Kuwait National Aviation Safety Plan (2023-2025)

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1. FOREWORD

State of Kuwait is committed to enhancing aviation safety and to the resourcing of supporting activities. The purpose of this national aviation safety plan Kuwait NASP is a continuation of the Kuwait NASP 2022-2024, in order to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a national aviation safety strategy and. A safe aviation system contributes to the economic development of The State of Kuwait and its industries.

The KUWAIT NASP promotes the effective implementation of The State of Kuwait safety oversight system, a risk-based approach to managing safety, as well as a coordinated approach to collaboration between The State of Kuwait and other States, regions and industry. All stakeholders are encouraged to support and implement the NASP as the strategy for the continuous improvement of aviation safety.

The NASP also allows us to provide even greater transparency into the multifaceted approach to aviation safety.

We trust that the Kuwait NASP will serve as a valuable source of information about the Kuwait civil aviation safety oversight system for the flying public, international civil aviation authorities, industry, and other stakeholders.

The Kuwait NASP is in alignment with the ICAO *Global Aviation Safety Plan* (GASP, Doc 10004) and the ICAO Middle East Region (ICAO MID) (RASP).

Approved By

President of Kuwait DGCA

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Attachment 1 (Kuwait Aviation Safety Plan Roadmap 2023-2025) Separate document

3. Abbreviation

ACAS - Airborne Collision Avoidance System
AGA - Aerodrome and Ground Aids
AIG - Aircraft Accident and Incident Investigation
AIP - Aeronautical Information Publication
AIR - Airworthiness
ANS - Air Navigation Services
AND - Air Navigation Department
ARIWS - Advanced Runway Incursion Warning System
ASD - Aviation Safety Department
A-SMGCS - Advanced Surface Movement Guidance and Control Systems.
ATC - Air Traffic Control

DGCA - Directorate General of Civil Aviation Kuwait

CAPs - Corrective Action Plans
CE - Critical Element
CFIT - Controlled Flight into Terrain

EFBs - Electronic Flight Bags
EI - Effective Implementation

GASP - Global Aviation Safety Plan
G-HRCs - Global High-Risk Categories of occurrences
GPS - Global Positioning System

HLSCC - High Level Safety Coordination Committee
HRCs - High Risk Categories
HUD - Head-Up Displays

ICAO	- International Civil Aviation Organization
Industry	- Manufacturers, Airporters, Navigation Service providers, Aerodrome operates, Ground handling service providers … etc.

KCAAS-Pulse - Kuwait Civil Aviation Authority Safety Pulse system

LEG	- Legislation
LOC-I	- Loss of Control-in Flight
MAC	- Mid Air Collision
NASP	- National Aviation Safety Plan
OLF	- Online Framework
OPS	- Operation
ORG	- Organization
PANS	- Procedures for Air Navigation Services
PEL	- Personnel Licensing
PQs	- Protocol Questions
RAIOs	- Regional Accident and Incident Investigation Organisation
RASG	- Regional Aviation Safety Group
RE	- Runway Excursion
RESA	- Runway End Safety Area
RI	- Runway Incursion
RSP	- Runway Safety Program
RST	- Runway Safety Team
SA	- Safety Advisory

SEIs	- Safety Enhancement Initiatives
SMO	- Safety Management Office
SMM	- Safety Management Manual
SMS	- Safety Management System
SOP	- Standard Operating Procedures
SSP	- State Safety Programme
STCA	- Short Term Conflict Alert
STOL	- Short Take Off and Landing
TAWS	- Terrain Awareness Warning System
VFR	- Visual Flight Rules

4. Definitions:

Operational Safety Risks: Operational safety risks arise during the delivery of a service or the conduct of an activity (for example, operation of an aircraft, airports or provision of air traffic control). Operational interactions between people and technology, as well as the operational context in which aviation activities are carried out, are taken into consideration to identify performance limitations and hazards. Operational safety risks should be classified according to categories of occurrences, such as incidents or accidents, aligned with the aviation occurrence categories from the ICAO Common Taxonomy.

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

Organizational Challenges: Organizational challenges are systemic issues, which take into consideration the impact of organizational culture, and policies and procedures on the effectiveness of safety risk controls. Organizations include entities in a State, such as the Civil Aviation Authority (CAA) and service providers, such as aircraft operators, ATS providers, approved aviation training organizations, approved maintenance organizations, operators of aerodromes, etc. Organizations should identify hazards and mitigate the associated risks to manage safety.

5. Executive Summary

Kuwait Aviation Safety Plan (NASP), 2023 - 2025 has been developed by the Directorate General of Civil Aviation (DGCA) Kuwait after studying the ICAO Global Aviation Safety Plan (GASP) ICAO Doc. 10004, Regional Aviation Safety Plan (RASP 2023-2025), Docs 10131 and Doc 10161.

The purpose of KUWAIT NASP is to continually enhance aviation safety performance by reducing the risk of fatalities, through development of a harmonized aviation safety strategy and its implementation. This edition of NASP incorporates the plans for enhancing aviation safety in Kuwait for a period of three years (2023 - 2025). It includes the goals for DGCA to improve its effective safety oversight capabilities by strengthening the weak elements.

Kuwait DGCA strength is our overall Effective Implementation (EI) index, which is above the global benchmark and MID region average rate. The safety oversight margin calculated by ICAO for Kuwait is above 92% (EI) for the functional category of Operation (PEL, OPS and AIR).

Our challenging categories are: CE 1 (Primary aviation legislation, at 62.07%), CE 7 (Surveillance obligations, at 63.16%) and CE 8 (Resolution of safety issues, at 48.78%) as identified by ICAO audits.

This NASP is a complimentary document for the State Safety Programme (SSP), were it recognizes the importance of safety risk analysis for the identification of hazards and mitigation of operational safety risks. Its mission is to ensure continuous enhancement of aviation safety by adopting a collaborative approach with all stakeholders. The Kuwait NASP has the following goals:

Goal 1 Achieve a continuous reduction of operational safety risk

Goal 2 Strengthen safety oversight capabilities of Kuwait

Goal 3	Implement State Safety Programme
Goal 4	Increase collaboration with Regional Aviation Safety Group to enhance safety
Goal 5	Expand the use of industry programme and safety information sharing networks.
Goal 6	Allocate resources to ensure the appropriate infrastructure is available to support safe operations
Goal 7	Updating the Aviation Safety Main Primary Law to establish AIG Office by 2025

To achieve the Kuwait NASP goals, there is the need for sufficient resources and qualified technical personnel for the effective implementation of the State's Safety Enhancement Initiatives (SEIs). In order to mitigate the risk of fatalities, the High-Risk Categories (HRCs) of occurrences should also be addressed. The selection of types of occurrences which are deemed as HRCs is based on causes of fatal accidents and the number of accidents and incidents as recommended by the ICAO so far. The following HRCs, in the given order and consistent with the GASP, have been included for the 2023 - 2025 edition of the Kuwait NASP: Controlled Flight Into Terrain (CFIT); loss of control in-flight (LOC-I); Mid-Air Collision (MAC); Runway Incursion (RI) and Runway Excursion (RE), The Kuwait NASP is believed to present the strategic direction for the management of aviation safety at the national level.

6. Introduction

6.1 Kuwait Strategic Objective on Safety

Safety is the highest priority of Kuwait DGCA Strategic Objectives. This Strategic Objective aims to enhance civil aviation safety and focuses primarily on a State's effective safety oversight and its capabilities in the management of safety.
The objective is set in the context of growing passenger and cargo movements, and the need to address efficiency and environmental sustainability. A safe aviation system contributes to the economic development of the State of Kuwait and our industries. The National Aviation Safety Plan (NASP) outlines the global and local strategy for the triennium, to achieve the Safety Strategic Objectives.

