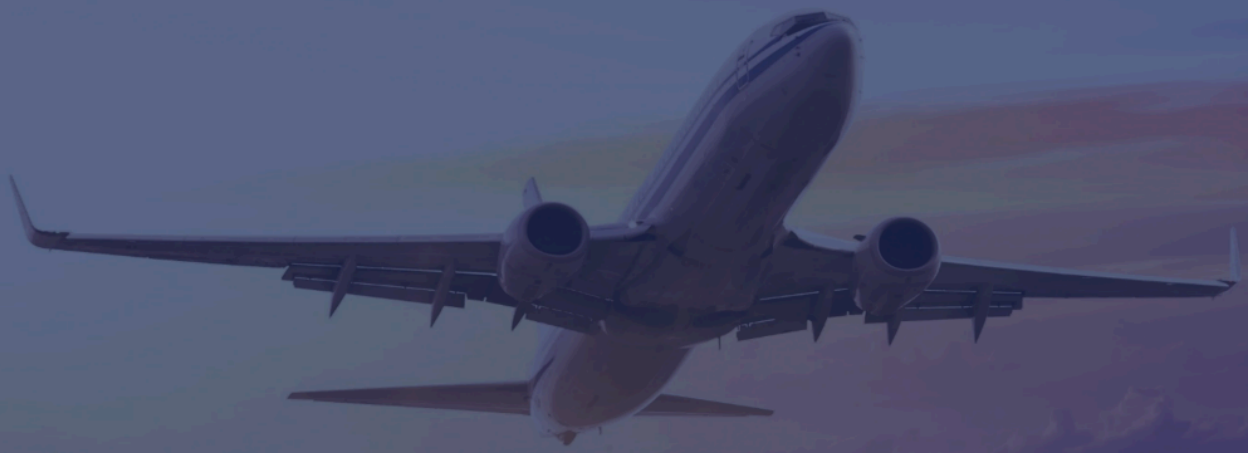
GACA
الهيئة العامة للطيران المدني
General Authority of Civil Aviation

الاستراتيجية الوطنية للطيران
SAUDI AVIATION STRATEGY



Kingdom of Saudi Arabia
National Aviation Safety Plan
(2025 – 2027)

Version 2 – issue 1

This document is intended for use by relevant parties involved in the implementation of the National Aviation Safety Plan in the Kingdom of Saudi Arabia. This document explains the concept of the National Aviation Safety Plan 2025-2027 in the Kingdom of Saudi Arabia. The General Authority of Civil Aviation, represented by the Aviation Safety and Environmental Sustainability Sector, is responsible for updating and maintaining this document, the scope of which is limited to aspects of aviation safety management in the Kingdom.

Contents

KSA National Aviation Safety Plan

Aviation is an important contributor to the economy in the KSA. Therefore, the KSA is committed to the continuous improvement of aviation safety through a national aviation safety strategy that is set out in the National Aviation Safety Plan (NASP). It is essential that all aviation stakeholders recognize that aviation safety must be the top priority for the aviation community.

Aviation has become safer over the years, brought about by innovations in technology, improvements to safety processes and focus on improvements in compliance and safety management. While globally fatal accidents are on the decrease, it is important to continue to upkeep safety and not take safety for granted.

Building on these foundations, the KSA NASP for (2025-2027) sets out our safety priorities and actions to keep aviation safe. GACA will work collaboratively with the National Transport Safety Center (NTSC) and other National Aviation Safety Committee (NASC) Members, and the aviation industry to implement the NASP.

A safe aviation system protects the public, passengers and the aviation industry as well as contributing to the economic development of the KSA. This can only be achieved through the commitment and actions by all aviation stakeholders.

All stakeholders shall consider the NASP as the national strategy for the continuous improvement of aviation safety in the Kingdom and contribute to the actions contained within.

It is important for all aviation stakeholders to review and support this National Aviation Safety Plan (NASP) and actively contribute to make the aviation system safer in the Kingdom.

Signed by:

GACA President
Abdulaziz A. Alduailej
10/12/2024

1. Purpose of the NASP

1.1 Relationship between the SSP and NASP

The NASP is a key output of an effective SSP. The SSP is a proactive approach national aviation safety risks. It includes the necessary governance, regulations, policies, processes, and procedures to maintain a safe aviation system. GACA fully implement an effective SSP by end of 2027 with supporting actions in the

This NASP sets out the strategic safety priorities and actions to improve aviation in the KSA. It addresses operational safety risks and issues identified nationally taking into consideration the global safety issues and risks detailed in the ICAO Aviation Safety Plan (GASP), and the regional safety issues and risks detailed in Middle East Regional Aviation Safety Plan (MID-RASP). However, it prioritises safety risks and issues over regional and global risks.
The actions listed in this NASP address the prioritised national safety issues and aims to enhance organizational capabilities related to effective safety This applies to GACA and other government agencies as well as the KSA industry.

