles through appropriate SSP working groups.

2.3.2 Role of Australian aviation agencies

The Australian SSP defines the roles and responsibilities of Australian Government agencies that manage aspects of the civil aviation system.

Individual SSP agencies are responsible for monitoring the performance of their relevant NASP safety performance indicators and tracking of SEI actions assigned to them. SSP agencies provide regular updates on their performance indicators and the status and progress of NASP SEIs and associated actions to the SSP-CAT and to any other relevant SSP governance forums.

SSP agencies may prepare a dedicated safety plan, or align existing plans, to complement the NASP and articulate how they will meet their obligations. Safety plans should include instances where an SSP agency is required to collaborate with a non-SSP government agency to fulfil its NASP objectives. This ensures SPIs, SEIs and actions assigned to an SSP agency are appropriately managed and issues are escalated to the relevant SSP governance forum as required.

Agencies' internal safety plans and safety reporting processes should be designed to allow for early identification and proactive management of latent or emerging safety hazards and risks, which have the potential to impact safety performance. This is especially applicable in relation to identified or emerging trends regarding contributing factors or precursor events for aviation accidents and serious incidents. Post this, identification agencies can address through their internal safety plans or processes and where necessary escalate to the relevant SSP governance forum for consideration of any potential new safety enhancement actions or performance monitoring metrics to be added on an ad-hoc or ongoing basis to supplement those already identified within the NASP.

2.4 Role of industry and industry participants

Industry and industry participants are expected to actively support the NASP and are encouraged to identify and undertake relevant supporting actions. Industry should engage in Safety Management System (SMS) implementation to continually identify hazards and address operational safety risks.

Industry is encouraged to work collaboratively with SSP agencies on safety information exchange, safety monitoring and safety oversight programs. Industry should develop their own indicators consistent with the NASP safety goals, objectives, and performance indicators, to ensure industry safety strategies align with those of the State. Industry should adopt a harmonised approach in developing SMS objectives and indicators.

3. Safety risks, challenges, and priorities

3.1 Global safety risks, challenges, and priorities

The GASP outlines the safety risks, challenges, and priorities that ICAO considers to be of highest concern to the international aviation community, identified through safety data collected from proactive and reactive activities.

In response to these challenges, ICAO develops and prioritises global SEIs to reduce the risk associated with aviation activities. The GASP identifies two broad categories of global concern: operational safety risks and organisational challenges, and associated initiatives that States are required to address through a NASP and SSP.

3.1.1   Global operational safety risks

Operational safety risks arise during the delivery of a service or the conduct of an aviation activity. The GASP has identified five global high-risk categories (G-HRCs) of occurrences based on global fatalities, fatality rates and the number of accidents and incidents.

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).

The GASP identifies that States should consider these G-HRCs when conducting regular safety risk assessments and in safety data analysis. Additionally, further national data analysis should be undertaken regarding underlying precursor events and contributing factors for G-HRCs, allowing for States to prioritise these factors to be mitigated as part of their NASP.

3.1.2   Global organisational challenges

Organisational challenges are systemic issues concerning organisational culture, policies, and procedures influencing the effectiveness of safety risk controls. Organisations can include State aviation agencies and service providers (including ATM services providers, aerodrome operators and aircraft operators etc.). The GASP 2023-25 identifies two common organisational challenges for States to address:

1. effective safety oversight; and
2. an effective SSP using a risk-based approach to measure and monitor safety performance.

In context, these challenges relate to the establishment and achievement of safety objectives and their related safety performance measurements, as well as effective oversight of service providers' SMS. Safety oversight also ensures that the aviation industry provides a safety level equal to, or better than, that defined by the ICAO Standards and Recommended Practices (SARPS).

The Global Aviation Safety Roadmap details specific roadmaps or action plans for operational safety risks and organisational challenges to support States in achieving the GASP goals.

The 2023-25 GASP has established the following global goals:

1. Achieve a continuous reduction of operational safety risks.

2. Strengthen States' safety oversight capabilities.

3. Implement effective State safety programmes (SSPs)

4. Increase collaboration at the regional level.

5. Expand the use of industry programmes and safety information sharing networks by service

   providers.

6. Ensure the appropriate infrastructure is available to support safe operations.

3.2   Regional safety risks, challenges, and priorities

The APAC region's strategic approach to managing safety at the regional level is to address the region's diverse regulatory and operational landscape in a timely manner. The diversity of the APAC

region, coupled with predictions the region's share of global passenger traffic is likely to increase nearly 50% by 2035, pose significant challenges for regional aviation safety.

The AP-RASP strategic safety approach is based on two pillars:

I. Enhance existing regional platforms and establish effective safety oversight and management capabilities.
II. Continue to address operational safety risks effectively and establish effective safety risk management.

A full analysis of safety trends impacting the APAC region is detailed in the Asia Pacific Annual Safety Report published annually by the RASG-APAC.

One characteristic of the APAC aviation safety landscape is that States within vary significantly in terms of capacity and degree of civil aviation safety development, with USOAP EI scores ranging from 5% to over 90%.

When considering the GASP goals and G-HRC, the AP-RASP identifies CFIT, LOC-I, and Runway Safety as primary contributors to fatality risk in the region which account for a high proportion of accidents. In the APAC region the most frequent types of accidents were runway safety related, which includes runway excursions, runway incursions, and abnormal runway contact, specifically hard landings, and tail strikes during landing.

The 2023-25 AP-RASP has established the following regional goals:

1. Reduce operational risks.

2. Improve States' safety oversight and compliance.

3. Implement consistent and effective SMS and SSP.

4. Data-driven regulatory oversight; and

5. Enhanced aviation infrastructure (physical and institutional).

Given the regions significant diversity regarding aviation safety Australia takes a supportive and collaborative role, actively engaging in the development of regional aviation safety priorities and policies through forums such as the RASG-APAC, APRAST, APAC -AIG and the Directors General of Civil Aviation Asia and Pacific Region (DGCA) conferences.

3.3   Australian's safety risks, challenges, and priorities

Australia's operational complexity

The Australian aviation system is rapidly changing considering economic, social, and technological developments. Australia's aviation system is complex with a diverse aircraft fleet, from traditional jet aircraft services provided by international (including ultra-long haul), domestic and regional airlines to offshore helicopters, sport, and recreational aircraft, and RPAS.

Emerging technology and the integration of existing technologies into aircraft will play a vital role in meeting Australia's future aviation safety, efficiency, and capacity requirements. Over the coming decades, conventional and non-conventional aviation activities will increasingly need to operate in conjunction, further increasing the congestion and complexity of airspace and airport operations. Regulatory requirements and air traffic management arrangements will need to be able to meet our increasingly complex operating environment.

Australia adopts a forward-looking approach to identify emerging aviation trends and associated hazards where possible and assess risks and implement effective mitigation strategies.

Australia's approach to identifying our national risks and challenges to determine our priorities for this NASP was developed using a combination of lessons learned and performance monitoring from our initial NASP, a data-driven analysis (quantitative and qualitative) of G-HRCs, sector safety risk profiles, and other safety issues, and proactive future scanning for emerging issues.

Accordingly, the priorities identified in the NASP contribute to an overarching desired level of safety performance for Australia. Australia's desired safety performance aim is:

> *To continually improve aviation safety towards reducing aviation accidents and serious incidents across all aviation sectors, with no fatal accidents involving commercial air transport operations.*

3.3.1 Australia's operational safety risks

Although Australia has experienced a very low rate of G-HRC occurrences over the past decade, has an excellent commercial air transport large aeroplane safety record and an advanced regulatory system; all G-HRCs remain relevant to Australian aviation. In this context, Australia will actively manage these G-HRCs, by implementing strategies to seek to further reduce the rate of incidents and accidents.

Because of the low G-HRC occurrence rate, Australia has identified additional national safety risks which present themselves as precursor events to G-HRCs and warrant mitigation in their own right:

1. Suitability of current air traffic management mechanisms for increasingly complex regional and remote airspace;
2. Emerging concerns regarding risk of mid-air collision involving non-CAT; and
3. Human performance operational safety impacts

Suitability of current air traffic management mechanisms for increasingly complex regional and remote airspace

Australia's regional and remote airspace is becoming increasingly more complex which is predicted to become further exacerbated as more CAT and non-CAT airspace and aerodromes are shared.

The introduction of larger aircraft onto some regional routes, which includes periods outside of controlled airspace, increases the complexities around the shared airspace and aerodromes in regional and remote areas. Consequently, there has also been an increase in airspace concerns raised and traffic conflict in 'uncontrolled' Class G airspace, with the current and potential further increases in air traffic and CAT in these locations.

The introduction of freight RPA and passenger and freight AAM aircraft into Australian airspace could significantly increase the volume of air traffic in currently 'uncontrolled' Class G airspace. Whereas operators in Class G airspace have historically relied on visual flight rules and instrument flight rules means to avoid conflicts, the sheer volume of aircraft within this airspace will require a more sophisticated means of managing air traffic flow.

Emerging concerns regarding risk of mid-air collision involving non-CAT

There are emerging concerns regarding an increased risk of mid-air collisions involving non-CAT within Australia. Loss of separation (in controlled airspace) or aircraft operating in proximity contrary to safe separation considerations (in uncontrolled airspace), is a notable precursor risk event for the G-HRC of mid-air collision. While non-CAT activities generally attract a lesser global focus, within

Australia it is an area of high aviation activity and given our diverse non-CAT aviation industry is considered a national safety risk beyond global and regional focus areas.

This risk is compounded by our increasing airspace complexity and with shared CAT and non-CAT airspace and aerodromes. This risk is exacerbated further within the shared 'uncontrolled' Class G airspace for both CAT and non-CAT operations, where differing operating standards and aircraft alerting systems between CAT and non-CAT operators exist.

Aircraft operating in proximity contrary to safe separation considerations are indicative of an area for greater focus for the State at a national level within the period of this NASP. While total number of these occurrence types has not increased in the last five years, the number of serious incidents and accidents within these occurrences has increased. This could indicate while the likelihood of these occurrences has remained unchanged, the seriousness of these events has shifted.

Human performance operational safety impacts

Human performance (HP) relates to human capabilities and limitations which have an impact on safety and efficiency of aeronautical operations. This area of aviation safety has been discussed across global aviation for decades. However, advances in understanding HP and its pervasive influence on safety have seen a shifting focus of this area within aviation safety management. In 2021 ICAO released the first edition of its manual on human performance for regulators, recognising that enhanced HP guidance is warranted given the potential for HP to both positively and negatively impact aviation safety. Acknowledging HP, as influenced by physiological and cognitive capabilities and constraints, contributes significantly to the overall safety performance of the aviation system; and future aviation systems will result in changes in roles for aviation professionals requiring work across multi-disciplinary teams to support collaborative decision-making.