6.2 Purpose of the NASP

The purpose of the NASP is to continually reduce fatalities, and the risk of fatalities, associated with accidents by guiding the harmonized development and implementation of Global Aviation Safety Plan (GASP), Regional Aviation Safety Plan (RASP), and the Kuwait National Aviation Safety Plan (NASP).
Planned and implementation by:

(a) establishing a national safety strategy, including goals, targets and indicators;
(b) providing a framework for the development and implementation of national aviation safety plans;
(c) providing guidance for the development of action plans to support the implementation of the national aviation safety plans, through the use of the Global Aviation Safety Roadmap (ICAO Doc 10161); and
(d) providing a methodology to guide the identification of organizational challenges, hazards and emerging issues, and the management of operational safety risks.

Through the NASP, State of Kuwait continues to prioritize global action in areas of aviation safety by addressing the currently identified global high-risk categories of occurrences (HRCs): Controlled Flight into Terrain; Loss of Control In-Flight; Mid-Air Collisions; Runway Excursions and Runway Incursions. Safety enhancement initiatives (SEIs), presented in this document, addressing precursors and contributing

factors for each of these HRCs, thereby contributing to the reduction of the global and national accident rate and the continuous reduction of fatalities.

6.3 Kuwait NASP Principles

The NASP contains a vision which states the intent behind this plan. It also includes a mission statement, which reflects what the state of Kuwait seeks to achieve through its NASP. A set of values are presented in the plan, which aims to guide national aviation safety planning and enable the NASP to meet its purpose.

Vision: To achieve and maintain the global ICAO goal of zero fatalities in commercial operations by 2030 and beyond.

Mission: To continually enhance national aviation safety performance and resilience by providing a collaborative framework for the state and its industry.

Values: NASP strives to enhance national civil aviation safety by:

(a) promoting a positive safety culture;
(b) recognizing and promoting the aviation sectors responsibility for the safety of the public;
(c) encouraging collaboration, teamwork and shared learning in the management of safety;
(d) protecting safety data and safety information;
(e) promoting the sharing and exchange of safety information;
(f) taking data-driven decisions;
(g) prioritizing actions to address operational safety risks and organizational challenges through a risk-based approach;
(h) allocating resources to identify and analyse hazards, and address their consequences or outcomes through a risk-based approach; and
(i) proactively managing emerging issues.

6.4 Scope of The Kuwait NASP

The NASP is a strategic document that enables the State and industry to adopt a flexible, step-by-step approach for the development and implementation of national aviation safety plans, and related SEIs aimed at improving safety. In accordance with

Kuwait Civil Aviation Safety Regulations (KCASRs), by developing the safety oversight capabilities, as part of the implementation of a State Safety Programme (SSP).

The NASP is a means for State to achieve compliance with ICAO safety-related SARPs and to go beyond the minimum level of compliance by proactively enhancing safety through the management of organizational challenges, operational safety risks and emerging issues. The NASP identifies the hazards and safety deficiencies and prioritize actions so we can meet the safety responsibilities through an action plan. The NASP further strengthen our capabilities in the management of safety through a structured process founded on the critical elements (CEs) of a State safety oversight system and the implementation of the SSP.

6.5 NASP Review Process

Directorate General of Civil Aviation Kuwait (DGCA)/ASD is responsible for development, implementation and monitoring of the plan in line with Global Aviation Safety Plan GASP and RASP.

In collaboration with aviation Industries and other stakeholders the Kuwait NASP is reviewed and updated with every new issue of the GASP and RASP, usually every three years, or when deemed necessary.

6.6 Relationship with Global and Regional Aviation Safety Plan

The Kuwait NASP presents the strategic path for the Kuwait DGCA management of aviation safety, for a set period. It presents the national safety goals and targets, the operational safety risks and organizational challenges, as well as SEIs with specific actions to address them (that is, an action plan). The State of Kuwait is using both the GASP and the RASP to develop its NASP. Furthermore, we identify our operational safety risks and organizational challenges, using existing processes and information (for example, safety risk assessments).

The NASP includes specific targets that are applicable to the State of Kuwait, to enhance safety nationally and contribute to the improvement of aviation safety at the international level.

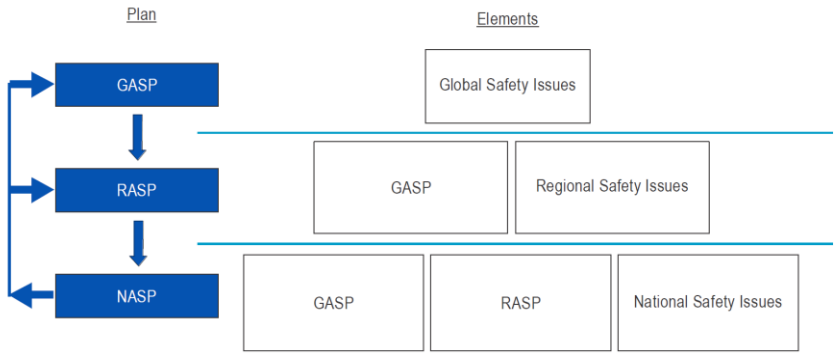


Figure 1- Relationship between the GASP, the RASP and the NASP

6.7 The Role of Industry

Note: *In the context of the NASP, the term "industry" refers to service providers, such as: aircraft operators; approved maintenance organizations; organizations responsible for the type design or manufacture of aircraft, engines or propellers; approved training organizations; air traffic services (ATS) providers; operators of aerodromes, and Ground Handlers as well as non-governmental organizations (for example, international organizations) and other entities that form part of the aviation industry, as appropriate.*

1.7.1 Industry should actively support the achievement of the NASP goals, by being involved in the development and implementation of the Kuwait NASP. The NASP development process should include consultation with industry. Industry stakeholders should review the roadmap to identify SEIs that support NASP implementation through specific action plans. To this end, industry should actively participate in, and contribute to, the NASP to enhance safety in a coordinated manner.

1.7.2 Industry should engage in SMS implementation to continually identify hazards and manage safety risks, as well as work collaboratively with Kuwait DGCA, on safety information exchange, safety monitoring and auditing programmes. Non-governmental organizations should provide guidance material and training to assist their members with addressing HRCs and SMS implementation.

6.8 Kuwait safety issues

As noted from the USOAP audit reports, Kuwait needs to improve in the following CEs and Safety Areas:

- CE 1 (Legislation)
- CE 7 (Surveillance)
- CE 8 (Resolution of Safety issues)

Safety Areas

- LEG (Legislation)
- AGA (Aerodrome and Ground Aids)
- AIG (Aircraft Accident and Incident Investigation)
- ANS (Air Navigation Services)

The USOAP audits conducted in different time periods (2016, 2017-ICVM and OSVA-2021) identified that Critical Element 1 (Primary Legislation), Critical Element 7 (Surveillance) and Critical Element 8, (Resolution of Safety issues) and the Aerodrome and Ground Aids (AGA), Aircraft Accident and Incident Investigation (AIG) and Legislation (LEG) areas that needs further improvements. Kuwait Aviation Safety Plan (2023 - 2025).

The overall Effective Implementation (EI) index of Kuwait is above the global benchmark and MID region average rate. The safety oversight margin calculated by ICAO for Kuwait is positive for the functional category of Operation (PEL, OPS and AIR) and the challenging categories are Air Navigation Services and Aerodromes and Ground Aids (ANS and AGA). In the support categories the challenging areas are Legislations and Aircraft Accident and Incident Investigation (LEG and AIG). All of Kuwait airline operators have already implemented SMS as well as aerodrome operator and ANSP have developed and implemented there SMS. The DGCA have started the implementation of the SSP in 2023. The KUWAIT NASP has set safety goals related to targets and performance indicators consistent with the GASP 2023-2025.