The NASP actions have been developed with the objective of:

- Improving safety across the KSA aviation system,
- Addressing the most significant safety risks and issues,
- Implementing and continuously improving the SSP, and
- Continuous improvement of safety management.

1. Purpose of the NASP

1.2 NASP Governance and Monitoring of Actions

The NASP is a dynamic document that covers a 3-year period. It is reviewed every 2 years to ensure there is continuity between each updated version.

The National Aviation Safety Committee (NASC) is responsible for endorsing the NASP and ensuring that the necessary resources are made available to the government agencies to implement the actions in the NASP.

GACA is responsible for developing the NASP in collaboration with the SSP Working Groups, other Government agencies and the KSA aviation industry. GACA is also responsible for monitoring and reporting on progress on the actions in the NASP and providing summary reports to the NASC.

Actions in the NASP are allocated an owner with other key stakeholders identified. Key
stakeholders are those agencies and organisations that are either involved in the action or significantly impacted by the action. Many of the actions are the responsibility of GACA because they carry out the oversight of the KSA aviation industry and most actions in respect of the SSP are the responsibilities of GACA, but it is important to recognise that the NASC members and the KSA industry has a responsibility to contribute to many of the actions and the continuous improvement of aviation safety in the KSA.

The KSA aviation industry sector's companies should address any actions that are specific to their type of activity, service provision or organization. In addition, they should review the NASP and take into consideration the identified safety issues, contributing factors and risks as part of their own safety risk management activities.

1. Purpose of the NASP

1.3 Structure and Layout of the NASP

The NASP is designed to communicate the safety actions and priorities to improve safety in the KSA. It starts by setting out the operational context of the NASP with an overview of the KSA aviation system. Section 2 then addresses the management of safety risks, including Global High-Risk categories as these relate to fatal accidents and are global and regional priorities. It then continues to consider emerging issues and risks, followed by a focus on national priority aviation safety risks, which have been developed in collaboration with the KSA aviation industry.

Additional National safety issues and risks are also included for awareness. GACA will continue to monitor these to determine whether at any point, they need to be escalated into priority actions.

Section 4 considers management of strategic priorities, with a focus on the continuous improvement of the SSP. GACA, SSP Working Groups and other government agencies are responsible for most of the actions in this section, however, as it includes the State safety oversight system and the implementation of SMS, there are also some actions directly related to the KSA aviation industry.

The final section of the NASP includes the State safety objectives and the related State SPIs that will be monitored to measure the effectiveness of safety performance across the KSA aviation system and the achievement of the State safety objectives.

2. Managing Safety Risks

KSA State Safety Objective: SSO-1 No fatal accidents in commercial air transport where the KSA has State oversight responsibility.

To achieve this State Safety Objective the following section includes the identified operational safety risks and issues, and the associated actions that are being planned to address them that could prevent fatal accidents in the KSA. This includes potential contributing factors that Service Providers should consider as part of their SMS. These contributing factors have been identified from Global and Regional sources as well as feedback from the GACA and the KSA Aviation industry.

2.1 Global Aviation Safety Risks

The Global Aviation Safety Plan has identified 5 High Risk Category (HRC) accident outcomes. These HRCs have been identified as the most common fatal accident outcomes and as a result the KSA recognises that these should also be prioritised in the KSA. From the analysis of safety data and information, runway incursion and mid-air collision are considered to be the priority HRCs for KSA.

2. Managing Safety Risks

Runway Incursion (RI)

Runway Incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft. Although statistically very few runway incursions result in collisions, there is a high fatality risk associated with these events. Contributing factors may include:

- Use of non-standardized phraseology.
- Incorrect read back of an instruction (Air Traffic Controller failure to confirm understanding).
- Misunderstanding an instruction.
- Loss of situation awareness (flight crew and ground vehicle drivers).
- Airport layout design.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
RI-1 Review the recommendations in GAPPRI for application in KSA	GACA SSP Working Groups	Aerodrome Operators, ANSPs, Airline Operators, Ground Service Providers	31 January 2025	G1-SEI-03
RI-2 Carry out a survey on which GAPPRI recommendations have been implemented by Service Providers	GACA	Aerodrome Operators, ANSPs, Airline Operators, Ground Service Providers	30 April 2025	G1-SEI-03
RI-3 Industry to review the GAPPRI recommendations and consider which recommendations to implement	Industry	Aerodrome Operators, ANSPs, Airline Operators, Ground Service Providers	31 March 2025	G1-SEI-03
RI-4 Identify RI Hotspots in KSA	AGA SSP WG ANS SSP WG	GACA Aerodrome Operators, ANSPs, Airline Operators, Ground Service Providers	31 December 2025	G1-SEI-03
RI-5 Establishment of a National Runway Safety Team	GACA	Aerodrome Operators, ANSPs, Airline Operators, Ground Service Providers	30 June 2025	G1-SEI-03

2. Managing Safety Risks

Mid-Air Collision (MAC)

Mid-Air Collision refers to a collision between aircraft while both are airborne. There is also a high fatality risk associated with these events. Most occurrences reported relate to loss of separation and Traffic Collision Avoidance System (TCAS) Resolution Advisory (RA) warnings.