HP considerations are embedded in key oversight and investigation responsibilities and activities and through safety intelligence garnered via detailed analysis and understanding of HP contributing factors to accidents, serious incidents, and incidents. Consideration of HP influences needs to be taken across all aspects of aviation safety, including systems and process as well as occurrence contributing factors. HP is an integral part of safety management and is necessary to understand, identify and mitigate risks as well as optimise the human contribution to safety. This has been reiterated through the [ATSB Safety Watch](#) which identifies the HP consideration of fatigue impairment with 'improving the management of fatigue' as a priority area of improvement in aviation based on safety investigations.

Historically, the human contribution to aviation safety largely focused on individuals' errors and violations adversely impacting safety. More recently, there has been a focus on the positive contribution to safety, resilience, and efficiency made by individuals. Integrating HP into safety management provides a framework to ensure systematically identification and analysis of HP issues for mitigation considerations. Assessing risks associated with HP can be more complex than assessing the risk factors associated with technology or the environment.

3.3.2   Australia's organisational challenges

Challenges, including emerging issues, comprise such things as concepts of operations, developing or emerging technologies, public policies, business models or ideas that might impact aviation safety in the future, but for which insufficient data exists to complete risk analysis. Due to the lack of data, challenging issues cannot automatically be assessed as presenting operational safety risks.

However, it is important we recognise these challenges in our safety enhancement initiatives, to be able to proactively identify any hazards early, collect the relevant data to assess the extent of the

risk and develop controls to mitigate potentially adverse impacts to aviation safety, while still maximising any opportunities for beneficial safety gains.

Australia has identified the following additional national challenges:

1. Workforce capabilities and capacity
2. Enhancing State aviation safety intelligence
3. Safe integration of emerging technologies.
4. Enhancing and enabling infrastructure for current and future needs.

Workforce capabilities and capacity

Career attractiveness across aviation roles from pilots to regulatory oversight and investigator roles has been in decline for decades and further damaged by the COVID-19 pandemic. In Australia following the pandemic, approximately one third of the workforce left the aviation sector[2]. A loss of skilled labour to other industries, countries, and the lack of attractiveness of other roles in the industry places systemic strain on Australia's aviation safety regime and its effective implementation. Furthermore, it is likely Australia's aviation skill shortage will continue, or even worsen. Labour shortages are likely to be a fixture of the industry for some time to come, being a multi-faceted challenge without a simple solution. Beyond workforce capacity issues there are increasing changes identified regarding capabilities of our workforce creating a challenge.

In the short to medium-term, continued growth in skilled aviation worker demand could exacerbate labour shortages. Limited availability of skilled labour, notably aircraft maintenance engineers, pilots, air traffic controllers and safety risk management personnel, may unequally impact parts of industry, particularly regional aviation. While workforce issues are partly cyclical, prolonged shortages could structurally damage some areas of the industry. There is also the need to ensure personnel supplied by third party and outsourced workforce elements are appropriately trained and qualified to support current and future needs of the industry.

Ensuring a sustainable skilled workforce that includes support roles within industry and SSP agencies will be a key enabler, and training frameworks will need to evolve to respond to changing aviation requirements. As aviation evolves, the changing skills needed adds further complexity to the aviation workforce regarding capabilities. As new aviation technology and systems are introduced there is the potential for new hazards and risks contributing to accidents and incidents. The capabilities and subject matter expertise in accident investigation and regulatory oversight will need to be considered to ensure lessons are learned to prevent repeat accidents.

The qualified technical personnel necessary to support SSP agencies and industry into the future will need to be carefully considered in workforce planning. The introduction of new technology requires new regulations, procedures, and processes to support safe and effective adoption.

Therefore, ongoing collaboration by State agencies with the Department of Education and Workplace Relations (DEWR), and service providers will be important to preserve and promote critical aviation industry capabilities across multiple aviation industry sectors.

Enhancing State aviation safety intelligence

Safety intelligence is the outcome of analysing safety data and information to support decision making. At a State level this allows for the interpretation of safety data and analysis to draw conclusions, make decisions, and take actions to enhance aviation safety.

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[2] Australian Aviation Green Paper: Towards 2050. Department of Infrastructure, Transport, Regional development, communications, and the Arts website

Through enhancing our safety intelligence, we can rapidly evaluate existing data patterns and trends, and potentially discover new patterns or emerging trends. This allows us to better respond to identified safety risks and augment existing safety management processes that support system-wide risk management and safety oversight functions.

To enhance State safety intelligence this requires the amalgamation and sharing of State safety data and information, building upon safety data and information governance to ensure all SSP agencies have access to safety information that can be used to inform decision making and risk management.

Australia has established a governance structure that is inclusive of relevant Australian Government agencies and ensures oversight of all SSP and NASP activities. Australia will review and monitor the SSP governance framework to ensure alignment of agency activities, the sharing of safety performance data for enhanced safety intelligence across the State, and that the requirements of the SSP are being met.

Building upon our current SSP and NASP structures and activities Australia will continue to look for opportunities to advance its safety data access and sharing abilities to better inform aviation safety and risk management. This includes monitoring advances in machine learning and artificial intelligence uses for data gathering and analysis; consistent comparison of safety data and safety information, and sharing safety information both across agencies and with the industry. While also encouraging industry service providers to provide the State with voluntary safety data and information sharing.

Safe integration of emerging technologies

Developments in technology in the aviation sector have the potential to produce productivity benefits and reduce infrastructure costs. It is essential our settings are right to encourage adoption in Australia to develop the opportunities rapid technological change presents for aviation growth, while also managing safety and security concerns.

RPAS and AAM

As RPAS and AAM technology improves, new models will accelerate their use in Australia. Aviation safety and air traffic management issues require active management to ensure RPAS and AAM operations are safely integrated into Australian airspace alongside conventional crewed flight operations.

While RPAS and AAM may be considered within the same category they are developing and entering the industry at differing paces. The responses required for the safe integration of these two types of operation will need to have regard to this different rate of adoption.

Artificial intelligence (AI) technology

AI is a broad term used to describe technology that can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environment within which they operate[3]. While the concept of AI has been in existence since the 1950s, its development has significantly accelerated in the last decade, including in the aviation domain.

AI is not only changing the way aircraft operate, it is transforming nearly every aspect of aviation on the ground, too. As AI and machine-learning (ML) technology have matured in recent years, the aviation industry has explored ways to capitalise on it by making processes more efficient and often

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[3] EASA: Artificial intelligence roadmap 2.0, May 2023. European Union Aviation Safety Agency website.

safer. However, the deployment of AI in aviation also poses new challenges and questions that need to be addressed to ensure our aviation industry benefits from the potential of AI while safeguarding aviation safety. There is a need in the immediate term to better understand the potential opportunities and challenges that may be posed to both State agencies and industry service providers from generative AI.

Aircraft energy sources emerging technology

The trial and introduction of electric, hybrid-electric and hydrogen propulsion systems have the potential to power future aviation, providing benefits in terms of cost and environmental impact. Electric powered aircraft using battery electric propulsion systems are initially aimed at replacing conventional fuel powered piston and turbine engines and have the benefit of removing aircraft design constraints inherent with internal combustion engines. Hybrid-electric conversions, which convert conventionally powered aircraft into aircraft powered by both conventional fuel and electric power sources are also being considered.

Hydrogen aircraft use hydrogen-powered fuel cells to power electric motor-driven propellers in smaller planes or burn hydrogen to power jet engines in larger aircraft. Current indications are that hydrogen-powered aircraft are unlikely to enter widespread deployment before 2035, but they are being considered to replace or supplement fleets of smaller jet aircraft in the medium- to long-term.

Currently there is an increase in the global uptake of sustainable aviation fuel (SAF), but with limited global production demand is likely to surpass supply. The CSIRO Sustainable Aviation Fuel Roadmap[4] suggests Australia is well placed to produce and scale SAF feedstocks and contribute to a SAF industry in the Asia Pacific region in the future.

With uncertainty around viability and deployment timeframes of these technologies, the optimal types of longer-term policy interventions to ensure aviation safety are unclear. However, as these technologies mature, further investigation and development of policy and regulatory options will be necessary to ensure aviation safety outcomes are maintained irrespective of fuel types used.

Enhancing and enabling infrastructure for current and future needs.

Australia's forecast air traffic growth, particularly at major airports, is expected to drive demand for infrastructure and services. Investments in infrastructure by airline, air traffic management, aviation rescue and firefighting service and airport operators can not only increase capacity and improve efficiency, but also generate safety benefits.

The ongoing digital transformation of aviation has resulted in an increasing reliance on various information systems to efficiently manage essential tasks such as flight operations systems, air traffic management, airport operations and other critical safety and operational functions. The benefits digital systems bring also introduces new risks, including cyber security and concerns regarding data trustworthiness. With the increasing threat of cyber security attacks on critical aviation infrastructure there is a need to improve its resilience now and into the future, while also bolstering the integrity of our aviation data and information. At the State level and working in collaboration with industry there is a need to review policies and best practices that can result in trusted, resilient, and secured infrastructure, digital systems, and information among all aviation stakeholders.

Australia does not currently certify heliports and vertiports, as these types of aerodromes do not fall under CASR Part 139.

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[4] Commonwealth Scientific and Industrial Research Organisation (CSIRO), Sustainable Aviation Fuel Roadmap (2023), CSIRO website

Heliports are a specific type of helicopter landing site, which may have one or more helipads, with facilities for passenger handling such as a terminal building. It may also include facilities such as a hangar, refuelling and lighting. They are however subject to State and Territory, and local government planning laws and requirements. A helicopter landing site may also be contained within a certified aerodrome.

The development of a 'vertiport' network, from which AAM aircraft will operate, is one of the most significant infrastructure requirements for AAM. Initially, existing regional airports and helipads could be upgraded to accommodate AAM aircraft. There may also be the need to consider operations to and from ships and offshore platforms. These upgrades could improve operating economics for regional airports by facilitating the integration of AAM aircraft into existing aviation infrastructure. However, this also becomes a consideration for the increasing complexity of airspace and aerodromes, as already indicated in section 3.3.1, as an important consideration in the construction of vertiports.

3.3.3 Ageing aircraft fleet

The average age of the Australian piston engine, general aviation aircraft is about 40 years old. Older aircraft are predominant in Australia's small air transport sector, particularly in regional and remote areas. While large transport aircraft are generally newer, older aircraft will remain a large part of Australia's general aviation and aerial work fleets at least over the short term.