6.9 Operational Context

There is one international airport with multi passenger terminals in Kuwait. The airport is owned by the State of Kuwait. The airport management, air navigation services provision, air traffic control and management are managed by Kuwait DGCA staff. The separation of functions between the regulator and service providers are not clearly defined at times. However, the certification and surveillance processes established. After the ICVM in 2017, the Kuwait Civil Aviation Safety Regulation has gone through a major revision process to harmonize with the European Aviation Safety Agency (EASA) rules especially in Basic Regulations, Personnel Licensing, Air Operations and Airworthiness. The implementation of SMS among service providers has been positively developed, and the implementation of SSP is progressively formulated and advanced by the Kuwait DGCA-ASD.

Post COVID, the traffic volume is gradually increasing and more passengers and cargo are being handled. A new passenger terminal (T2) is in the final stage of completion to meet the growth of the industry in the forthcoming years. In addition, the certification process of a third new runway has started including an introduction of a new ATC tower operation.

After opening of the third new runway, the existing two parallel runways would in turn need to undergo resurfacing works. The availability of sufficient qualified technical personnel for the certification process and enhancement in safety oversight functions would also be a challenge.

7. Description of NASP Goals, Targets and Indicators

NASP is the master planning document containing the strategic direction of Kuwait for the management of aviation safety for a period of 3 years (2023 - 2025). This plan lists national safety issues, sets national aviation safety goals and targets, and presents a series of safety enhancement initiatives (SEIs) to address identified safety deficiencies and achieve the national safety goals and targets.

This NASP addresses all aspects of air transport at the State level, with the objective of providing a clear and comprehensive planning and implementation strategy for the future development of the entire civil aviation sector. The NASP contains in-depth information specific to aviation safety aspects. The NASP has been developed using international safety goals and targets and G-HRCs from both the GASP and the MID-RASP. These are highlighted in the text, where applicable. The SEIs listed in the NASP support the improvement of safety at the wider regional and international levels and include several actions to address specific safety risks and recommended SEIs for individual States set out in the MID- RASP. Kuwait has adopted these SEIs and has included them in this plan.

A series of targets support this aspirational of safety goals. The 2023–2025 edition of the Kuwait NASP contains Seven goals, which are updated goals to the previous, (2022–2024) issue 1 of the Kuwait NASP. The top 6 are maintained for this issue because they remain pertinent considering organizational challenges and operational safety risks, and to ensure consistency and continued alignment with published GASP and RASPs.

Goal 1 To achieve a continuous reduction of operational safety risks. This reduction is achieved by a series of SEIs targeting the HRCs. This goal addresses operational safety issues.

Target 1.1 Decrease of the national accident rate for commercial scheduled operations. Several examples of indicators are linked to this target including: number of accidents; fatal accidents and fatalities by State, region or globally; as well as accident, fatal accident and fatality rates.

Goal 2 Aimed to strengthen the safety oversight capabilities. This goal calls for the state progress in implementation of the eight CEs and address the organizational challenges faced when implementing a safety oversight system.

Target 2.1 Calls for to improve the EI score of the CEs of the State of Kuwait safety oversight system in a progressive manner that would result in incremental increases, until a high overall EI score is reached.

As part of this target, Kuwait DGCA should focus closely on the priority protocol questions (PQs) related to a safety oversight system. The term "priority PQs" refers to PQs that have a higher correlation to operational safety risks. Examples of indicators related to this target include the number of the priority PQs and the percentage of required CAPs submitted to ICAO via the online framework (OLF) to address findings from Universal Safety Oversight Audit Programme (USOAP) continuous monitoring approach (CMA) activities.

Goal 3 Calls for the implementation of effective SSP. The goal addresses organizational challenges faced by Kuwait DGCA when implementing an SSP and includes the implementation of SMS by service providers, in accordance with KCASR 19. In the 2022–2024 NASP issue, two targets were linked to this goal as part of a phased approach to SSP implementation. These were revised and the 2023-2025 issue of the NASP , now, has Two targets associated with this goal, which consider the progress made by Kuwait DGCA in implementing the SSP and associated challenges.

Target 3.1 To implement the foundation of an SSP by 2024. The term "foundation of an SSP" refers to a subset of USOAP PQs that aim to assist States in building a solid safety oversight foundation for the implementation of an SSP. These are referred to as "SSP foundation PQs". Examples of indicators related to the foundation of an SSP include the number of implemented applicable SSP foundation PQs, as well as the percentage of required CAPs related to the SSP foundation PQs submitted using the OLF.

***Note**. The full list of SSP foundation PQs is provided with the SSP foundation tool available via the ICAO iSTARS at www.icao.int/safety/iStars.*

Target 3.2 Work towards an effective SSP through a phased approach, with target dates leading up to 2028. An "effective SSP" refers to an SSP that actually achieves the desired results. Effectiveness of the different aspects of an SSP is measured through maturity level matrices in the State Safety Programme Implementation Assessment (SSPIA), which forms part of the USOAP CMA activities to assess States' implementation of ICAO safety management provisions.

Goal 4 To increase collaboration at the regional level to enhance safety. Three targets are associated with this goal.

Target 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID.

Target 4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023. It is integrated as part of the regional collaboration-related RASP is developed though a collaborative approach in each region. The publication of NASP, as the document containing the national strategic direction for the management of aviation safety at the state level, allows for the allocation of resources dedicated to SEIs, through the development and implementation of that plan. The example of an indicator for this target is published and shared an updated NASP.

Target 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. This target is aims to build up RASG-MID safety risk management capabilities.

Note. *Additional information on the Secure Portal on Operational Safety Risks and Emerging Issues is found on the ICAO website at https://www.icao.int/safety/GASP/Pages/Secure-Portal.aspx.*

Goal 5 Is directed at the industry and aims to expand the use of industry programmes and safety information sharing networks by service providers. The 2022–2024 issue of the NASP contained two targets linked to this goal. In the 2023–2025 issue of the NASP, these have been combined into one target.

Target 5.1 Industry to maintain an increasing trend in its contribution to safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan. Examples of indicators related to this target include the number of service providers using globally harmonized metrics for their SPIs;

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

Target 6.1 Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards. Examples of indicators for this target are the number of infrastructure-related air navigation deficiencies by the state of Kuwait against the regional air navigation plans and the percentage of state of Kuwait having implemented

infrastructure-related PQs linked to the basic building blocks. This target is associated to the activities outlined in the GANP (refer to Chapter 3, Section 3.3).

Note. The Manual on Monitoring Implementation of Regional and National Aviation Safety Plans (Doc 101621) contains guidance on data sources for indicators used to measure the achievement of the NASP and RASP goals, respectively, based on the examples of indicators presented in the GASP.

Goal 7 Establish AIG Office two targets are associated with this goal.

Target 7.1 Amend the primary law to establish an independent AIG authority by 2025.

Target 7.2 Establish an independent accident and incident office core infrastructure and function by 2025.

8. Implementation Strategy

The NASP presents the SEIs that were developed based on the organizational challenges (ORG) and operational safety risks (OPS) roadmaps, as presented in the ICAO Global Aviation Safety Roadmap (Doc 10161), Region-specific issues identified by MID- RASP. The SEIs in this plan are implemented through Kuwait existing safety oversight capabilities and the service providers' SMS. The SEIs derived from the ICAO global aviation safety roadmap were identified to achieve the national safety goals and targets presented in the NASP. Some of the national SEIs are linked to overarching SEIs at the regional and international levels and help to enhance safety globally. The full list of the SEIs is presented in the (Attachment 1) to the Kuwait NASP CAP-102.

The NASP is developed and maintained by DGCA Aviation Safety Department and in coordination with other key internal and external aviation stakeholders. The NASP is updated at least every 3 years. This NASP includes the following national safety goals and targets, for the management of aviation safety, as well as a series of indicators to monitor the progress made towards their achievement. They are tied to the goals, targets and indicators listed in the GASP and the MID-RASP and include additional national safety goals, targets and indicators."