In the KSA this is becoming a more significant risk due to the increasing size and complexity of the aviation system. Contributing Factors may include:

- Air traffic control errors.
- Air traffic controllers' workload and fatigue.
- Communication errors between ATC and Pilot.
- Flight crew failing to follow TCAS instructions.
- Aircraft system malfunction (TCAS, Altimeters).
- Congested airspace.
- Mix of different airspace users operating at different speeds.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
MAC-1 Develop and publish the Saudi National Air Navigation Plan to meet the requirements of the GANP	GACA ANS SSP WG	ANS Aerodrome Operators Airline Operators Ground Service Providers	30 April 2025	G1-SEI-05
MAC-2 Establish the interfaces between the SNAP and the SSP Governance Structure	GACA ANS SSP WG	ANS	31 January 2025	G1-SEI-05
MAC-3 Fully apply the ICAO Manual on Civil-Military cooperation in Air Traffic Management (Doc 10088)	GACA ANS SSP WG	ANS, KSA Military aviation	31 December 2026	G1-SEI-05

2. Managing Safety Risks

Runway Excursion (RE)

Runway Excursion is a veer off or overrun off the runway surface during both take-off and landing. This is the most prevalent occurrence related to "runway safety". As opposed to previously described events, occurrences related to runway excursions have led, on average, to fewer fatalities. However, the reported occurrences relate to actual excursions rather than potential runway excursions so although the numbers are low the potential severity is high. Contributing factors may include:

- Unstabilized approaches that continue to land.
- Long landings.
- High sink rate.
- Runway surface contamination.
- Rushed and short vectored approaches.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
RE-1 Review the recommendations in GAPPRE for application in KSA	GACA SSP Working Groups	Aerodrome Operators, ANSPs, Airline Operators, Maintenance Organisations	31 January 2025	G1-SEI-02
RE-2 Carry out a survey on which GAPPRE recommendations have been implemented by Service Providers	GACA	Aerodrome Operators, ANSPs, Airline Operators, Maintenance Organisations	30 April 25	G1-SEI-02
RE-3 Industry to review the GAPPRE recommendations and consider which recommendations to implement	Industry	Aerodrome Operators, ANSPs, Airline Operators, Maintenance Organisations	31 March 2025	G1-SEI-02
RE-4 Operators to monitor and report to GACA unstabilized approaches that continue to land.	Operators	Aerodrome Operators, ANSPs, Airline Operators, Maintenance Organisations	30 June 2025	G1-SEI-02
RE-5 Establishment of a National Runway Safety Team	GACA	Aerodrome Operators, ANSPs, Airline Operators, Maintenance Organisations	30 June 2025	G1-SEI-02

2. Managing Safety Risks

Controlled Flight into Terrain (CFIT)

Controlled Flight into Terrain (CFIT) is an in-fight collision with terrain, water or obstacle without indication of loss of control. CFIT events are included in the NASP due to the high risk of fatality. CFIT is a more significant risk to helicopter operations in KSA due to the nature of the operational environment. Contributing factors may include:

- Pilot fatigue and disorientation.
- ILS malfunction or calibration.
- PAPI alignment with glideslope.
- Crew resource management.
- Adverse weather.
- Obstacles not appropriately documented (charts) or marked (lighting).
- Loss of situational awareness.
- Mountainous terrain.
- Aircraft system malfunction (Navigation equipment, TAWS or GPWS).
- Unpredicted weather and visibility changes enroute.
- Descending below weather minima.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
CFIT-1 Airports to engage with the local government offices on planning permission for buildings and other obstacles close to the flight path.	AGA SSP WG	Local town planning Airport operators GACA ANS	31 December 2025	G1-SEI-4
CFIT-2 Carry out periodic checks on the airport environment through aerodrome survey covering OLS and the eTOD areas.	GACA AGA SSP WG	Airport Operators ANS	31 December 2025	-
CFIT-3 Operators and ATOs to identify CFIT threats as part of their SMS and implement robust mitigation actions	Industry (Operators, ATOs)	Airline Operators ATOs Met providers CNS providers	31 December 2025	G1-SEI-4
CFIT-4 Implementation of RNAV (GNSS) / RNP-AR procedures to all runways not currently served by precision approach procedure	Industry (Operators)	Airlines Airport operators ANS	31 December 2026	G1-SEI-4

2. Managing Safety Risks

Loss of Control In flight (LOC-I)