Older aircraft can pose challenges to airworthiness assurance and the adoption of emerging technology for aircraft energy sources and aviation industry carbon reduction initiatives. This includes through reduced aircraft reliability, airframe degradation and metal fatigue, more demanding and costly maintenance, and costs associated with retrofitting new technology to improve environmental performance (carbon reductions), piloting, and air traffic management.

Australia's regional fleet is aging, with many aircraft over 20 years old. These aircraft can remain in service for years to come with adequate spares and proper maintenance but will likely need to be replaced or substantially refurbished in the medium to long-term.

Fleet ageing and the associated risks are likely to be exacerbated with the increasing complexity of shared airspace as replacing or retrofitting aircraft can be cost prohibitive. Any risks posed by ageing aircraft fleet will need to be considered in the development of appropriate risk mitigation measures.

4. NASP goals, objectives, and indicators

4.1 Australia's safety goals

Australia's safety goals represent our desired overarching safety aims or outcomes and are supported by our safety objectives. These goals and objectives stem from the aviation safety risks and challenges outlined in Section 3 of the NASP. Australia's safety goals, and their alignment with the GASP global safety goals and AP-RASP regional priorities, are outlined in Figure 1.

4.1.1 Goal 1 - Improve the safety of Australian aviation operations across all sectors.

Goal 1 seeks to achieve continuous reduction of operational safety risks faced by Australian SSP stakeholders (including industry) and reflects the ICAO G-HRCs. While Australia has a good safety record against the G-HRCs within large aeroplane CAT, there is the need to remain vigilant and to constantly be monitoring these ever-present high-risk categories within both our CAT and non-CAT operations.

4.1.2   Goal 2 - Strengthen Australia's safety oversight and investigation capabilities.

Goal 2 seeks to improve Australia's organisational ability, oversight, and investigative capabilities. Ensuring that Australia's aviation safety oversight and investigation functions are effective, robust, and align with ICAO standards and practices, and keep pace with industry and technological advances. Australia will continue to effectively implement the eight ICAO CEs and ensure the State oversight, aviation investigation, and SSP governance structures are appropriate to meet State organisational challenges.

4.1.3   Goal 3 - Enhance the effectiveness of Australia's State Safety Programme through safety intelligence.

Goal 3 seeks to ensure the continued effectiveness of Australia's SSP, ensuring across agencies we are developing and enhancing safety intelligence. Enhanced safety intelligence is used to better inform decision making and provide a greater picture of our aviation safety risks. Moving our safety enhancement initiatives and oversight into a more proactive approach towards safety performance and risk management. To ensure that hazards in Australia's aviation operating environment are proactively identified, and related risks assessed and mitigated as low as reasonably practicable.

4.1.4   Goal 4 - Increase collaboration at global and regional levels to enhance aviation safety.

Goal 4 seeks to support both global and regional States to strengthen their safety performance and outcomes through enhanced collaboration by Australia. This includes ensuring we maintain our global collaborative status to allow for enhanced sharing of safety lessons and intelligence for proactive global aviation safety. Additionally, to enhance Australian collaboration with regional partners through recognised platforms, sharing Australia's safety experiences and expertise.

4.1.5   Goal 5 - Enhance greater safety programme collaboration between Australian industry, industry associations and State agencies.

Goal 5 seeks to enhance greater collaboration between industry service providers and State agencies to further leverage safety promotions, education, and communication capabilities across Australia aviation. This includes enhancing the sharing of safety lessons learned at a whole of industry level, supported by industry associations and fostering a positive safety culture and strengthen cooperation among industry stakeholders.

4.1.6   Goal 6 - Ensure Australia has the appropriate aviation infrastructure to support safe operations.

Goal 6 seeks to ensure that Australia has the appropriate infrastructure to support safe operations, this includes both physical and digital supporting systems that overall create Australia's aviation infrastructure. It is linked to Australia's obligations under the ICAO GANP and seeks ongoing investment in Australia's air navigation and airport core infrastructure to maintain compliance with safety standards both currently and into the future.

Figure 1 - Australia's safety goals and their alignment with global and regional priorities

GASP Goals	**1.** Achieve a continuous reduction of operational safety risks	**2.** Strengthen States' safety oversight capabilities	**3.** Implement effective State Safety Programmes		**4.** Increase collaboration at the regional level	**5.** Expand the use of industry programmes and safety information sharing networks by service providers	**6.** Ensure appropriate infrastructure is available to support safe operations
AP-RASP Goals	**1.** Reduce operational risks	**2.** Improve States' safety oversight & compliance	**3.** Consistent & effective SMS & SSP	**4.** Data-driven regulatory oversight			**5.** Enhanced aviation infrastructure
State Safety Goals	**1.** Improve the safety of Australian aviation operations across all sectors.	**2.** Strengthen Australia's safety oversight and investigation capabilities	**3.** Enhance the effectiveness of Australia's State Safety Programme through safety intelligence.		**4.** Increase collaboration at global and regional levels to enhance aviation safety.	**5.** Enhance greater safety programme collaboration between Australian industry, industry associations and State agencies	**6.** Ensure Australia has the appropriate aviation infrastructure to support safe operations

4.2 Safety objectives

Each safety goal has one or more safety objectives associated with them. Safety objectives define a desired strategic safety outcome related to each safety goal.

Our safety objectives provide broad measurable outcomes to help achieve our safety goals and drive safety performance against specific identified risks or challenges. Each of our safety objectives have been designed to provide specific, measurable, achievable, and relevant directions for performance towards achieving our overarching safety goals and improve Australia's aviation safety performance.

4.3 Safety performance indicators

Each safety objective is accompanied by tactical safety performance indicators (SPIs) to measure Australia's performance and provide evidence on whether desired outcomes are being achieved. SPIs provide us a tactical parameter relating to our safety objectives, are a reference point to monitor our safety data and enhance our safety intelligence capabilities.

Safety performance monitoring occurs through collecting safety data and information from various sources across the SSP agencies. Safety performance monitoring is an ongoing activity, as safety risks and availability of data change over time so too does the ability to monitor and manage our safety performance.

Each SPIs is supported through safety performance targets (SPTs) or safety performance trends (i.e., a reduction or increase, depending on the nature of the SPI). SPTs represent the level of performance considered to be acceptable for that specific indicator.

Some SPIs are better suited to be defined as a trend to target continuous safety performance improvement, such as to reduce the number of events, rather than used to define an absolute target. Within our safety performance trending SPIs there are additional alert levels set to identify when the trended performance is moving outside of acceptable standards. Each of the relevant safety governance committees and SSP agencies are responsible for the monitoring of their specific SPI maintain the reporting trends and alert levels. These can be adapted to address changes in acceptable performance over time as part of our SSP continuous performance.

Australia's safety goals, safety objectives, and SPIs are outlined in Table 1.

4.3.1   Accident rate

ICAO considers the accident rate for CAT operations (above 5,700 kilograms) as a primary safety indicator in the global air transport system.

Australia considers this accident rate to be a reactive SPI and has broadened the definition to better understand the safety of the air transport system, by including fatal and non-fatal accidents across CAT and non-CAT operations, serious incident rates, runway safety events and number of ground fatalities.

Airservices and BITRE data is used to determine the number of departures to determine accidents rates. ATSB data is used to assess the number of accidents, serious incidents, and incidents. The ATSB definitions[5] used to differentiate between accidents, serious incidents, and incidents are consistent with ICAO Annex 13 – *Aircraft Accident and Incident Investigations* requirements.

Within the NASP accident, serious incident and incident data is used primarily as lagging (reactive) SPIs to monitor our performance against internationally recognised benchmarks for actual safety performance of a State.

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[5] ATSB Occurrence classification and taxonomy: aircraft accident, serious aircraft incident, and aircraft incidents definitions (https://www.atsb.gov.au/avdata/terminology#atsboccurrencecategorytaxonomy0)

Table 1 - Australia's safety goals, objectives, indicators, and targets.

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives (SO)	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Australia's operational safety risks (per section 3.3.1)	**Goal 1:** Improve the safety of Australian aviation operations across all sectors. *(Where Australia has State oversight responsibility)*	**SO1.1:** Maintain a 3-year moving average decreasing trend of accidents[6].	(a) Fatal accident rate per million departures (CAT, crewed)	Zero fatal accidents	CASA
			(b) Accident rate per million departures (CAT, crewed)	A stable or reducing accident rate*	
			(c) Number of fatalities (commercial aviation^, crewed)	A stable or reducing number of fatalities*	
			(d) Number of accidents (commercial aviation^, crewed)	A stable or reducing number of accidents*	
			(e) Number of fatalities (non-commercial aviation^, crewed)	A stable or reducing number of fatalities*	
			(f) Number of accidents (non-commercial^, crewed)	A stable or reducing number of accidents*	
			(g) Number of ground fatalities	Zero ground fatalities resulting from aircraft operations.	
			(h) Accident rate per registered[7] RPA. (Uncrewed (Remotely Piloted Aircraft [RPA]))	A stable or reducing uncrewed accident rate.	
			(i) Number of fatal accidents (Uncrewed).	Zero fatal accidents.	
		SO1.2: Maintain a 3-year moving average decreasing trend of serious incidents[8].	(a) Serious incident rate per million departures (CAT, crewed).	A stable or reducing serious incident rate*	CASA
			(b) Number of serious incidents (commercial aviation^, crewed)	A stable or reducing number of serious incidents*	
			(c) Number of serious incidents (non-commercial^, crewed)	A stable or reducing number of serious incidents*	

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* Comparative to the monthly average of 2014-23.

^ Commercial aviation includes the aviation activities of aerial work and flight training excluding CAT activities. While non-commercial consists of sports and pleasure, recreational aviation, and other activities, excluding CAT activities.

[6] According to the accident definition within ICAO Annex 13 and Transport Safety Investigation Regulations Part 2.

[7] According to the CASA RPA registration requirements but excluding micro (under 250g) and excluded RPA's (as per the *Civil Aviation Safety Regulations 1998*).

[8] According to the serious incident definition within ICAO Annex 13 and Transport Safety Investigation Regulations Part 2.