The NASP also addresses emerging issues. Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical data-driven analysis. It is important that Kuwait remain vigilant on emerging issues to identify potential safety risks, collect relevant data and proactively develop mitigations to address them. Kuwait currently denotes the following to be an emerging issue that would require further analysis.

- Unmanned Aerial Vehicle (UAV) operating in the vicinity of aerodromes
- GNSS Interference
- Interference with Radio Altimeter
- Wildlife
- Management of Security Risks with Safety Impact

8.1 Strategic Approach of KUWAIT NASP

Kuwait NASP has set seven goals for aviation safety management. Their relative Targets and Indicators are as follows:

Goals	Target(s)	Indicators	Link to GASP and RASP
Goal 1: Achieve a continuous reduction of operational risk	**1.1** Maintain a decreasing trend of accident/incident rate	**Number of accidents** • Number of accidents per 1000 departures (accident rate) • Number of fatal accidents • Number of fatal accidents per 1000 departures (fatal accident rate) • Number of fatalities • Number of fatalities per passengers carried (fatality rate) • Percentage of occurrences related to high-risk categories (HRCs)	This goal is directly linked to Goal 1 and Target 1.1 of the GASP and RASP.
Goal 2: Strengthen safety oversight capabilities	**2.1** Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	• Overall EI score of Kuwait. • Percentage of priority PQs implemented in Kuwait. • Percentage of required corrective action plans (CAPs) submitted using the OLF. • Percentage of completed CAPs using the OLF.	This goal is directly linked to Goal 2 and Target 2.1 of the GASP and RASP
Goal 3: **Implement effective State Safety Programme (SSP)**	**3.1** To implement the foundation of SSP by 2024.	• Percentage of satisfactory SSP foundational PQs. • Percentage of required CAPs related to SSP foundational PQs submitted using the OLF.	This goal is directly linked to Goal 3 and Target 3.1 of the GASP and RASP

Goals	Target(s)	Indicators	Link to GASP and RASP
	3.2 To implement an effective SSP by 2028	Level of maturity achieved in SSP PQs	This goal is directly linked to Goal 3 and Target 3.3 of the GASP and RASP
Goal 4: Increase collaboration at the regional level to enhance safety	**4.1** Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	Technical Missions from ICAO-MID	This goal is directly linked to Goal 4 and Target 4.1 of the GASP and RASP
	4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023	Publish an updated NASP (Issue 2)	Target 4.2 of the GASP and RASP
	4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025.	• Sharing our SSP SPIs with ICAO-MID • mechanism to collect and process data on operational safety risks and emerging issues • Sharing our Safety Intelligence.	Target 4.3 of the GASP and RASP
Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers	**5.1** Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan	• Number of service providers using the globally harmonized SPIs. • established safety data collection and processing systems (SDCPS) to facilitate participation in a safety information-sharing network	This goal is directly linked to Goal 5 and Target 5.1 of the GASP and RASP

Goals	Target(s)	Indicators	Link to GASP and RASP
Goal 6: Ensure the appropriate infrastructure is available to support safe operations	**6.1** Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards	Percentage of air navigation and airport core infrastructure elements implemented.	This goal is directly linked to Goal 6 and Target 6.1 of the GASP and RASP
Goal 7: Establish AIG Office	**7.1** Amend the primary law to establish an independent AIG authority by 2025.	Promulgation of primary law CE1	This is a local additional Goal
	7.2 Establish an independent accident and incident office core infrastructure and function by 2025.	Fulfilling all the establishment requirements from CE2 to CE5	

9. Safety Enhancement Initiatives and actions for Critical Elements

The National Aviation Safety Roadmap outlines specific SEIs associated with the GASP and RASP goals and targets, as well as the HRCs. Each SEI is supported by a set of actions. The roadmap includes specific SEIs directed to two different sets of stakeholders: Kuwait DGCA and our industry.

Successful achievement of the SEIs found in this document relies upon the close collaboration and cooperation of all key aviation stakeholders.
The national aviation safety roadmap in NASP context is composed of three parts:

9.1 Operational (OPS) Safety Risks:

The OPS part of the roadmap addresses operational safety risks and is based on the G-HRCs identified in the GASP and RASP. It contains specific SEIs to address each of the five G-HRCs: controlled flight into terrain (CFIT); loss of control inflight (LOC-I); mid-air collision (MAC); runway excursion (RE); and runway incursion (RI). As well as a N-HRC: Ground Collisions (GCOL).

Kuwait DGCA and the industry should use the OPS roadmap to assist in developing a plan to mitigate the risks associated with these G-HRCs and N-HRCs. The OPS roadmap is not divided into components or steps. SEIs can be accomplished in parallel. All the SEIs in the OPS roadmap contribute directly to the achievement of NASP Goal 1, which aims to achieve a continuous reduction of operational safety risks by targeting the G-HRCs and N-HRCs. As such.

9.2 Organisational (ORG) Issues:

The ORG roadmap part comprises of two components to facilitate its use and is divided into three horizontal streams, each with specific SEIs aimed at States, regions and industry, as presented in Figure 2.

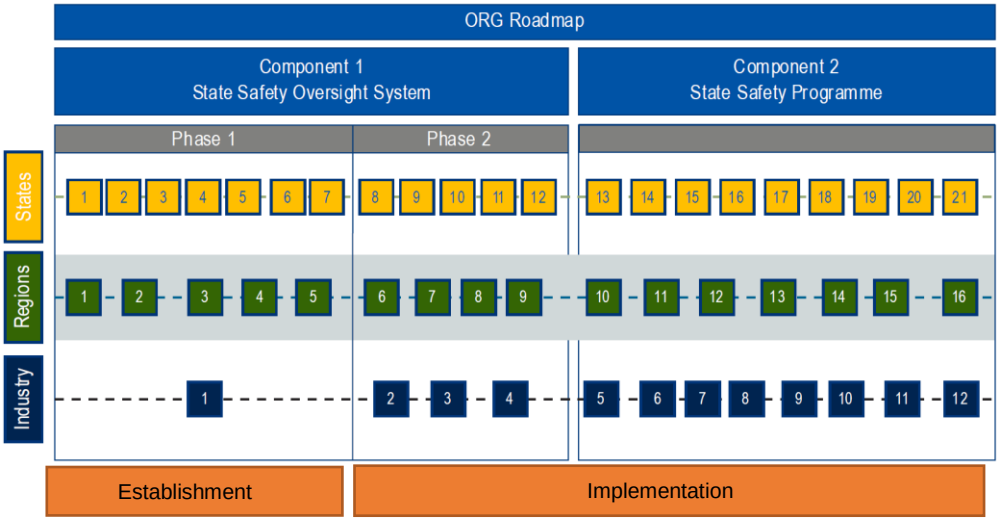


Figure 2 (as a sample)

The SEIs are laid out in a sequence and should be accomplished in chronological order. As stakeholders accomplish each SEI, represented by a numbered box in the diagram, they advance through the roadmap, thus helping to achieve the different GASP, RASP and NASP goals. Each SEI has a number, which links it to a detailed description of the corresponding initiative.

9.3 Emerging Issues.

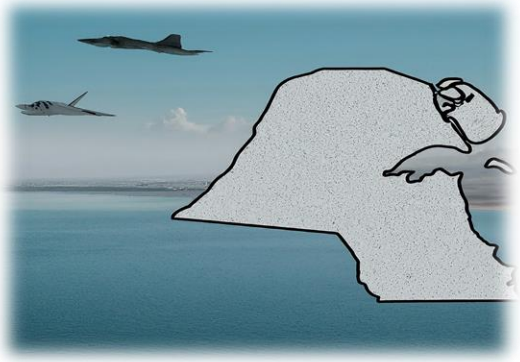
Emerging issues include concepts of operations, technologies, public policies, business models or ideas that might impact safety in the future, for which insufficient data exists to complete typical data-driven analysis. Due to the lack of data, emerging issues cannot automatically be considered as operational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

10. Monitoring Implementation

Refer to Appendix 3 in attachment 1 to Kuwait NASP CAP 102.