Loss of Control In-fight is an extreme deviation from intended flight path. Occurrences categorised as LOC-I are events that lead or could lead to a non-recoverable loss of control. LOC-I accidents often have catastrophic results with very high risk of fatality; for this reason, it is included in this NASP. Contributing Factors may include:

- Pilot performance as a result of Human Factors.
- Inadequate flight crew training.
- Air traffic related such as wake turbulence.
- Malfunctioning and/or misunderstanding of flight deck automation.
- Aircraft system malfunction – In Flight Shut Down.
- Environment, including adverse weather conditions.
- Bird Strikes by large birds or large flocks of birds.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
LOC-1 Operators to identify LOC-I threats as part of their SMS and implement robust mitigation actions	Industry (Operators)	Airline Operators ATOs	30 June 2025	G1-SEI-01
LOC-2 ATOs to train student pilots on threat and error management in respect of LOC-I threats and recovery actions	Industry (ATOs)	Airline Operators ATOs	30 June 2025	G1-SEI-01
LOC-3 Operators to validate the effectiveness of LOC-I risk mitigations through the analysis of FDM and pilot reports	Industry (operators)	Airline Operators ATOs	30 June 2025	G1-SEI-01
LOC-4 Establishment of a National Wildlife Safety Committee	GACA	Airport operators, Airline Operators ANSP	30 June 2025	G6-SEI-01 A6

2. Managing Safety Risks

2.2 Emerging Issues and Risks

Emerging safety issues and risks are those that might impact safety in the future. Existing safety data and information is unlikely to exist and will have to rely on subject matter expertise with many assumptions being made. These issues and risks may include the introduction of new technologies, new business models or ideas that, while perhaps an outlier today, could mature and develop into a critical mainstream issue in the future or become a major trend in its own right.

For KSA this is focusing on the introduction of Advanced Air Mobility (AAM) operations and cybersecurity threats.

2. Managing Safety Risks

Advanced Air Mobility

The KSA is expected to be one of the first States to introduce Advanced Air Mobility. This will involve the introduction of new technology where globally there is limited experience and regulations. The introduction of this type of operation will need to address the aircraft, the vertiports and how they operate within the KSA airspace.

The introduction of such complex operations requires close collaboration and synergies between several stakeholders (aviation and non-aviation), including but not limited to GACA, Unmanned Aircraft System Traffic Management (UTM) service provider, Unmanned Aircraft System (UAS) service provider, ANS providers, Aerodrome, Vertiport operators, Communications, Space, and Technology Commission (CST),
Telecommunication providers, Saudi Authority for Data and Artificial Intelligence, urban development authorities, military and security agencies and Research and development entities.

Action	Owner	Stakeholders	Target Date	Link to GASP or RASP
AAM-1 Introduction of regulations to allow the introduction of advanced air mobility into the KSA	GACA	RPAS Operators ANS Airport Operators RPAS repair stations	30 June 2025	Not Applicable
AAM-2 Industry to present the safety case for safe operations of advanced air mobility operations into the KSA	RPAS Operators	GACA ANSPs Airport Operators RPAS repair stations	30 June 2025	Not Applicable
AAM-3 GACA to have established a suitable structure to enable the certification and oversight of advanced air mobility operations in KSA	GACA	RPAS Operators ANS Airport Operators RPAS repair stations	30 June 2025	Not Applicable

2. Managing Safety Risks

Cybersecurity

The aviation system is accelerating towards more digitalization. This implies that any exchange of information within any digital workflow of the aviation community needs to be resilient to information security threats which have consequences on the safety of flight or the availability of airspace and beyond.

It is essential that the KSA aviation industry, NTSC, NASC Members and GACA share knowledge and learn from experience to ensure systems are secure from the malicious intent of a cybersecurity attack.

Action	Owner	Target Date	Link to GASP or RASP
SEC-1 All Service Providers to comply with the National Cybersecurity Authority requirements and review their vulnerability to a cyber security attack that could impact aviation safety and to implement appropriate mitigations through their SMS	Industry	31 March 2025	G2-SEI-07

2. Managing Safety Risks

2.3 National Priority Safety Issues and Organizational Challenges

The following priority issues have been identified through safety data analysis, discussions between subject matter experts within GACA and from an industry workshop held to enable the KSA aviation industry to contribute to the NASP. It is important for all of the KSA aviation stakeholders to take into consideration these priority issues and where relevant to identify and implement actions to ensure that they do not negatively impact safety performance.

Those issues that are also considered Global and Regional Safety issues have been identified first but this does not necessarily correlate to the level of prioritisation for KSA.