SO1.3: Maintain a 3-year moving average decreasing trend of runway safety-related[9] events.	(a)	Runway safety events (including accident, serious incident, and incidents[10]) rate per million departures (Controlled aerodromes)	A stable or reducing event rate*	CASA
	(b)	Number of runway safety events (including accident, serious incident, and incidents[9]) (Uncontrolled aerodromes)	A stable or reducing number of events*	
SO1.4: Maintain a 3-year moving average decreasing trend of midair collisions (MAC) and airspace separation events.	(a)	MAC accident and serious incident rate per million departures (CAT, Crewed)	Zero MAC	CASA
	(b)	Number of MAC accidents and serious incidents (commercial aviation^, crewed)	Stable or reducing number*	
	(c)	Number of MAC accidents and serious incidents (non-commercial^, crewed)	Stable or reducing number*	
	(d)	Airspace events[11] rate per million departures (CAT, Crewed)	Stable or reducing event rate*	
	(e)	Number of airspace events (commercial aviation^, crewed)	Stable or reducing number of events*	
	(f)	Number of airspace events (non-commercial^, crewed)	Stable or reducing number of events*	
	(g)	The number of distinct RPA detected in the aerodrome no fly zone.	Stable or reducing number of distinct RPA detections comparative to the monthly average of 2020-23.	
SO1.5: Maintain or increase Australia's air navigation safety performance.	(a)	ATS attributable IFR-IFR loss of separation per 100 000 IFR flights.	Stable or reducing event rate*	Airservices & Defence
	(b)	ATS attributable Runway Incursions per 100 000 runway movements.	Stable or reducing event rate*	

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* Comparative to the monthly average of 2014-23.

^ Commercial aviation includes the aviation activities of aerial work and flight training, excluding CAT activities. While non-commercial consists of sports and pleasure, general aviation, and other activities.

[9] Runway safety-related events are as per the ATSB occurrence category taxonomy of Runway Events, including the following: Runway excursions, Runway incursions, Depart/Approach/Land wrong runway, and Runway undershoot, but excludes Runway events Other.

[10] According to the ATSB Occurrence classification and taxonomy: aircraft accident, serious aircraft incident, and aircraft incidents definitions

[11] Airspace events includes the ATSB occurrence category taxonomy of Airspace, including aircraft separation, airspace infringement, ANSP operational error, breakdown of coordination, operational non-commercial and encounter with RPA. While Events includes all occurrences classifications of: aircraft accident, serious aircraft incident, and aircraft incidents definitions (https://www.atsb.gov.au/avdata/terminology#atsboccurrencecategorytaxonomy)

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives (SO)	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Challenges: Workforce capabilities and capacity, And Enhancing State safety intelligence	**Goal 2:** Strengthen Australia's safety oversight and investigation capabilities	**SO2.1:** Enhance Australia's safety management oversight capabilities of Service Providers Safety Management Systems (SMS).	(a) Completion rates of SMS Assess and Approve training programs for all CASA SMS inspectors.	95% of all active inspectors involved in SMS oversight to have completed and be current in SMS Assess and Approve training.	CASA
			(b) Completion rates of SMS introduction training for all CASA regulatory staff.	95% of all CASA regulatory staff have completed and are current in SMS introduction training.	
			(c) Completion rates for Human Performance in Safety Management training programs for CASA inspectors.	95% of all active inspectors involved in SMS oversight to have completed required HP training (initial and recurrent).	
		SO2.2: Enhance and continue to maintain Australia's regulatory oversight technical inspectors' capabilities.	(a) Completion rates of mandatory technical training.	95% of all inspectors have completed mandatory technical training relevant to their role.	CASA
		SO2.3: Enhance and continue to maintain Australia's aviation safety investigators technical capabilities.	(a) Completion rates of initial/induction mandatory technical training for accident and incident investigations	100% of all mandatory technical initial/induction training completed within 12 months of commencement in role.	ATSB
			(b) Completion rates of recurrent/refresher mandatory technical training for accident and incident investigations	95% of all active aviation safety investigators to have completed required recurrent/refresher mandatory technical training.	
		SO2.4: Improve the completion of ATSB investigations in a timely manner	(a) ATSB investigation reports published, and safety issues relayed to safety owners.	Median time to complete short, Defined and Systemic investigations are within timeframes as detailed in the ATSB's PBS.	ATSB
		SO2.5: Improving CASAs oversight activities to monitor compliance and performance of Service Providers SMS.	(a) Percentage of SMS oversight activities undertaken to evaluate compliance with SMS Part 119 and Part 138 requirements against planned surveillance.	90% of planned SMS oversight activities completed.	CASA
			(b) Percentage of SMS Part 119/138 oversight activities resulting in non-	Monitoring and trend reporting only to enhance safety intelligence with analysis	

		compliance/non-conformance findings being issued.	provided to inform State for oversight surveillance undertaken	
	SO2.7: Maintain or improve the effectiveness of Australia's aviation safety regime in accordance with ICAO SARPS	(a) Percentage of corrective action plans (CAPs) completed.	100% actioned within agreed time	USOAP-CMA working group
		(b) Number of ICAO significant safety concerns	Nil ICAO Significant Safety Concerns	
	SO2.8: Monitoring aviation service providers compliance with regulations.	(a) NOP Planned Surveillance program: Percentage of planned surveillance activities undertaken within identified scheduled.	90% of NOP planned surveillance activities completed within schedule.	CASA

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Challenge: Enhancing State safety intelligence	**Goal 3:** Enhance the effectiveness of Australia's State Safety Programme through safety intelligence.	**SO3.1:** Enhancing SSP performance through SEI actions being accomplished and implemented.	(a) Percentage of SEI actions completed within defined timeline	90% of NASP SEI actions completed in accordance with defined timeline	SSP-CAT
			(b) Number of SEI actions requiring adjusted delivery timelines	Less than 5% of SEI actions requiring adjusted delivery timelines	
		SO3.2: Enhancing ongoing state agency SSP collaboration through SSP governance meeting attendance.	(a) Percentage of SSP governance meetings held (based on annual planned schedule)	90% of SSP governance meetings conducted (based on annual schedule)	Infrastructure
			(b) Participation at each SSP governance meeting by SSP agencies	All required agency members participating[12] in each SSP governance meeting	
		SO3.3: Safety issues identified in ATSB investigations are addressed	(a) Percentage of all safety issues identified in ATSB aviation investigations addressed.	In line with targets detailed in the ATSB's PBS.	ATSB
		SO3.4: Maintaining risk identification and analysis activities to inform the State risk intelligence and decision making.	(a) Number of sector safety risk profiles (SSRP) workshops conducted against planned.	100% completion of all planned SSRPs workshops	CASA
			(b) Timely publication of SSRPs	All SSRPs published within 2 months of workshop	
		SO3.5: Enhance and continue to maintain knowledge and awareness of the SSP and NASP across all SSP agencies.	(a) Completion rates of SSP/NASP training programs for all SSP Agency staff.	95% of all SSP agency aviation staff to have completed required SSP/NASP training.	SSP-CAT

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[12] Member participation includes through meeting attendance, briefings, input or feedback.

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Global, Regional and Australia's operational safety risks	**Goal 4:** Increase collaboration at global and regional levels to enhance aviation safety.	**SO4.1:** Improve the sharing of best practices in safety management, safety data and analyses, safety investigations, and search and rescue among global and regional platforms.	(a) Australian representation at safety related ICAO meetings, panels and working groups.	At least ≥90% of meetings attended (defined by annual Strategic Review)	SSP-CAT
			(b) Percentage of regional aviation safety capacity building requests received via regional platforms and undertaken by Australian SSP agencies.	Monitoring and trend reporting; with aim to maintain or increased level of support offered by Australian SSP agencies to region partners.	Infrastructure
		SO4.2: Maintaining effective oversight activities of Foreign Aircraft operating into Australia.	(a) Number of Safety Assessment of Foreign Aircraft (SAFA) oversight activities undertaken as part of European Union Ramp Inspection Programme.	80% of planned activities conducted	CASA
			(b) Number of safety findings issued during Safety Assessment of Foreign Aircraft (SAFA) Ramp Inspection Programme.	Monitoring and trend reporting only to enhance safety intelligence with analysis provided to inform State for oversight surveillance undertaken.	

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Risk: Australia's operational safety risks Challenges:	**Goal 5:** Enhance greater safety programme collaboration between Australian industry, industry	**SO5.1:** Improve engagement with industry to support the continuous improvement of an efficient and effective aviation safety regulatory framework	(a) Percentage of significant regulatory changes publicly consulted, and outcomes informed by industry feedback	100% of significant regulatory changes publicly consulted on.	CASA
		SO5.2: Improving industry engagement with SSRPs to support the continuous	(a) Percentage of SSRP workshops with industry participation	100% of workshops include industry representative attendance	CASA

Workforce capabilities and capacity, And Enhancing State safety intelligence	associations and State agencies.	identification and monitoring of sector related risks			
		SO5.3: Maintaining and ensuring industry engagement with SSP working groups[13]	(a) Percentage of SSP WG meetings with industry participation[14]	100% industry participation in SSP WG meetings with required industry membership	SSP-CAT
		SO5.4: Promotion of safety education through improved collaboration between SSP agencies via the Interagency Aviation Safety Promotions Working Group (IASPWG).	(a) Number of joint agency safety education activities and initiatives completed per year	i. Minimum of 4 IASPWG meetings held annually. ii. 100% of planned and agreed joint safety education activities and initiatives delivered each year.	IASPWG
		SO5.5: Maintain or improve Airservices safety program maturity evaluation	(a) Airservices Civil Air Navigation Services Organisation (CANSO) maturity assessment score	To achieve CANSO maturity level D	Airservices
		SO5.6 Improving industry awareness, engagement and collaboration with key safety initiatives, campaigns, and outcomes	(a) Attendance at industry association conferences and meetings, representation at annual safety conferences including AAA, RAAA, AAAA, AAUS, SafeSkies, and AHIA Rotortech conference.	CASA representation at 100% of major industry conferences.	CASA
			(b) Participation of industry and industry associations in Aviation Safety seminars, webinars, and safety campaigns.	90% of planned seminars and webinars conducted.	
			(c) Support industry to deliver key safety programs aligned with key safety priorities and identified risks.	Offer and provide scholarships aligned to key safety initiatives. Continue to offer and provide safety sponsorship opportunities for industry and encourage collaboration.	