Attachment 1 (Roadmap) is a Separate Document

Kuwait Aviation Safety Plan (Roadmap)



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Attachment 1

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Amendment Record

Amendment No.	DATE	NOTE

Appendix 1

1.1 OPERATIONAL SAFETY RISKS (OPS) ROADMAP

In line with the GASP and RASP for compliance and the national operating environment, the operational safety risks adopted by Kuwait, have been identified as Controlled Flight Into Terrain (CFIT), Loss Of Control in Flight (LOC-I), Mid Air Collision (MAC), Runway Incursion (RI) and Runway Excursion (RE). The Safety Enhancement Initiatives to be adopted for the purpose of addressing these operational risks are as follows:

1.1.1 Controlled Flight into Terrain (CFIT)

Safety Enhancement Initiative	**Mitigate contributing factors to the risk of CFIT**
Stakeholder Actions	**Kuwait DGCA-ASD**
	1. Implement the following CFIT safety actions:
	a) Ensure aircraft are equipped with terrain awareness and warning system (TAWS) in accordance with KCASR 6 – Operation of Aircraft
	b) Promote the wider use of TAWS beyond the requirements of KCASR 6
	c) Issue Safety Bulletins (SB) to increase adherence to TAWS / GPWS warning procedures.
	d) Promote greater awareness of approach risks
	e) Consider the implementation of continuous descent final approaches (CDFA)
	f) Consider the implementation of Minimum Safe Altitude warning (MSAW) systems
	g) Ensure the timeliness of updates and accuracy of Electronic Terrain and Obstacle Data (eTOD)
	h) Promote the use of GPS-derived position data to feed TAWS
	2. Analyse the mandatory occurrence reporting (MORs) and voluntary occurrence reporting systems (VORs) and accident/incident investigations (apply safety management methodologies)
	3. Identify additional contributing factors, <u>for example:</u>
	a) Flight in adverse environmental conditions

	b) Approach design and documentation (e.g. approaches with vertical guidance (APV) or localizer performance with vertical guidance (LPV) approaches) c) Phraseology used (standard vs. non-standard) d) Pilot fatigue Situational Awareness and Spatial disorientation.
	4. Conduct continuous evaluations of the performance of the SEIs
References	- KCASR 6 – Part CAT - ICAO Safety Report - RASGs - Commercial Aviation Safety Team – Safety enhancements for CFIT - IATA CFIT - IATA Safety Report - FSF ALAR Toolkit - Skybrary

Safety Enhancement Initiative	**Mitigate contributing factors to the risk of CFIT**
Stakeholder Actions	**Industry**
	1. Implement the following CFIT safety actions:
	a) Equip aircraft with TAWS
	b) Increase adherence to TAWS warning procedures
	c) Develop greater awareness of approach risks
	d) Promote CDFA
	e) Utilize MSAW systems
	f) Utilize up-to-date eTOD
	g) Utilize GPS-derived position data to feed TAWS
	1. Validate the effectiveness of the SEIs presented in this roadmap through the analysis of flight data monitoring (FDM)* and pilot reports** (apply safety management methodologies)
	3. Identify additional contributing factors <u>for example:</u>
	a) Flight in adverse environmental conditions
	b) Approach design and documentation
	c) Phraseology used (standard vs non-standard)
	d) Pilot fatigue and disorientation
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for CFIT
	5. Conduct continuous evaluation of the performance of the SEIs
	*TAWS cautions and warnings, and pilot responses to TAWS warnings. **Flight planning - failure to comply with minimum safe altitude (MSA) or military operations area (MOA) restrictions.
References	KCASR 6 – *Part CAT* – ICAO Safety Report

– RASGs
– Commercial Aviation Safety Team – Safety enhancements for CFIT
_ IATA CFIT
– IATA Safety Report
– Flight Safety Foundation ALAR Toolkit
– Skybrary

1.1.2 Loss Of Control In-flight (LOC-I)

Safety Enhancement Initiative	**Mitigate contributing factors to LOC-I accidents and incidents**
Stakeholder Actions	**Kuwait DGCA - ASD**
	1. Implement the following LOC-I safety actions:
	a) Require upset prevention and recovery training in all full flight simulator type conversion and recurrent training programmes.
	b) Require more time devoted to training for the pilot monitoring role
	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems and accident/incident investigations (apply safety management methodologies)
	3. Identify additional contributing factors <u>for example</u>:
	a) Distraction
	b) Adverse weather and or Spatial Disorientation
	c) Complacency
	d) Inadequate standard operating procedures (SOPs) for effective flight management
	e) Insufficient height above terrain for recovery
	f) Lack of awareness or competence in procedures for recovery from unusual aircraft attitudes
	g) Inappropriate flight control inputs in response to a sudden awareness of an abnormal bank angle
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for LOC-I:
	a) Increase the effectiveness of regulatory oversight.
	b) Improve regulations.
	5. Conduct continuous evaluations of the performance of the SEIs
References	– KCASR 1 – *Part FCL* – Doc 10011, *Manual on Aeroplane Upset Prevention and Recovery Training* – ICAO Safety Report – ICAO LOC-I – RASGs – Commercial Aviation Safety Team – Safety enhancements for LOC-I – IATA LOC-I – IATA Safety Report – Flight Safety Foundation – Skybrary

Safety Enhancement Initiative	**Mitigate contributing factors to LOC-I accidents and incidents**
Stakeholder Actions	**Industry**
	1. Implement the following LOC-I safety actions:
	a) Aircraft upset prevention recovery training in all full flight simulator type conversion and recurrent training programmes
	b) More time devoted to training multi-crew pilots for the monitoring role
	c) Promote bank angle alerting systems into all multi-engine aircraft
	d) Training on manual aircraft handling of approach to stall and stall recovery (including at high altitude)
	e) Recurrent training on flight mechanics
	f) Simulator fidelity
	2. Validate the effectiveness of the SEIs through the analysis of FDM and pilot reports (apply safety management methodologies)
	3. Identify additional contributing factors, for example:
	a) Distraction
	b) Adverse weather and or Spatial Disorientation
	c) Complacency
	d) Inadequate SOPs for effective flight management
	e) Insufficient height above terrain for recovery
	f) Lack of awareness or competence in procedures for recovery from unusual aircraft attitudes
	g) Inappropriate flight control inputs in response to a sudden awareness of an abnormal bank angle
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for LOC-I
	5. Conduct continuous evaluations of the performance of the SEIs
References	– KCASR 1 – *Part FCL* – Doc 10011, *Manual on Aeroplane Upset Prevention and Recovery Training* – ICAO Safety Report – ICAO LOC-I – RASGs – Commercial Aviation Safety Team – Safety enhancements for LOC-I – IATA LOC-I – IATA Safety Report – Flight Safety Foundation – Skybrary