Hazard / Safety Issue	Consequences	Background
Runway incursions ICAO HRC (Global and Regional safety issue)	Ground collisions Late Aircraft go arounds	There have been several near miss events in KSA by both vehicles and aircraft. Globally this is on the increase especially with the recent JAL accident at Haneda Airport. Actions defined in RI-1 to RE-5
Loss of separation events ICAO HRC (Global and Regional safety issue)	Mid-Air collision TCAS RA Adverse manoeuvre Personnel injury	Several loss of separation events have occurred in the KSA. With the increasing levels of traffic this is going to create more congestion. Actions defined in MAC-1 to MAC-3
Emerging technologies, including RPAS, AAM (Regional Safety issue)	Mid-Air Collision Ground Collision TCAS RA	Development of UTM Vertiports New technologies that are new to the aviation system with limited testing and regulations to keep up with the innovations. Actions defined in AAM-1 to AAM-3
Fatigue in aviation personnel (Regional Safety issue MID RASP G2-SEI-05)	Increase in errors and mistakes occurring and poor decision making. Runway Incursion Runway Excursion Mid-Air Collision CFIT Loss of Control inflight	Although there are working time limitations for flight crew, cabin crew and Air Traffic Controllers many aviation personnel such as maintenance engineers, ground handling personnel, air traffic engineering personnel do not have any limitations other than Government labour laws are not based on the safety risk of fatigue. Workforce shortages increase the pressure on organisation and personnel to extend working hours that increases the fatigue levels of their staff.

2. Managing Safety Risks

Increasing size and complexity of the KSA aviation activity putting pressure on the capacity and capability of the aviation system.	Goal conflicts between infrastructure changes and rapid expansion against safety performance goals Increased risk of a ground or mid-air collision	To recognise the rapid growth in the aviation system in KSA and the need for all stakeholders to balance the pressure to fully implement all of the infrastructure projects on time against the need to ensure that safety is not compromised during the transition and once fully implemented. The expansion includes new entrants to the industry, increasing mix of traffic types: seaplane operations (mixed land/sea operations), EVTOL and AAM aircraft, drones, helicopter operations, new airports, terminals and runways being constructed.
Adverse Weather including windshear	Loss of situational awareness CFIT Runway excursion Loss of control inflight Damage to aircraft equipment especially engines and ground equipment	Adverse weather events are on the increase in the Kingdom and are not always predictable and with the increased aviation activity this will put increased pressure on airspace and airport capacity during adverse weather events such as sandstorms.
Shortage of skilled aviation professionals	Dilution of skills Increased likelihood of human errors occurring that could result in a significant accident or serious incident.	The rapid expansion of the KSA aviation industry is putting a challenge on organisations to recruit and retain high calibre aviation professionals. This includes GACA recruiting and retaining inspectors.
Regulatory changes to adapt to EASA style regulations	Challenges to oversight processes during transition period	The transition to EASA style regulatory structure will impact the industry and GACA as it goes through the transition including training of inspectors and industry personnel. Action defined in SSOI-6

2. Managing Safety Risks

2.4 Other National Safety Issues and Organizational Challenges

The following safety issues and risks have been identified that and will continue to be monitored and analysed but currently are not considered to be priority aviation safety risks in the KSA. The KSA aviation industry are encouraged to consider any of these hazards and safety issues that are relevant to their activities within their SMS. It is important that occurrences (including near miss events) related to these safety issues are reported to GACA and if appropriate NTSC to improve the risk picture for the KSA SSP.

Hazard / Safety Issue	Consequences	Background
Dangerous Goods specifically related to lithium battery fires (Regional safety issue MID RASP G2-SEI-04)	Cabin fire and smoke Cargo hold fire	This is a global issue and although this has not resulted in a catastrophic accident on a passenger yet, lithium battery thermal runaway events are on the increase with limited risk controls in place.
GNSS Jamming and Spoofing. (Regional safety issue MID RASP G1-SEI-05A2)	Unintentional deviation from ATC Clearance Altitude / Level Busts CFIT due to GPWS interference Runway excursion or hard landing	The impact of GNSS jamming and spoofing is a significant risk in the region and especially in the south of KSA due to ongoing conflicts.
Military and civil aviation mixed operations at airports and in KSA Airspace (Regional safety issue G1-SEI-05)	Increased risk of a mid-air or ground collision	Mixed aviation traffic between fast jets and civil aviation and the increasing use of large drones by the military. Actions defined in MAC-3
Management of Human Factors (Regional safety issue MID RASP G2-SEI-05)	Working environments that make it easy for people to make errors and mistakes. Increased of errors and mistakes occurring and poor decision making.	This includes fatigue, working in high temperatures, commercial and time pressure, competence of personnel, Ramadan. Management play a vital role in ensure that the working environment enables staff to be able to complete their tasks effectively and safely.