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[13] SSP working groups as per documented in Australia's SSP Annex 1
[14] Only where industry forms part of membership as per documented in Australia's SSP Annex 1

| | | | (d) Attendance at key industry airshows and other events. | CASA represented at a minimum of 5 events annually. | |
| | | | (e) Delivery of safety promotion and education to enhance awareness within industry of safety factors relating to G-HRC and national safety risks. | Maintaining or increasing level of safety promotions and education campaigns to industry. | SSP-CAT |

Australian safety risk or challenge	Australian Safety Goal	Safety Objectives	Safety Performance Indicators	Safety Performance Targets or Trend	Agency or SSP Forum
Risk: Australia's operational safety risks Challenge: Enhancing and enabling infrastructure for current and future needs.	**Goal 6:** Ensure Australia has the appropriate aviation infrastructure to support safe operations	**SO6.1:** Maintain or enhance SAR system effectiveness for the timely location and rescue of survivors of aircraft distress incidents.	(a) Percentage availability of the COSPAS-SARSAT satellite distress beacon system for the Australian Flight Information Region (FIR)	100% availability for the Australian (FIR)	AMSA
		SO6.2: Reduce the unnecessary activation of the SAR system	(a) Percentage of false Emergency Locator Transmitter (ELT) alerts	Reduction in rate of false ELT alerts, including portable ELT alerts	AMSA
			(b) Percentage of unnecessary emergency phases declared due to failure of pilots to report by SARTIME expiry	Reduction in failure to cancel by SARTIME error rate	
			(c) Percentage of unnecessary emergency phases declared due to failure of pilots to report by SARWATCH time.	Reduction in failure to report by SARWATCH error rate	
		SO6.3: Maintain an increasing trend of air navigation and aerodrome infrastructure that meet relevant ICAO Standards.	(a) Percentage of the 16 high priority Block 0 and 1 elements defined in the Australian Air Navigation Plan (NANP) implemented.	100% of the elements implemented in alignment with APAC Air Navigation Plan defined milestone dates.	Airservices

			(b) Number of infrastructure-related air navigation deficiencies, against the GANP	Zero air navigation deficiencies	

4.4   Aviation safety roadmap

The aviation safety roadmap comprises an action plan of SEIs designed to help Australia achieve its NASP safety goals. It is divided into Operational (OPS) and Organisational (ORG) components in line with the GASP, Global Aviation Safety Roadmap and AP-RASP. A summary of Australia's aviation safety roadmap is included at Table 2.

Each SEI comprises specific actions that Australia intends to undertake to improve State safety system processes and performance. Unlike the NASP Safety objectives and SPIs which monitor and measure our current safety performance, the SEIs are designed to provide continuous improvements to our supporting safety systems and processes towards enhancing our overall safety performance capabilities.

The OPS roadmap (Appendix A) details Australia's SEIs to meet global, regional, and national goals related to the continuous reduction of operational safety risks, including risk management activities associated with ICAOs G-HRC items.

The ORG roadmap (Appendix B) details Australia's SEIs associated with Australia's safety oversight capabilities and the ongoing improvement of Australia's SSP, including industry service provider's SMS implementation and oversight.

The initial NASP roadmap SEIs focused on establishing and implementing enhanced oversight systems and support SSP processes. This second NASP incorporates lessons learned and works towards continuous improvement of our SSP systems and processes to further enhance our safety performance, oversight and supporting processes.

Despite the breakdown of the roadmap into components, the SEIs should not be viewed as stand-alone activities. In many cases, they are interrelated and serve to meet several goals simultaneously. Therefore, the SEIs in the ORG roadmap may be linked to multiple NASP goals.

Figure 2: Demonstrates the relationship between Australia's Safety goals, objectives, SPIs, SEIs and actions.

Table 2 - Australian aviation safety roadmap summary

Goal	ID	Safety Enhancement Initiative (SEI)
1. Improve the safety of Australian aviation operations across all sectors	1.1	Mitigate contributing factors to the risk of CFIT
	1.2	Mitigate contributing factors to the risk of LOC-I
	1.3	Mitigate contributing factors to the risk of MAC
	1.4	Mitigate contributing factors to the risk of Runway Safety events.
	1.5	Safe integration of the rapidly evolving RPAS sector into the Australian aviation operations.
	1.6	Safe integration of the rapidly evolving AAM sector into the Australian aviation operations.
2. Strengthen Australia's safety oversight and investigation capabilities	2.1	Ensure Australia's civil aviation safety regulatory regime is optimised for aviation safety performance, and where practical for the Australian aviation environment, aligned to the standards and practices of ICAO and leading aviation countries.
	2.2	Ensure Australia's aviation safety system and safety oversight capability are responsive to new or emerging threats and trends.
	2.3	Improvement of industry compliance with SMS requirements.
	2.4	Enhance and maintain qualified technical personnel to support effective safety oversight and investigations.
	2.5	Safe integration of artificial intelligence (AI) into Australian aviation.
3. Enhance the effectiveness of Australia's State Safety Programme through safety intelligence.	3.1	Ensure the continuous improvement of Australia's SSP and the associated governance.
	3.2	Design a SSP Safety Intelligence (SI) framework.
	3.3	Enhancing proactive safety intelligence and use of risk modelling capabilities.
4. Increase collaboration at global and regional levels to enhance aviation safety.	4.1	Collaboration with other States and Service Providers on the safe integration of emerging technology.
	4.2	Strategic collaboration with regional partners to enhance safety in a coordinated manner.
5. Enhance greater safety programme collaboration between Australian industry, industry associations and State agencies.	5.1	Identify and sharing safety management best practices with Industry Service Providers and Associations.
	5.2	Enhancing safety issues communication and dissemination of safety awareness messaging.
	5.3	Strategic collaboration with key aviation stakeholders to support proactive safety management
6. Ensure Australia has the appropriate aviation infrastructure to support safe operations	6.1	Enhanced enabling services capabilities to provide greater safety outcomes and performance.
	6.2	Optimised, resilient, and efficient aerodrome services through scalable and flexible delivery.
	6.3	Optimised, safe, and efficient use of Australian airspace through a single national air traffic system.
	6.4	The strategic review and reform of Australia's airspace.

4.5.1   Roadmap structure

Each SEI is presented in a standardised format using the template at Figure 3 and aligns with GASP and AP-RASP requirements as shown at Figure 3.

Figure 3 - Australian aviation safety roadmap SEI template

NASP Goal	*NASP Goal that the defined SEI supports.* *For further details on the NASP goals and objectives refer to Table 1.*		
Safety Enhancement Initiative	*Unique identifier for SEI: Title of SEI*		
		Responsible Agency	**Timeline**
Actions	*Action to be undertaken in support of the SEI.* *Each action is assigned a unique identifier based on the SEI ID.*	*Agency responsible for each action.*	*Proposed timelines for key milestones, deliverables, or completion of each action.*
National risk or challenge area	*Demonstrates SEI alignment to an identified National risk or challenge area.*		
AP-RASP Reference	*Details any related RASP priority areas / Targets / actions.* *Demonstrates NASP alignment to AP-RASP.*		
GASP Reference	*Details any related GASP Goals / Targets / SEIs.* *Demonstrates NASP alignment to GASP.*		

5.   Safety performance measurement

The ability to measure and report on Australia's safety performance is vital to determine the success of NASP strategies. Performance of each NASP safety goals and objectives is measured against metrics (SPIs) that are aligned to, but expanded upon, those identified in the GASP. Each SPI has a defined benchmark of either a target (SPT) or trended monitoring with alert levels. Details on the safety objectives and SPIs are identified in Table 1.

5.1   SSP agencies data analysis

Data collected by SSP agencies based on their legislative requirements and practical needs is used to support Australia's safety goals. Agencies that collect and analyse aviation safety data include:

- CASA*

- ATSB*

- Airservices*

- Infrastructure (BITRE)*

- AMSA; and

- Defence*.

* Primary aviation safety data collecting agencies.

The primary aviation safety data collecting agencies regularly meet through the Joint Aviation Agencies Safety Analysis Coordination Group (JAASACG) to facilitate the exchange of data and analysis.

Industry generally has access to better and more timely data, which can be useful to inform individual operators of pertinent safety risks when used in conjunction with an effective SMS. Implementing data sharing programmes have the potential to improve the range of data shared by industry with SSP agencies to enhance State-level risk-based decisions.

5.2   Sharing safety data

SSP stakeholders collect information that can contribute to understanding safety performance and identify safety-related trends. Sharing safety information among SSP stakeholders helps support risk management at a national level and ensure Australia's safety performance can be readily measured. The aviation data catalogue is one mechanism used with the intention to support the sharing of aviation data and safety intelligence.

Government agencies can often access information based on legislated (mandatory) or voluntary reporting from industry. SSP stakeholders should make every effort to share safety information in a timely manner, working within the extant limits required by legislative and privacy considerations.

Further information on the types of safety data collected from industry can be found in the SSP section 2.4: *Hazard identification and safety risk assessment*.

5.3   Monitoring and oversight

SSP governance meetings and working groups play a key role in monitoring and delivering NASP safety goals, objectives, SPIs and SEIs.

Each SPI and SEI action is tracked via an appropriate SSP agency or governance forum, to monitor the achievement of defined State safety goals and status of planned initiatives. SSP agencies or governance forums may be assigned responsibility to provide supporting safety information or conduct certain analysis. Relevant responsibilities are defined in Table 1, and throughout Appendix A and Appendix B.

5.4   Actions on not meeting Australia's safety goals.

Should Australia not meet, or is not expected to meet, its safety goals, objectives, or initiatives, the relevant SSP agency or governance forum will seek to identify root causes and take reasonable measures to mitigate any critical safety risks as soon as reasonably practicable. Concurrently, performance will be escalated by the responsible SSP agency or governance forum in accordance with the governance structure and escalation process detailed in the SSP.

Appendix A   Australian OPS Roadmap

NASP Goal	1. Improve the safety of Australian aviation operations across all sectors.		
Safety Enhancement Initiative (SEI)	**1.1:** Mitigate contributing factors to the risk of Controlled Flight into Terrain (CFIT).		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
1.1.1	Promote the wider use of certified terrain awareness and warning system (TAWS) and non-certified TAWS beyond the regulatory requirements.	Infrastructure & CASA	Ongoing (with biannual update reporting)
1.1.2	Promote greater awareness of approach risks. Through: • Reviewing current approach risks identified and documented. • Review current communications of approach risks for relevance and continuous improvement opportunities.	Airservices & CASA	Ongoing (with annual update reporting)
1.1.3	Ensure and validate the timeliness of updates and accuracy of Electronic Terrain and Obstacle Data (eTOD) within the Integrated Aeronautical Information Package (IAIP).	Airservices	Ongoing (with annual update reporting)
1.1.4	Understanding the effectiveness of mitigating CFIT through the trending and analysis of CFIT events occurrence reporting.	CASA	2024 to develop process. Then ongoing (with biannual update reporting)
1.1.5	Through data analysis of occurrence reporting and accident/incident investigations identify and report on contributing factors to CFIT (i.e., adverse environmental conditions, approach design and documentation, phraseology, specific human factors performance influencers etc).	ATSB	2026
1.1.6	Implementation of Satellite-based Augmentation System to enable vertically guided and continuous descent approaches	Airservices	2028
National risk or challenge area	Australia's operational safety risks		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks Regional HRC 3: CFIT		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks. Global Aviation Safety Roadmap SEI 1. CFIT (States): Mitigate contributing factors to CFIT accidents and incidents.		