1.1.3 Mid Air Collision (MAC)

Safety Enhancement Initiative	**Mitigate contributing factors to MAC accidents and incidents**
Stakeholder Actions	**Kuwait DGCA - ASD**
	1. Implement the following MAC safety actions:
	a) Establish guidance and regulations to ensure aircraft are equipped with Airborne Collision Avoidance System (ACAS), in accordance with KCASR 6 – Operation of Aircraft.
	b) Ensure adherence to ACAS warning procedures
	c) Promote the improvement of air traffic control (ATC) systems, procedures and tools to enhance conflict management.
	d) Promote the improvement of communications systems and procedures, such as controller-pilot datalink.
	2. Validate the effectiveness of the SEIs through the analysis of MORs and VORs and accident/incident investigations (apply safety management methodologies)
	3. Identify additional contributing factors, for example:
	a) Traffic conditions - traffic density, complexity, mixture of aircraft types and capabilities, etc.
	b) ATC performance related to workload, competence, teamwork, procedures, commitment, etc., as well as the influence of air navigation services providers' (ANSP) safety management.
	c) Flight crew training and corporate culture with workload, competence, teamwork, procedures, commitment, etc., and the influence of the aircraft operator's safety management
	d) ATC systems - flight data processing, communication, short term conflict alert (STCA), etc., as well as the interaction with the human operators and the aircraft systems, and the procurement policy of the ANSP.
	e) Aircraft equipment - autopilots, transponders and ACAS, but also aircraft performance (e.g. rate-of-climb) and their physical size.
	f) Navigation infrastructure - both coverage and quality
	g) Surveillance - both coverage and quality
	h) Flight plan processing - efficiency and reliability of flight plan submission, approval and distribution
	i) Airspace - complexity of airspace design, route layout, extent of controlled or uncontrolled airspace, proximity of military operational or training areas, etc.

	j) Flight in adverse environmental conditions that may influence conflict management and collision avoidance
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for MAC
	5. Conduct continuous evaluations of the performance of the SEIs
References	– KCASR 6 – *Operation of Aircraft* – KCASR 8 – *Airworthiness of Aircraft* – KCASR 19 – *Safety Management* – Doc 8168, *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) – Doc 9868, *Procedures for Air Navigation Services – Training (PANS-TRG)* – Doc 9859, *Safety Management Manual* – iSTARS – ICAO Safety Report – CAST/ICAO Common Taxonomy Team – RASGs – Commercial Aviation Safety Team – Safety enhancements for MAC – IATA Safety Report – Flight Safety Foundation – Skybrary

Safety Enhancement Initiative	**Mitigate contributing factors to MAC accidents and incidents**
Stakeholder Actions	**Industry**
	1. Implement the following MAC safety actions:
	a) Equip aircraft with ACAS.
	b) Consider equipping aircraft with auto-pilot/flight director ACAS response.
	c) Increase adherence to ACAS warning procedures.
	d) Consider the implementation of STCA, including Short Term Conflict Alert (STCA) suitable for terminal areas.
	e) Improve reliability and consistency of safety nets to provide early and dependable warning, and to reduce nuisance alerts.
	f) Improve aircraft systems to alert pilots to any non-availability of transponders and ACAS.
	g) Improve ATC systems, procedures and tools to enhance conflict management – this can include predictability of aircraft trajectories, so that conflicts can be predicted and resolved at an earlier stage, using Medium-Term Conflict Detection (MTCD) and similar systems
	h) Improve communications systems and procedures, such as Controller-Pilot Datalink Communication (CPDLC)

2. Validate the effectiveness of the SEIs through the analysis of FDM*, pilot and ATC reports** (apply safety management methodologies)
3. Identify additional contributing factors, <u>for example:</u>
a) Traffic conditions – traffic density, complexity, mixture of aircraft types and capabilities, etc.
b) ATC performance related to workload, competence, teamwork, procedures, commitment, etc., as well as the influence of ANSPs' safety management
c) Flight crew training and corporate culture related to workload, competence, teamwork, procedures, commitment, etc., and the influence of the aircraft operator's safety management
d) ATC systems – flight data processing, communication, STCA, etc., as well as the interaction related to human operators and the aircraft systems, and the procurement policy of the ANSP
e) Aircraft equipment – autopilots, transponders and ACAS, but also aircraft performance (e.g. rate-of-climb) and their physical size
f) Navigation infrastructure – both coverage and quality
g) Surveillance – both coverage and quality
h) Flight plan processing – efficiency and reliability of flight plan submission, approval and distribution
i) Airspace – complexity of airspace design, route layout, extent of controlled or uncontrolled airspace, proximity of military operational or training areas, etc.
j) Flight in adverse environmental conditions that may influence conflict management and collision avoidance
4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for MAC
5. Conduct continuous evaluations of the performance of the SEIs
*Traffic alert and collision avoidance system resolution advisories (TCAS-RA), TCAS traffic advisories (TCAS-TA). **Separation and airspace infringement, level busts, aircraft proximity (AIRPROX), gross navigation errors (GNE) and large height deviations (LHD).

References

– KACSR 6 – *Operation of Aircraft*
– KACSR 8 – *Airworthiness of Aircraft*
– KACSR 19 – *Safety Management*
– Doc 8168, *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS)
– Doc 9868, *Procedures for Air Navigation Services – Training (PANS-TRG)*
– Doc 9859, *Safety Management Manual*
– iSTARS
– ICAO Safety Report
– CAST/ICAO Common Taxonomy Team
– RASGs
– Commercial Aviation Safety Team – Safety enhancements for MAC

– IATA Safety Report
– Flight Safety Foundation
– Skybrary

1.1.4 Runway Excursion (RE)

Safety Enhancement Initiative	**Mitigate contributing factors to RE accidents and incidents**
Stakeholder Actions	**Kuwait DGCA - ASD**
	1. Implement the following RE safety actions:
	a) Ensure the establishment and implementation of a State runway safety programme and runway safety teams.
	b) Promote the establishment of policy and training on rejected landings, go-arounds, crosswind and tailwind landings (up to the maximum manufacturer-demonstrated winds)
	c) Promote equipage of runway overrun awareness and alerting systems on aircraft
	d) Ensure effective and timely reporting of meteorological and aerodrome conditions (e.g. runway surface condition in accordance to the ICAO global reporting format in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations braking action and revised declared distances)
	e) Certify aerodrome in accordance with KCASR 14, Volume I, as well as PANS-Aerodromes (ICAO-Doc 9981)
	f) Promote the installation of arresting systems if runway end safety area (RESA) requirements cannot be met.
	g) Ensure that procedures systematically reduce the rate of un stable approaches to runways are developed and used.
	2. Validate the effectiveness of the SEIs through the analysis of MORs, VORs and accident/incident investigations (apply safety management methodologies)
	3. Identify additional contributing factors, for example:
	a) Ineffective SOPs
	b) Failure to adhere to the appropriate SOPs
	c) Long/floated/bounced/firm/off-centre/crabbed landing
	d) Inadequate approach procedures design
	e) Inadequate regulatory oversight
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RE
	5. Conduct continuous evaluations of the performance of the SEIs
References	– KCASR 14 – *Aerodromes*, Volume I – *Aerodrome Design and Operations* – Doc 8168, Procedures for *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS)

– Doc 9981, *Procedures for Air Navigation Services – Aerodromes* (PANS-Aerodromes) – Doc 9859, *Safety Management Manual* – ICAO Global Runway Safety Action Plan – ICAO Runway Safety Team Handbook – ICAO Runway Safety IKit – RASGs – EASA Safety Promotion – European Action Plan for the Prevention of Runway Excursions (EAPPRE) – Commercial Aviation Safety Team – Safety enhancements for RE – RSOOs – iSTARS – ICAO Safety Report – CAST/ICAO Common Taxonomy Team – IATA Safety Report – IATA Runway Safety – Skybrary – Flight Safety Foundation ALAR Toolkit

Safety Enhancement Initiative	**Mitigate contributing factors to RE accidents and incidents**
Stakeholder Actions	**Industry**
	1. Implement the following RE safety actions:
	a) Active participation in runway safety programmes and runway safety teams.
	b) Policy and training on rejected landings, go-arounds, crosswind and tailwind landings (up to the maximum manufacturer-demonstrated winds).
	c) Equip the aircraft with runway overrun awareness and alerting systems.
	d) Effective and timely reporting of meteorological and aerodrome conditions (e.g. runway surface condition in accordance with the ICAO global reporting format in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations braking action and revised declared distances).
	e) Comply with runway-related provisions in KCASR 14, Volume I as well as PANS-Aerodromes (ICAO Doc 9981).
	f) Consider an arresting system if RESA requirements cannot be met.
	g) Procedures to systematically reduce the rate of un stable approaches to runways.