2. Managing Safety Risks

Inaccurate weather information	Loss of situation awareness Unintentional VFR into IMC CFIT Windshear events	There is a need to improve the accuracy of weather information being provided to flight crew. This primarily focuses on sandstorms, lightning strikes and windshear events.
Diversity of nationalities and language proficiency	Miscommunication and poor team working resulting in errors and mistakes. This may also result in errors or mistakes not being identified and captured.	Although English proficiency levels are high in the KSA with most licensed aviation professionals the exposure is more limited to ground staff where there are multiple nationalities and no requirements for language proficiency.
Foreign operators operating during Hajj and seasonal demand on staffing levels	Airworthiness standards of some foreign aircraft used for Hajj and wet leased during other peak periods are not to the same standards as KSA registered aircraft and operate during a high-pressure period resulting in poor decision making and high workload	KSA GACARs and GACA ensure a high standard of aircraft are operated by KSA Operators. However, on occasions KSA Operators wet lease foreign aircraft in to support peak periods and aircraft shortages. This results in variable standards of foreign aircraft operating into the KSA with some of those aircraft and operators on other countries 'safety lists'.

3. Managing Strategic Priorities

This section focuses on the continuous improvement actions of the State Safety Program. This includes the State safety oversight system and SMS oversight. KSA is currently going through a transformation of the aviation system that in addition to the rapid expansion of Vision 2030, is a strategic priority for KSA to become a leader in aviation safety both and regionally. The actions in the NASP reflect that aspiration with the necessary resources and collaboration between all of the KSA Aviation stakeholders.

State Safety Objective SSO-2: To achieve continuous improvement in safety performance across the KSA aviation system through the effective implementation of safety management principles.

State Safety Objective SSO-3: To have implemented an effective SSP that ensures national aviation safety risks are being managed to an acceptable level.

State Safety Objective SSO-7: To ensure that dynamic changes in the KSA aviation system are continuously managed safely, efficiently and effectively.

3. Managing Strategic Priorities

3.1 SSP Implementation

KSA has established an SSP implementation plan to operationalise the SSP Document. Most of the implementation actions are planned to be completed by the end of 2025 but it is recognised that as processes are implemented, they still need to be fine-tuned before they are fully implemented.

Currently the KSA has an overall ICAO EI score of 89.61% and it is recognised that as the number of ICAO protocol questions has been amended, that to achieve an EI of 90% is still a good target level.

Action	Owner	Other Stakeholders	Target Date	Link to GASP or RASP
SSP-1 To fully implement the SSP	NASC	NASC Members	31 December 2026	SEI16A SEI16C
SSP-2 To self-assess the effectiveness of the SSP	GACA	None	31 December 2026	SEI-16B
SSP-3 To have implemented an effective SSP	GACA	None	31 December 2027	G3-SEI-01
SSP-4 To improve compliance with ICAO SARPS to achieve an average score of at least 90%	GACA	NTSC	30 June 2025	SEI-8B
SSP-5 To improve compliance with ICAO SARPS in the area of Critical Element CE-4 to at least 80%	GACA	NTSC	30 June 2025	SEI-1D
SSP-6 To increase the level of compliance with ICAO SARPs and the EI of Critical Elements CE-6 to CE-8	GACA	NTSC	30 June 2025	SEI-8B
SSP-7 Implementation of a Resource Management System to ensure that there are sufficient trained and competent staff in GACA and NTSC	GACA	NTSC	31 December 2025	SEI2C SEI4B SEI5A SEI-5B
SSP-8 Publication of the 2024 Annual Safety Report	GACA	NASC Members KSA Aviation Industry	30 June 2025	
SSP-9 Implementation of an updated SDCPS to capture and consolidate all available safety data	GACA	NASC Members	31 December 2025	SEI-17C
SSP-10 KSA to implement a State Management of Change process for any change that may have an impact on aviation safety.	GACA	NASC Members	31 December 2025	

3. Managing Strategic Priorities

3.2 State Safety Oversight Improvement

State Safety Objective SSO-4: To ensure that the safety oversight system is performance - based and aligned with ICAO Standards and Recommended Practices.

The existing regulations are overly prescriptive and there is a need to transition to a performance-based regulatory environment. To address this GACA will harmonise its regulations with the EASA regulations that are more performance-based with a mix of implementing rules (mandatory) and Acceptable Means of Compliance with more flexibility on how an organization meets those implementing rules. This will also enable GACA to apply performance-based oversight (PBO) that will ensure that the oversight is proportionate and target areas of greatest concern.

Action	Owner	Other Stakeholders	Target Date	Link to GASP or RASP
SSOI-1 Fully implement Statewide organisational risk profiles	GACA	None	31 December 2026	Not Applicable
SSOI-2 Establish a State risk profile	GACA	None	31 December 2027	Not Applicable
SSOI-3 PBO processes and procedures finalised and initiated	GACA	None	31 May 2026	Not Applicable
SSOI-4 Fully implement PBO	GACA	KSA Aviation Industry	31 September 2027	Not Applicable
SSOI-5 Publication of EASA Harmonised regulations	GACA	KSA Aviation Industry	31 December 2027	Not Applicable
SSOI-6 EASA harmonised fully implemented	GACA	KSA Aviation Industry	31 December 2027	Not Applicable

3. Managing Strategic Priorities

3.3 SMS Implementation

State Safety Objective SSO-2: To achieve continuous improvement in safety performance across the KSA aviation system through the effective implementation of safety management principles.