NASP Goal	1. Improve the safety of Australian aviation operations across all sectors.
Safety Enhancement Initiative (SEI)	**1.2:** Mitigate contributing factors to the risk of Loss of Control Inflight (LOC-I)

SEI Actions		Responsible agencies or SSP forum	Timeline
1.2.1	Understanding the effectiveness of mitigating LOC-I through the trending and analysis of LOC-I events occurrence reporting.	CASA	2024 to develop process. Then ongoing (with biannual update reporting)
1.2.2	Through data analysis of occurrence reporting and accident/incident investigations identify and report on contributing factors to LOC-I (i.e., adverse weather, human performance influencers, Inadequate standard operating procedures, Inappropriate flight control inputs etc).	ATSB	2026
National risk or challenge area	Australia's operational safety risks		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks. Regional HRC 1: LOC-I.		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks. Global Aviation Safety Roadmap SEI 2. LOC-I (States): Mitigate contributing factors to LOC-I accidents and incidents		

NASP Goal	**1. Improve the safety of Australian aviation operations across all sectors.**		
Safety Enhancement Initiative (SEI)	**1.3:** Mitigate contributing factors to the risk of Mid-Air Collision (MAC)		
SEI Actions		Responsible agencies or SSP forum	Timeline
1.3.1	Promote the wider use of aircraft collision avoidance systems (ACAS) beyond the regulatory requirements	CASA	Ongoing (with biannual update reporting)
1.3.2	Encourage and promote the wider use of aircraft situational awareness tools beyond regulatory requirements (i.e., ADS-B in/out).	Infrastructure & CASA	Ongoing (with biannual update reporting)
1.3.3	Understand the effectiveness of mitigating MAC through the trending and analysis of MAC events occurrence reporting.	CASA	2024 to develop process. Then ongoing (with biannual update reporting)
1.3.4	Through data analysis of occurrence reporting and accident/incident investigations identify and report on contributing factors to MAC.	ATSB	2026
1.3.5	Ballina ATM service enhancement project: (a) to implement class D airspace architecture and an approach control service for Ballina airspace	Airservices	2025

	(b) explore systems that can detect and manage non-cooperative aircraft and surface vehicles; and (c) implement an aerodrome control service for Ballina Byron Gateway Airport		
1.3.6	Lowering of Class E airspace on the east coast of Australia to enhance safety of airspace by leveraging existing communication, surveillance infrastructure and resources to deliver enhanced services without ongoing increase in our service costs.	Airservices	Ongoing (with annual update reporting)
1.3.7	Conduct risk analysis of Commercial Air Transport operations near non-controlled aerodromes in Class G airspace.	CASA	2024
1.3.8	Through the pilot safety campaign, increase knowledge and understanding of non-controlled operations.	CASA	Ongoing (with biannual update reporting)
National risk or challenge area	Australia's operational safety risks National safety risk 2: Emerging concerns regarding risk of MAC involving non-CAT		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks. Global Aviation Safety Roadmap SEI 3. MAC: Mitigate contributing factors to MAC accidents and incidents		

		Responsible agencies or SSP forum	Timeline
NASP Goal	**1. Improve the safety of Australian aviation operations across all sectors.**		
Safety Enhancement Initiative (SEI)	**1.4:** Mitigate contributing factors to the risk of runway safety events. *Note*: Runway Safety Events includes the following ICAO CICTT runway safety categories: • Runway excursions (RE), • Runway incursions (RI), • Abnormal runway contact (ARC), • Ground Collision (GCOL) • Loss of Control on the Ground (LOC-G), and • Undershoot/Overshoot (USOS).		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
1.4.1	Understand the effectiveness of mitigating runway safety events through the trending and analysis of runway safety events occurrence reporting	CASA	2024 to develop process. Then ongoing (with biannual update reporting)
1.4.2	Through data analysis of occurrence reporting and accident/incident investigations identify and report on contributing factors to runway safety events.	ATSB	2026
1.4.3	Continue to review and promote procedures and training that supports situational awareness for controllers, pilots, and airside vehicle drivers to mitigate runway incursions.	Airservices & CASA	Ongoing (with annual update reporting)
1.4.4	Establish and implement requirements for a reporting format to assess and report runway	CASA	2024

	surface conditions in accordance with the ICAO Global Reporting Format (GRF).		
1.4.5	Development of a Visual Surveillance System (VSS) to provide air traffic controllers a view of obstructed areas of a manoeuvring area from the tower.	Airservices	2024
National risk or challenge area	Australia's operational safety risks		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks. Global Aviation Safety Roadmap SEI 4. RE: Mitigate contributing factors to RE accidents and incidents. Global Aviation Safety Roadmap SEI 5. RI: Mitigate contributing factors to RI accidents and incidents.		

NASP Goal	1. Improve the safety of Australian aviation operations across all sectors.		
Safety Enhancement Initiative (SEI)	**1.5:** Safe integration of the rapidly evolving RPAS sector into the Australian aviation operations.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
1.5.1	Work with industry associations to promote key safety lessons, from investigations and occurrences, from RPAS sector available data.	ATSB & CASA	Ongoing (with annual update reporting)
1.5.2	Consider new separation standards, which use new technologies, for RPAS-to-RPAS.	Airservices & CASA	Ongoing (with annual update reporting)
1.5.3	Consider standardised requirements for RPAS in controlled airspace.	Airservices & CASA	Ongoing (with annual update reporting)
1.5.4	Consult with all airspace users on the appropriateness of proposed rules for RPAS.	CASA	Ongoing (with annual update reporting)
1.5.5	Develop the framework and standards to support the implementation of Uncrewed Aircraft System (UAS) Traffic Management (UTM).	Airservices & CASA	Ongoing (with annual update reporting)
1.5.6	Develop standards for international RPAS operations and approvals, including SMS requirements.	CASA	Ongoing (with annual update reporting)
1.5.7	Continue to use RPAS (drone) detection technology and share data and information to inform safe integration of RPAS sector	CASA & Defence	Ongoing (with annual update reporting)
1.5.8	Develop and implement the Flight Information Management System (FIMS) to underpin the UTM	Airservices	2025
1.5.9	Use data from the RPAS (drone) detection technology to inform and deliver location-specific safety campaigns aimed at discouraging recreational drone use in 'no fly' areas	CASA & Defence	Ongoing (with biannual update reporting)
1.5.10	Use data and information from airspace reviews to inform and deliver location-specific campaigns where recreational drones post a risk to helicopter and scenic flights operating at lower levels.	CASA	Ongoing (with biannual update reporting)

1.5.11	Support and maintain the RPAS platform and third-party app integration for CASA-verified drone safety apps, until FIMs is operational.	CASA & Airservices	Ongoing (with annual update reporting)
1.5.12	Continued implementation and monitoring of drone safety campaigns targeting recreational drone flyers on the safety rules	CASA	Ongoing (with annual update reporting)
1.5.13	Conduct an analysis of the risk posed by recreational uncrewed aircraft (sub 25kg) (model aircraft) to crewed aircraft in Australia.	CASA	2024
1.5.14	Enhance UAS detection around civil controlled aerodromes	Airservices	Ongoing (with annual update reporting)
National risk or challenge area	Australia's operational safety risks. National organisation challenge 3: Safe integration of emerging technologies.		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks		

NASP Goal	**1. Improve the safety of Australian aviation operations across all sectors.**		
Safety Enhancement Initiative (SEI)	**1.6:** Safe integration of the rapidly evolving AAM sector into the Australian aviation operations.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
1.6.1	Review and monitor global progress of introduction of AAM for relevant policy consideration and its impact of safe integration within Australia.	CASA	2030
National risk or challenge area	Australia's operational safety risks. National organisation challenge 3: Safe integration of emerging technologies.		
AP-RASP Reference	AP-RASP Second Pillar: Continue to address operational safety risks effectively and establish effective safety risk management. Regional Goal I: Reduction in Operational Risks		
GASP Reference	Global Goal 1: Achieve a continuous reduction of operational safety risks		

Appendix B   Australian ORG Roadmap

NASP Goal	2. Strengthen Australia's safety oversight capabilities.		
Safety Enhancement Initiative (SEI)	**2.1:** Ensure Australia's civil aviation safety regulatory regime is optimised for aviation safety performance, and where practical for the Australian aviation environment, aligned to the standards and practices of ICAO and leading aviation countries.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
2.1.1	Introduce a contemporary continuing airworthiness (maintenance) scheme for aircraft used in non-scheduled air transport (ATCA) (previously 'charter') operations.	CASA	2026
2.1.2	Introduce a contemporary continuing airworthiness (maintenance) scheme for aircraft used in private, and aerial work.	CASA	2024
2.1.3	Develop policy and standards, recognising international alignment, to support the ongoing safe introduction and use of emerging technologies in aircraft energy sources.	CASA	2030
2.1.4	Improve the airworthiness regulatory environment through Airworthiness Regulatory Reform projects (Part 43 and ATCA) and providing capacity for a Part 21 project.	CASA	2026
National risk or challenge area	National organisational challenge 2: Enhancing State aviation safety intelligence. National organisation challenge 3: Safe integration of emerging technologies.		
AP-RASP Reference	Regional Goal II: Improvements to safety oversight and compliance. Regional Goal III: Effective SMS and SSP		
GASP Reference	Global Aviation Safety Roadmap ORG SEI 8. Consistent implementation of ICAO SARPs at the national level. Global Aviation Safety Roadmap ORG SEI 9. Continued implementation of and compliance with ICAO SARPs at the national level		

NASP Goal	**2. Strengthen Australia's safety oversight capabilities.**		
Safety Enhancement Initiative (SEI)	**2.2:** Ensure Australia's aviation safety system and safety oversight capability are responsive to new or emerging threats and trends.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
2.2.1	Implement a tiered requirement for SMS for RPAS operators, which are proportionate to risk and complexity	CASA	2028
2.2.2	Provide transparent, reporting on RPAS enforcement actions to promote corrective actions and lessons learned for both commercial and recreational RPA users.	CASA	2026
2.2.3	Maintain a system to record, track and resolve safety issues identified via accident and incident investigations, surveillance activities, safety reports and other means.	ATSB, Airservices & CASA	2025 to develop process. Then ongoing (with annual update reporting)