	2. Validate the effectiveness of the SEIs using data provided by Kuwait DGCA and industry (apply safety management methodologies)
	3. Identify additional contributing factors, <u>for example</u>:
	a) Ineffective SOPs
	b) Failure to adhere to the appropriate SOPs
	c) Long/floated/bounced/hard/off-centre/crabbed landing
	d) Inadequate approach procedures design
	e) Inadequate regulatory oversight
	4. Implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RE
	5. Conduct continuous evaluation of the performance of the SEIs
	*For example, long landings, excessive height and speed at threshold, aircraft configuration at 1 000 ft above aerodrome level (AAL), speed at 1 000 ft AAL, tailwind, heading deviation during final approach, use of retardation devices (spoilers, reverse thrust, autobrakes) **Braking action, adverse weather, navigational aid (navaid) malfunctions
References	– KCASR 14, *Aerodromes*, Volume I – *Aerodrome Design and Operations* – Doc 8168, *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) – Doc 9981, *Procedures for Air Navigation Services – Aerodromes* (PANS-Aerodromes) – Doc 9859, *Safety Management Manual* – ICAO Global Runway Safety Action Plan – ICAO Runway Safety Team Handbook – ICAO Runway Safety IKit – RASGs – EASA Safety Promotion – European Action Plan for the Prevention of Runway Excursions (EAPPRE) – Commercial Aviation Safety Team – Safety enhancements for RE – RSOOs – iSTARS – ICAO Safety Report – CAST/ICAO Common Taxonomy Team – IATA Safety Report – IATA Runway Safety – Skybrary – Flight Safety Foundation ALAR Toolkit – Global Action Plan for the Prevention of Runway Excursions (GAPPRE)

1.1.5 Runway Incursion (RI)

Safety Enhancement Initiative	**Mitigate contributing factors to RI accidents and incidents**
Stakeholder Actions	**Kuwait DGCA - ASD**
	1. Implement the following RI safety actions:
	a) Ensure the establishment and implementation of a State runway safety programme and runway safety teams.
	b) Promote the establishment of policy, procedures and training that supports situational awareness for controllers, pilots and airside vehicle drivers.
	c) Ensure effective use of suitable technologies to assist the improvement of situational awareness, such as improved resolution airport moving maps (AMM), electronic flight bags (EFBs), enhanced vision systems (EVS) and head-up displays (HUD), advanced-surface movement guidance and control systems (ASMGCS), stop bars and runway incursion warning systems (ARIWS)
	d) Certify aerodrome in accordance with KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations, as well as PANS-Aerodromes (Doc 9981)
	e) Ensure the use of standard phraseologies in accordance with applicable State regulations and ICAO provisions (e.g. ICAO Doc 9432, Manual of Radiotelephony).
	f) Ensure the identification and publication in the aeronautical information publication (AIP) of hot spots at aerodromes.
	g) Ensure that suitable strategies to remove hazards or mitigate risks associated with identified hot spots are developed and executed.
	2. Validate the effectiveness of the SEIs through the analysis of MORs, VORs and accident/incident investigations (apply safety management methodologies).
	3. Identify additional contributing factors, for example:
	a) Operations in low visibility conditions
	b) Complex or inadequate aerodrome design
	c) Complexity of traffic (multiple simultaneous line-ups)
	d) Conditional clearances
	e) Simultaneous use of intersecting runways
	f) Late issue of or late changes to departure clearances
	g) Phraseology use (e.g. non-standard vs. standard, call-sign confusion)

	h) Concurrent use of more than one language for ATC communications.
	i) English language competence despite the introduction by KCASR of a system of validating competence in aviation English.
	j) Inadequate manoeuvring area driver training and assessment programme.
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RI
	5. Conduct continuous evaluations of the performance of the SEIs
References	– KCASR 14 – *Aerodromes*, Volume I – *Aerodrome Design and Operations* – Doc 8168, *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) – Doc 9981, *Procedures for Air Navigation Services – Aerodromes* (PANS-Aerodromes) – Doc 9432, *Manual of Radiotelephony* – Doc 9859, *Safety Management Manual* – Doc 9870, *Manual on the Prevention of Runway Incursions* – ICAO Global Runway Safety Action Plan – ICAO Runway Safety Team Handbook – ICAO Runway Safety IKit – RASGs – EASA Safety Promotion – Commercial Aviation Safety Team – Safety enhancements for RI – RSOOs – iSTARS – ICAO Safety Report – CAST/ICAO Common Taxonomy Team – IATA Safety Report – IATA Runway Safety – Flight Safety Foundation – Skybrary

Safety Enhancement Initiative	**Mitigate contributing factors to RI accidents and incidents**
Stakeholder Actions	**Industry**
	1. Implement the following RI safety actions:
	a) Active participation in a runway safety programme and runway safety teams.
	b) Policy, procedures and training that support situational awareness for controllers, pilots and airside vehicle drivers.
	c) Effective use of suitable technologies to assist the improvement of situation awareness, such as improved resolution AMM, EFB, EVS and HUD, Advanced Surface Movement Guidance & Control System (A-SMGCS), stop bars and Autonomous Runway Incursion Warning System (ARIWS).

	d) Comply with runway-related provisions in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations, as well as PANS-Aerodromes (ICAO Doc 9981).
	e) Use of standard phraseologies in accordance with applicable State regulations and ICAO provisions (e.g. ICAO Doc 9432, Manual of Radiotelephony).
	f) Identification and publication in the AIP of Hot Spots at aerodromes.
	g) Suitable strategies to remove or mitigate hazards associated with identified hot spots.
	2. Validate the effectiveness of the SEIs through the analysis of ATC data*, and reports from stakeholders (apply safety management methodologies)
	3. Identify additional contributing factors, <u>for example:</u>
	a) Operations in low visibility conditions
	b) Complex or inadequate aerodrome design
	c) Complexity of traffic (multiple simultaneous line-ups)
	d) Conditional clearances
	e) Simultaneous use of intersecting runways
	f) Late Issue of or late changes to departure clearances
	g) Phraseology use (e.g. non-standard vs. standard, call-sign confusion)
	h) Concurrent use of more than one language for ATC communications
	i) English language competence despite the introduction by KCASR of a system of validating competence in aviation English.
	j) Inadequate manoeuvring area driver training and assessment programme.
	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RI
	5. Conduct continuous evaluations of the performance of the SEIs
	*Transcripts, number of conflicts detected by Advanced Surface Movement Guidance & Control System (SMGCS).
References	– KCASR 14 – *Aerodromes*, Volume I – *Aerodrome Design and Operations* – Doc 8168, *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) – Doc 9981, *Procedures for Air Navigation Services – Aerodromes* (PANS-Aerodromes) – Doc 9432, *Manual of Radiotelephony* – Doc 9859, *Safety Management Manual* – Doc 9870, *Manual on the Prevention of Runway Incursions* – ICAO Global Runway Safety Action Plan – ICAO Runway Safety Team Handbook – ICAO Runway Safety IKit – RASGs – EASA Safety Promotion

– Commercial Aviation Safety Team – Safety enhancements for RI
– RSOOs
– iSTARS
– ICAO Safety Report
– CAST/ICAO Common Taxonomy Team
– IATA Safety Report
– IATA Runway Safety
– Flight Safety Foundation
– Skybrary
– EUROCONTROL
– European Action Plan for the Prevention of Runway Incursions