SMS is required by service providers in the KSA as detailed in GACAR 5. However, the level of SMS performance and maturity varies across the industry. GACA has recently developed a harmonised SMS assessment tool that assesses the performance and effectiveness of the SMS. This new tool is being launched in 2024 and will be used to assess the SMS of all Service Providers.

Action	Owner	Other Stakeholders	Target Date	Link to GASP or RASP
SMS-1 GACA to have established a suitable structure to enable SMS oversight to be carried out in a consistent and standardised approach	GACA	None	31 January 2025	SEI-19C
SMS-2 GACA to finalise the harmonised SMS evaluation tool and published it	GACA	KSA Aviation Industry	31 October 2025	SEI-19C
SMS-3 GACA to have all relevant staff fully trained and competent to carry out SMS assessments in a harmonised approach	GACA	KSA Aviation Industry	31 May 2026	SEI-5F SEI-19C
SMS-4 Industry to have implemented a fully operating SMS	Industry	KSA Aviation Industry	31 May 2026	SEI-6D
SMS-5 To host a Saudi Aviation Safety Summit in 2026	GACA	NASC Members KSA Aviation Industry	30 November 2026	Not Applicable

3. Managing Strategic Priorities

3.4 Improving Safety Culture

State Safety Objective SSO-5: To achieve a reduction in aviation risk through an improvement in the aviation safety culture and strengthened cooperation and collaboration with industry stakeholders.

Safety culture is always a challenge in organisations and across the aviation system. Safety culture is intangible but plays a vital role in safety management to improve the flow of safety reporting within Service Providers and then to GACA to support the SSP and future versions of the NASP.

Action	Owner	Other Stakeholders	Target Date	Link to GASP or RASP
SC-1 Launch an industry wide safety culture survey	GACA	NASC Members KSA Aviation Industry	31 December 2026	SEI-20A
SC-2 Carry out a feasibility study for the establishment of a network of safety analysts	GACA	KSA Aviation Industry	30 June 2025	SEI-20D
SC-3 Deliver industry conference on safety culture	GACA	KSA Aviation Industry	30 June 2026	Not Applicable
SC-4 GACA to provide guidance on behavioural analysis	GACA	KSA Aviation Industry	30 June 2025	Not Applicable
SC-5 To improve the way just culture is embedded in Service Providers	Industry	GACA NTSC	31 December 2026	Not Applicable
SC-6 GACA to assess the effectiveness of just culture implementation in Service Providers	GACA	KSA Aviation Industry	31 December 2026	Not Applicable
SC-7 All relevant GACA and NTSC staff to be trained on the application of just culture principles	GACA, NTSC	KSA Aviation Industry	31 December 2025	Not Applicable

3. Managing Strategic Priorities

3.5 Regional and Global Influence

State Safety Objective SSO-6: To be the leading authority on aviation safety regionally and support regional safety improvement initiatives.

The KSA Vision 2030 project and the SSP both include a strategic priority and objective to influence regionally and globally. GACA and NTSC are building up their capacity to implement and maintain an effective SSP and sharing that knowledge and expertise across the Middle Eastern Region.

KSA will continue to contribute safety information on operational safety risks, lessons learnt and effective risk mitigations to the MID RASG as well as actively contributing to the MID-RASP.

KSA expects to be one of the earliest States to introduce Advanced Air Mobility operations into the KSA and is building up capacity and expertise to facilitate the introduction in close collaboration with the aviation industry.

GACA is planning to implement a network of analysts within the KSA which will pool safety analysts from the KSA industry to work with the SRM General Department to improve the analysis of safety data and information and improve the risk picture in the KSA. Once fully implemented, it is hoped that a regional network of analysts could also be created.

Action	Owner	Other Stakeholders	Target Date	Link to GASP or RASP
REG-1 To lead the region in the of Advanced Air Mobility	GACA	KSA Aviation Industry	31 December	SEI-6
REG-2 To lead the region in research and feasibility of the use of AI in the aviation system	GACA Research Units at National Universities	KSA Aviation Industry	31 December	SEI-6
REG-3 To develop a working paper on the establishment of a regional network of analysts to the MID-RASG	GACA	KSA Aviation Industry MID RASG	30 June 2025	SEI-6