2.2.4	Maintaining research activities and updating technical personnel competencies to remain up to date with the state of emerging technologies.	ATSB & CASA	Ongoing (with annual update reporting)
2.2.5	Increase Air Traffic Management systems cyber security, digital systems, and information resilience.	Airservices	Ongoing (with annual update reporting)
National risk or challenge area	National organisation challenge 1: Workforce capabilities and capacity. National organisation challenge 3: Safe integration of emerging technologies.		
AP-RASP Reference	Regional Goal II: Improvements to safety oversight and compliance Regional Goal III: Effective SMS and SSP		
GASP Reference	Global Aviation Safety Roadmap ORG SEI 2. Development of a comprehensive regulatory oversight framework. Global Aviation Safety Roadmap ORG SEI 9. Continued implementation of and compliance with ICAO SARPs at the national level		

NASP Goal	**2. Strengthen Australia's safety oversight capabilities.**		
Safety Enhancement Initiative (SEI)	**2.3:** Improvement of industry compliance with SMS requirements		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
2.3.1	Develop and implement a harmonized common safety management system (SMS) regulation across service providers in accordance with the Annex 19 SMS framework.	CASA	2028
2.3.2	Ensure all relevant CASA Inspectors are trained on revised SMS harmonised regulations and ensure all CASA inspectors who perform SMS oversight activities are trained in SMS oversight.	CASA	2028
2.3.3	Develop and continuously update industry guidance material to assist with SMS implementation and continuous improvements.	CASA	2027
2.3.4	Develop tracking and reporting capabilities for all SMS oversight activities undertaken to evaluate compliance with SMS requirements. Including reporting on SMS oversight activities resulting in non-compliance/non-conformance findings being issued. (i.e. beyond Part 119 and Part 138 SPI reporting)	CASA	2025
2.3.5	Document and implement SMS surveillance and oversight processes and mechanisms to: i. periodically assess all elements of the SMS of service providers, ii. monitor the safety performance of service providers, and iii. to ensure the safety performance of service providers (via SMS surveillance activities) is used to inform safety performance measurement and monitoring at SSP/NASP level.	CASA	i) 2025 ii) 2026 iii) 2027
National risk or challenge area	National organisational challenge 1: Workforce capabilities and capacity. National organisational challenge 2: Enhancing State aviation safety intelligence.		

AP-RASP Reference	Regional Goal II: Improvements to safety oversight and compliance Regional Goal III: Effective SMS and SSP
GASP Reference	Global Aviation Safety Roadmap ORG SEI 2. Development of a comprehensive regulatory oversight framework. Global Aviation Safety Roadmap ORG SEI 9. Continued implementation of and compliance with ICAO SARPs at the national level

NASP Goal	2. Strengthen Australia's safety oversight capabilities.		
Safety Enhancement Initiative (SEI)	2.4: Enhance and maintain qualified technical personnel to support effective safety oversight		
SEI Actions		Responsible agencies or SSP forum	Timeline
2.4.1	Implement training policies and programmes for technical personnel and verify that the type and frequency of training successfully completed (i.e., initial, recurrent, specialised, and on-the-job training) are sufficient to acquire and maintain the required qualifications and level of competence corresponding to the assigned duties and responsibilities of technical personnel	ATSB & CASA	Ongoing (with Quarterly update reporting)
2.4.2	Develop a process for assessing changing needs for qualified technical personnel requirements and develop procedures to update hiring, retention, and training of personnel needs	ATSB & CASA	Ongoing (with Quarterly update reporting)
2.4.3	Establish an effective system to identify and track qualifications and training of existing technical personnel and to ensure qualifications remain current	ATSB & CASA	2027
2.4.4	Conduct a review of CASA's airworthiness personnel technical capability against required competencies and establish an external engineering support network.	CASA	2027
2.4.5	Develop and implement a Human Factors refresher course for all inspectors to capture updates to processes and lessons learnt.	CASA	2026
National risk or challenge area	National organisational challenge 1: Workforce capabilities and capacity.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP Regional Goal IV: Data-driven regulatory oversight		
GASP Reference	Global Aviation Safety Roadmap ORG SEI-5 – Qualified technical personnel to support effective safety oversight. Global Aviation Safety Roadmap ORG SEI-10 – Strategic allocation of resources to enable effective safety oversight.		

NASP Goal	2. Strengthen Australia's safety oversight capabilities.		
Safety Enhancement Initiative (SEI)	2.5: Safe integration of artificial intelligence (AI) into Australia aviation		
SEI Actions		Responsible agencies or SSP forum	Timeline

2.5.1	Develop a strategy to establish an AI roadmap that identifies all SSP agencies affected domains for safe integration and use of generative AI/ML in aviation.
	
	AI roadmap considerations could include:
	  i. the key opportunities and challenges created by the introduction of AI in aviation,
	  ii. any key cyber security and digital information system trustworthiness and reliability risks,
	  iii. how this may impact the SSP agencies in terms of organisation, processes, and regulations; and
	  iv. proposed actions that the SSP agencies should undertake to meet those challenges.
		Infrastructure	2028

National risk or challenge area	National organisational challenge 3: Safe integration of emerging technologies: including RPAS, AAM, AI, and aircraft energy sources.		
AP-RASP Reference	Regional Goal I: Reduction in Operational Risks. Regional Goal V: Enhanced aviation infrastructure (physical and institutional).		
GASP Reference	Global Aviation Safety Roadmap ORG SEI-21 – Advancement of safety risk management at the national level		

NASP Goal	**3. Enhance the effectiveness of Australia's State Safety Programme (SSP) through safety intelligence.**		
Safety Enhancement Initiative (SEI)	**3.1:** Ensure the continuous improvement of Australia's SSP and the associated governance.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
3.1.1	Review and update all SSP governance working groups/forums terms of reference, ensuring NASP SPIs and SEIs monitoring and reporting requirements are clearly allocated to the relevant working groups/forums.	Infrastructure	2024
3.1.2	Develop an annual SSP and NASP performance reporting (on safety objectives, SPIs and SEIs) mechanism for dissemination across all SSP agencies for alignment and inclusion in agency level corporate planning.	Infrastructure	2024

3.1.3	Revision of the SSP to ensure remains consistent with ICAO and Australia's approach to aviation safety and aligns with Annex 19 Amendment.
	Amendment considerations include:
	  i. Specific consideration should be given to human performance implications.
	  ii. Creating of an ongoing review period for the SSP
	  iii. Develop and document a SSP Management of Change process, to proactively manage changes at the State level, to ensure that the safety risks incurred by the changes are properly controlled while the desired outcomes are achieved.
		Infrastructure	2026-2027

3.1.4	Review of the SSP Emergency Response Planning and Crisis Management Plan (per Annex 19 Amendment) in liaison with NEMA to ensure national response planning continues to capture the roles and responsibilities of relevant SSP agencies and effectively addresses potential impacts on aviation safety.	SSP-CAT (in liaison with NEMA)	2026
3.1.5	Establish and document a SSP safety data and safety intelligence governance policy and strategy, for within and across SSP agencies.	Infrastructure	2025
3.1.6	Consider the need for a State Aviation Safety Risk Register and supporting processes.	SSP-CAT	2025
National risk or challenge area	National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-17 – Availability of safety data and safety information to support safety management activities at the national level (step 1) Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2) Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level		

		Responsible agencies or SSP forum	Timeline
NASP Goal	**3. Enhance the effectiveness of Australia's SSP through safety intelligence.**		
Safety Enhancement Initiative (SEI)	**3.2:** Design a SSP Safety Intelligence (SI) framework.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
3.2.1	Develop a strategy for the development of SI framework roadmap. Which brings together all SSP agencies safety data, information, and analysis for greater visibility, supporting management of safety and decision-making. SI roadmap considerations could include: i. Identify resources (people and systems) needed to support safety intelligence collection and processing, advanced data analysis, risk modelling and information-sharing capabilities. ii. Enhancing data sharing connectivity and integration among the aviation safety databases of the State, including the mandatory occurrences reporting system, voluntary safety reporting systems, safety audit reports and aviation system statistics (traffic volume, weather information, surveillance outcomes, etc.) iii. Develop proactive risk analysis and modelling capabilities to support monitoring system safety issues and accident/incident prevention.	Infrastructure	2028

	iv. Develop and document within the SSP a process to evaluate the effectiveness of actions taken to manage State safety risks and resolve safety issues.		
National risk or challenge area	National organisational challenge 1: Workforce capabilities and capacity. National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-17 – Availability of safety data and safety information to support safety management activities at the national level (step 1) Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2) Global Aviation Safety Roadmap SEI-19 – Acquisition of resources to increase the proactive use of risk modelling capabilities. Global Aviation Safety Roadmap SEI-20 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities. Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

		Responsible agencies or SSP forum	Timeline
NASP Goal	**3. Enhance the effectiveness of Australia's SSP through safety intelligence.**		
Safety Enhancement Initiative (SEI)	**3.3** Enhancing proactive safety analysis and use of risk modelling capabilities.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
3.3.1	Enhance identification, trend analysis and reporting on contributing factors leading to accidents, serious incidents, and incidents.	ATSB, Airservices & CASA.	2026 to develop process. Then ongoing (with biannual update reporting)
3.3.2	Conduct detailed data trending analysis of accidents, serious incidents, and incidents for identification of precursor or contributing factors to events prior to G-HRC (i.e., increased data taxonomy and analysis for contributing factors for incident reporting)	CASA	2026 to develop process. Then ongoing (with biannual update reporting)
3.3.3	Develop a more proactive data-driven, targeted approach of identifying precursor events of safety risks.	ATSB, Airservices & CASA	2026 to develop process. Then ongoing (with biannual update reporting)
National risk or challenge area	National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2). Global Aviation Safety Roadmap SEI-19 – Acquisition of resources to increase the proactive use of risk modelling capabilities.		

	Global Aviation Safety Roadmap SEI-20 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities. Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.

NASP Goal	4. Increase collaboration at global and regional levels to enhance aviation safety.		
Safety Enhancement Initiative (SEI)	**4.1** Collaboration with other States and service providers on the safe integration of emerging technology		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
4.1.1	Work collaboratively with international regulatory authorities to ensure type certification and production standards for advanced air mobility aircraft and RPAS are internationally harmonised.	CASA	Ongoing (with annual updated reporting)
4.1.2	Collaborate and monitor international safety regulatory developments and standards around the deployment of sustainable aviation fuels (SAFs).	CASA	Ongoing (with annual update reporting)
National risk or challenge area	Australia's operational safety risks. National organisational challenge 3: Safe integration of emerging technologies: including RPAS, AAM, AI, and aircraft energy sources.		
AP-RASP Reference	Regional Goal I: Reduction in Operational Risks.		
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner. Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	4. Increase collaboration at global and regional levels to enhance aviation safety.		
Safety Enhancement Initiative (SEI)	**4.2** Strategic collaboration with regional partners to enhance safety in a coordinated manner		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
4.2.1	Responding to requests and state letters from AP-RASG/APRAST for provision of sharing safety best practices and safety outcomes across the region. With reporting via types of requests received and responses/actions taken by each agency through the SSP-CAT on an "as requests received" basis.	Infrastructure	Ongoing (with biannual update reporting)
4.2.2	Contribute information on operational safety risks, including SSP/NASP safety performance indicators and emerging issues relating to AP-RASP	Infrastructure	Ongoing (with biannual update reporting)
4.2.3	Participation in regional working groups and collaboratives to enhance search and rescue learnings and capabilities within the region. (including ICAO/IMO JWG-SAR, IMO NCSR SC and ICAO APSAR/WG)	AMSA	Ongoing (with annually update reporting)
National risk or challenge area	Australia's operational safety risks.		

AP-RASP Reference	Regional Goal I: Reduction in Operational Risks. Regional Goal IV: Data-driven regulatory oversight.
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner. Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.

NASP Goal	**5. Enhanced safety promotions programme collaboration between Australian Industry Service Providers, industry associations and State agencies.**		
Safety Enhancement Initiative (SEI)	**5.1** Identify and sharing safety management best practices with Industry service providers and industry associations.		
SEI Actions		**Responsible agencies or SSP forum**	**Completion**
5.1.1	Through the National Aviation Agency Communication Working Group and other forums, identify and share safety information and best practises.	CASA	Ongoing (with annual update reporting)
5.1.2	Enhanced promotion of the understanding and benefits of positive safety culture/ 'just culture' across industry service providers (including crewed and uncrewed industry).	CASA, ATSB, Airservices	Ongoing (with biannual update reporting)
5.1.3	Enhanced promotion of Human Performance safety management considerations for enhanced safety performance across industry service providers (including crewed and uncrewed industry)	CASA, ATSB, Airservices	Ongoing (with biannual update reporting)
5.1.4	Airport Collaborative Decision Making (A-CDM): Optimise airport operations through enhanced collaboration with airport operators and associations by sharing real-time data and insights.	Airservices	2025
National risk or challenge area	Australia's operational safety risks. National safety risk 3: Human performance operational safety impacts. National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner. Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2). Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	**5. Enhanced safety promotions programme collaboration between Australian Industry Service Providers, industry associations and State agencies.**		
Safety Enhancement Initiative (SEI)	**5.2** Enhancing safety issues communication and dissemination of safety awareness messaging.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
5.2.1	Enhancing human performance/human factors safety lessons learned through provision of safety lessons with identified cross-industry safety issue	ATSB	2026

	considerations, for agencies, industry service providers, and industry associations.		
5.2.2	Greater emphasis on post-investigation functions such as leveraging data and publishing findings to a broad audience to affect changes in behaviour and policy that improve transport safety outcomes.	ATSB	2025
5.2.3	Enhance work with RPAS Industry associations to promote key safety lessons from available data.	ATSB & CASA	Ongoing (with annual update reporting)
5.2.4	Encourage and promote sharing of information from industry to State agencies to assist in the development and refinement of aviation safety risk profiles.	CASA	Ongoing (with biannual update reporting)
National risk or challenge area	Australia's operational safety risks. National safety risk 3: Human performance operational safety impacts. National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner. Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2). Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	**5. Enhanced safety promotions programme collaboration between Australian Industry Service Providers, industry associations and State agencies.**		
Safety Enhancement Initiative (SEI)	**5.3** Strategic collaboration with key aviation stakeholders to support proactive safety management.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
5.3.1	Encourage sharing of voluntary safety data analysis and safety information sharing between industry service providers and State agencies to enhance proactive and state level risk management.	ATSB & CASA	Ongoing (with annual update reporting)
5.3.2	Support industry awareness and understanding that within an SMS specific consideration should be given to human performance implications to safety management.	ATSB & CASA	Ongoing (with annual update reporting)
5.3.3	Renewing Australia's commitment to providing ATSB staff to participate as auditors in ICAO's USOAP CMA program	ATSB	2025
5.3.4	Increase participation by industry in accident investigation courses (RMIT) teaching best practice methodologies to enhance capability for identifying safety lessons from accidents and incidents.	ATSB	Ongoing (with annual update reporting)
National risk or challenge area	Australia's operational safety risks. National safety risk 3: Human performance operational safety impacts. National organisational challenge 2: Enhancing State aviation safety intelligence.		
AP-RASP Reference	Regional Goal III: Effective SMS and SSP. Regional Goal IV: Data-driven regulatory oversight.		
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner.		

	Global Aviation Safety Roadmap SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2). Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.

NASP Goal	**6. Ensure Australia has the appropriate aviation infrastructure to support safe operations.**		
Safety Enhancement Initiative (SEI)	**6.1** Enhanced enabling services capabilities to provide greater safety outcomes and performance.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
6.1.1	Sustainable and scalable Aviation Rescue Firefighting Services (ARFFS) through evolving fleet and fleet renewal programs.	Airservices	Ongoing (with annual update reporting)
6.1.2	ARFF Services Capability Uplift Program aims to enhance our ways of working through the application of new and emerging technologies and systems in the Aviation Rescue Fire Fighting service environment.	Airservices	Ongoing (with annual update reporting)
6.1.3	Enterprise Network Modernisation Program: Developing a next generation telecommunications network architecture for service expansion to deliver greater network resilience and reliability for our industry.	Airservices	2025
National risk or challenge area	Organisational challenge 4: Enhancing and enabling infrastructure for current and future needs.		
AP-RASP Reference	Regional Goal V: Enhanced aviation infrastructure (physical and institutional)		
GASP Reference	Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	**6. Ensure Australia has the appropriate aviation infrastructure to support safe operations.**		
Safety Enhancement Initiative (SEI)	**6.2** Optimised, resilient, and efficient aerodrome services through scalable and flexible delivery.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
6.2.1	Introduction of Digital Aerodrome Services (DAS) enabling automated detection and alerting capabilities that will provide additional safety net to tower services.	Airservices	2026
National risk or challenge area	Organisational challenge 4: Enhancing and enabling infrastructure for current and future needs		
AP-RASP Reference	Regional Goal V: Enhanced aviation infrastructure (physical and institutional)		
GASP Reference	Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	**6. Ensure Australia has the appropriate aviation infrastructure to support safe operations.**		
Safety Enhancement Initiative (SEI)	**6.3** Optimised, safe, and efficient use of Australian airspace through a single national air traffic system.		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
6.3.1	OneSKY Program: Deliver a harmonised civil and military air traffic management system that enables us to meet Australia's air traffic management needs into the future, maintain Defence capability, and meet national security imperatives.	Airservices & Defence	2027
6.3.2	Uncrewed Aircraft Traffic Management development and integration into the existing Air Traffic Management system.	Airservices	2027
National risk or challenge area	Organisational challenge 4: Enhancing and enabling infrastructure for current and future needs		
AP-RASP Reference	Regional Goal V: Enhanced aviation infrastructure (physical and institutional)		
GASP Reference	Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

NASP Goal	**6. Ensure Australia has the appropriate aviation infrastructure to support safe operations.**		
Safety Enhancement Initiative (SEI)	**6.4** The strategic review and reform of Australia's airspace		
SEI Actions		**Responsible agencies or SSP forum**	**Timeline**
6.4.1	Conduct risk profiling assessments of specific locations and airspace volumes, and subsequent further investigation.	CASA	Ongoing (with biannual update reporting)
6.4.2	Conduct airspace reviews and aeronautical studies to determine the appropriateness of airspace classifications and the services and facilities provided.	CASA	Ongoing (with annual update reporting)
6.4.3	Implementation of remote Airservices towers to enhance airspace navigation support services and coverage. Planned for introduction in Canberra 2025, followed by Western Sydney in 2026.	Airservices	2026
6.4.4	Design and implement new airspace associated with new Perth and Melbourne runways and Western Sydney airport.	Airservices	Ongoing (with annual update reporting)
National risk or challenge area	Organisational challenge 4: Enhancing and enabling infrastructure for current and future needs.		
AP-RASP Reference	Regional Goal V: Enhanced aviation infrastructure (physical and institutional)		
GASP Reference	Global Aviation Safety Roadmap SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner. Global Aviation Safety Roadmap SEI-21 – Advancement of safety risk management at the national level.		

Appendix C   Key reference documents used to develop the NASP 2024-26

- ICAO GASP 2023-2025 Edition (Doc 10004)
- ICAO Global Aviation Safety Roadmap 2023-2025 Edition (Doc 10161)
- ICAO Basic Building Block (BBB) Framework, October 2022
- ICAO State Letter 23/18: Proposals for the amendments of Annex 19 and consequential amendments to Annexes 1; 6 Parts I and III; and 13.
- ICAO Manual on human performance for regulators (Doc 10151) First edition 2021.
- ICAO World Civil Aviation Report, Volume 6, 2023 edition
- AP-RASP 2023-2025 Edition
- RASG-APAC Annual Safety Report 2022
- Australian Aviation State Safety Programme 2021
- Australian National Aviation Safety Plan 2021-2023
- Australian Aviation SSP and NASP consultation: *Stakeholder issues and responses*, 2021
- Australian Aviation Green Paper: Towards 2050
- Australia Aviation Recovery Framework, December 2021
- Australia's Air Traffic Management Plan, 2017
- Airspace Risk and Safety Management Guide, May 2022
- Australian SSP Agencies Corporate Plans and Ministerial Statements of Expectations
- CASA Aviation Safety Scorecard and Aviation Safety Committee reporting
- CASA General Aviation Workplan, 2022
- General Aviation Advisory Network: *A New Strategy for the Australian General Aviation Sector*, December 2020
- Office of Airspace Regulation Strategic Work Plan, January 2023
- The Future of Australia's Aviation Sector: *Issues Paper* 2020
- The RPAS and AAM Strategic Regulatory Roadmap, 2022
- Emerging aviation technologies: *Nation aviation policy issues paper.* September 2020.
- The Sustainable Aviation Fuel Roadmap, CSIRO 2023
- Aviation White Paper: *Scenario Analysis of the Future of Australian Aviation*, Final Report September 2023.
- Creating our future transport and mobility workforce: *Understanding the workforce implications of transport digitalisation and automation in Australia*. Final report, February 2023.
- EASA Artificial Intelligence Roadmap 2.0, May 2023
- Data sourced from ATSB National Aviation Occurrence Database.