4.State Safety Objectives and SPIs

State Safety Objective	Related SPIs
SSO-1 No fatal accidents in commercial air transport where the KSA has State oversight responsibility	Number of fatal accidents in CAT (Fixed wing & Rotary) where GACA has oversight remit per 100,000 departures
	Number of fatalities on the ground resulting from CAT accidents per 100,000 departures
	Rate of medium and high-risk occurrences related to runway incursions (RI) 100,000 departures
	Rate of medium and high-risk occurrences related to Mid-Air Collision (MAC) per 100,000 departures
	Rate of medium and high-risk occurrences related to Runway excursion (RE) per 100,000 departures
	Rate of medium and high-risk occurrences related to Controlled Flight into Terrain (CFIT) per 100,000 departures
	Rate of medium and high-risk occurrences related to Loss of Control Inflight (LOC-I) per 100,000 departures
SSO-2 To achieve continuous improvement in safety performance across the KSA aviation system through the effective implementation of safety management principles.	Rate of serious incidents involving CAT fixed wing aircraft in KSA per 100,000 departures
	Rate of serious incidents involving CAT helicopters in KSA per 100,000 departures
	% of Service Providers that have been assessed as having an operating SMS
	% of Service Providers that have been assessed as having an effective SMS
SSO-3 To have implemented an effective SSP that ensures national aviation safety risks are being managed to an acceptable level.	% of ICAO SSP gap analysis questions fully implemented
	% of SSP PQs that are present and effective using the ICAO SSPIA tool
SSO-4 To ensure that the safety oversight system is performance based and aligned with ICAO Standards and Recommended Practices.	Overall EI score for KSA
	Level of EI Score of ICAO SARPs by Critical Element and by domain
SSO-5 To achieve a reduction in aviation risk through an improvement in the aviation safety culture and strengthened cooperation and collaboration with industry stakeholders.	% of relevant GACA staff trained in Just culture
	% of relevant NTSC staff trained in Just culture
	% of Service Providers that pass a just culture assessment without non-compliance findings No of voluntary occurrence reports % of responses to GACA safety culture survey
SSO-6 To be the leading authority on aviation safety regionally and support regional safety improvement initiatives.	Attendance of GACA and NTSC personnel at ICAO Safety meetings and conferences
	No of ICAO working papers submitted
	No of aviation safety workshops hosted by GACA
SSO-7 To ensure that dynamic changes in the KSA aviation system are continuously managed safely, efficiently and effectively.	Progress on implementing a State Management of Change process.

Appendix 1 – Abbreviations and Acronyms

AAM	Advanced Air Mobility
AI	Artificial Intelligence
AGA	Aerodromes and Ground Aids
AMO	Approved Maintenance Organization
ANS	Air Navigation Services
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATO	Approved Training Organization
CAT	Commercial Air Transport
CE	Critical Element
CFIT	Controlled Flight Into Terrain
EASA	European Aviation Safety Agency
EI	Effective Implementation
eTOD	Electronic Terrain and Obstacle Data
EVTOL	Electric Vertical Take-Off and Landing
FDM	Flight Data Monitoring
GACA	General Authority of Civil Aviation (in KSA)
GACAR	General Authority of Civil Aviation Regulations
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan
GAPPRE	Global Action Plan for the Prevention of Runway Excursions
GAPPRI	Global Action Plan for the Prevention of Runway Incursions

Appendix 1 – Abbreviations and Acronyms

GD	General Department
GNSS	Global Navigation Satellite System
GPWS	Ground Proximity Warning System
GRC	Governance Risk and Compliance
HR	Human Resources
HRC	High Risk Category
ICAO	International Civil Aviation Organization
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
KSA	Kingdom of Saudi Arabia
LOC-I	Loss of Control In-Flight
MAC	Mid-Air Collision
MID RASG	Middle East Regional Aviation Safety Group
MID RASP	Middle East Regional Aviation Safety Plan
NASC	National Aviation Safety Committee
NASP	National Aviation Safety Plan
NTSC	National Transport Safety Center
OLS	Obstacle Limitation Surfaces
PAPI	Precision Approach Path Indicator
PBO	Performance Based Oversight
PQs	Protocol Questions
RA	Resolution Advisory

Appendix 1 – Abbreviations and Acronyms

RE	Runway Excursion
RI	Runway Incursion
RNP-AR	Required Navigation Performance Authorization Required
RPAS	Remotely Piloted Aircraft Systems
SARPs	ICAO Standards and Recommended Practices and Procedures
SDCPS	Safety data collection and processing system
SEI	Safety Enhancement Initiative
SMS	Safety Management System
SNAP	Saudi National Air Navigation Plan
SPI	Safety Performance Indicator
SRM	Safety Risk Management
SSP	State Safety Program
SSP-WG	SSP Working Groups
TAWS	Terrain Avoidance and Warning System
TCAS	Traffic Collision Avoidance System
UAM	Urban Air Mobility
UTM	Unmanned Aircraft System Traffic Management
VFR	Visual Flight Rules

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