1.2 ORGANIZATIONAL CHALLENGES (ORG) ROADMAP

1.2.1 State

PHASE 1 – ESTABLISHMENT OF A SAFETY OVERSIGHT FRAMEWORK (CE-1 TO CE-5)

Safety enhancement initiative	**SEI-1 – Consistent implementation of ICAO SARPs at the national level**
Stakeholder	**Kuwait DGCA - ASD**
Actions	1A – Work at the national level to address, if any, Significant Safety Concerns as a priority
	1B – Address all protocol questions (PQs) of the USOAP Continuous Monitoring Approach (CMA)
	1C – Establish primary aviation law and regulations, to empower the competent authority to conduct regulatory oversight, this includes separation of oversight functions and service provision functions (CE-1 and CE-2)
	1D – Increase the level of compliance with ICAO SARPs and the EI of CEs at the national level (CE-1 to CE-5)
	1E – Establish a process for the identification of differences with ICAO SARPs (CE-2)
References	**1A and 1D** Doc 9734, *Safety Oversight Manual*, Part A – *The Establishment and Management of a State Safety Oversight System* Doc 9735, *Universal Safety Oversight Audit Programme Continuous Monitoring Manual* iSTARS safety audit information (ICAO secure portal login required) **1B, 1C and 1D** Doc 9734, *Safety Oversight Manual*, Part A – *The Establishment and Management of a State Safety Oversight System* Canadian Aviation Regulations

Civil Aviation Safety Regulations of Australia
European Aviation Safety Rules
United States Federal Aviation Administration (FAA) Regulations
ICAO reference documents
iMPLEMENT
iSTARS State safety briefings (ICAO secure portal login required)
Latin American Civil Aviation Regulations
Model Civil Aviation Regulations
Rules of the Civil Aviation Authority of New Zealand
ICAO USOAP CMA

Safety enhancement initiative	**SEI-2 – Development of a comprehensive regulatory oversight framework**
Stakeholder	**Kuwait DGCA - ASD**
Actions	2A – Establish and maintain an independent regulatory oversight authority, which includes separation of oversight functions from service provision functions where these exist within the authority (CE-3)
	2B – Maintain an effective system to promulgate technical guidance and tools, and provide safety-critical information needed for technical personnel to effectively perform their safety oversight functions (CE-5)
	2C – Establish and maintain an effective system to attract, recruit, train and retain qualified and sufficient technical personnel to support regulatory oversight (see SEI-5) (CE-3 and CE4)
References	**2A** Doc 9734, *Safety Oversight Manual*, Part A – *The Establishment and Management of a* State *Safety Oversight System* **2B and 2C** FAA Inspector Training System – Flight Standards (International) Course ICAO-Endorsed Government Safety Inspector Training Programme ICAO Global Aviation Training course catalogue ICAO Global Aviation Training iSTARS Ramp Inspection Programmes (Safety Assessment of Foreign Aircraft (SAFA)/Safety Assessment of Community Aircraft (SACA))

Safety enhancement initiative	**SEI-3 – Establishment of an independent accident and incident investigation authority, consistent with KCASR 13 / Annex 13 – *Aircraft Accident and Incident Investigation***
Stakeholder	**Kuwait DGCA / State**
Actions	3A – Establish an independent accident and incident investigation authority, as per KCASR 13 / Annex 13 requirements (CE-1 and CE-3)
	3B – Develop an effective system to promulgate technical guidance and tools, and provide safety-critical information needed for technical personnel to effectively conduct accident and incident investigations (CE-5)
	3C – Establish an effective system to attract, recruit, train and retain qualified and sufficient technical personnel to support accident and incident investigations (see SEI-5) (CE-3 and CE-4)
References	**3A** – KCASR 13 / Annex 13 – *Aircraft Accident and Incident Investigation* – Doc 9734, *Safety Oversight Manual*, Part A – *The Establishment and Management of a State Safety Oversight System* **3B** – Doc 9734, Safety *Oversight Manual* – Doc 9756, *Manual of Aircraft Accident and Incident Investigation* – Doc 9946, *Manual on Regional Accident and Incident Investigation Organization* – Doc 9962, *Manual on Accident and Incident Investigation Policies and Procedures* – Doc 9973, *Manual on Assistance to Aircraft Accident Victims and their Families* – Doc 9998, *ICAO Policy on Assistance to Aircraft Accident Victims and their Families* – Doc 10053, *Manual on Protection of Safety Information*, Part I – *Protection of Accident and Incident Investigation Records* – Doc 10062, *Manual on the Investigation of Cabin Safety Aspects in Accidents and Incidents* – Cir 315, *Hazards at Aircraft Accident Sites* **3C** – Cir 298, *Training Guidelines for Aircraft Accident Investigators*

Safety enhancement initiative	**SEI-4 – Strategic allocation of resources to enable effective safety oversight**
Stakeholder	**Kuwait DGCA - ASD**
Actions	4A – Confirm executive or legislative mandate to receive financial resources from government or other external sources and expend them (CE-1)
	4B – Establish a process for the resource planning and allocation in alignment with the organizational structure of a competent authority, which is required to conduct effective safety oversight (CE-2 and CE-3). SEI-1 and SEI-5 could be used to identify resource requirements (CE-1 to CE-5)
	4C – Obtain a sustainable and stable source of financing through commitments from the national leadership (CE-1 to CE-3). For small scope short-term improvements: i) Utilize the ICAO Safety Technical Cooperation Bureau, or other means to acquire technical assistance in coordination with RASG/ICAO Regional Office. ii) Seek assistance from more experienced States and other stakeholders in coordination with RASG/ICAO Regional Office.
	4D – Develop a process for assessing changing resource requirements and sustain necessary coordination with resource stakeholders for safety oversight improvements, as outlined in Component 1 of this roadmap (CE-1 to CE-3)
References	ICAO Safety Fund (SAFE) ICAO Technical Cooperation Bureau RASGs RSOOs and COSCAPs ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA)

Safety enhancement initiative	**SEI-5 – Qualified technical personnel to support effective safety oversight**
Stakeholder	**Kuwait DGCA - ASD**
Actions	5A – Establish and Maintain effective system to identify and track qualifications and training of existing technical personnel (CE-4)
	5B – Identify the gaps in qualified technical personnel and training requirements necessary to implement the oversight mandate (CE-4)
	5C – Establish a compensation scheme for the attraction and retention of qualified technical personnel (CE-4)
	5D - Reserved
	5E – Establish human resource plans to support hiring and retention of the appropriate number of qualified technical personnel required (CE-4).
	5F – Implement training policies and programmes for technical personnel and verify that the type and frequency of training successfully completed (i.e. initial, recurrent, specialized and on-the-job training) are sufficient to acquire/maintain the required qualifications and level of competence corresponding to the assigned duties and responsibilities of technical personnel (CE-4).
	5G – Develop and maintain a process for assessing changing needs for qualified technical personnel requirements and develop procedures to update hiring, retention and training of personnel needs, in coordination with SEI-4B (CE-4).
References	Doc 8335, *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance* Doc 9734, *Safety Oversight Manual* ICAO-Endorsed Government Safety Inspector Training Programme ICAO Global Aviation Training ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA)

Safety enhancement initiative	**SEI-6 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner**
Stakeholder	**Kuwait DGCA - ASD**
Actions	6A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues (CE-1 to CE-5)
	6B – Reserved.
	6C – Provide assistance via States, regions and industry to other States for primary aviation legislation development (in coordination with SEI-1B) (CE-1)
	6D – Provide assistance via States, regions and industry to other States for the development of national regulations (CE-2)
	6E – Establish a process via RASG for mentoring/collaboration system, including providing State/industry assistance as well as sharing of best practices and internal follow-up actions (CE-1 to CE-5, emphasis on CE-3).
	6F – Collaborate with RASG, other States, ICAO, industry joint programmes and/or technical school partnerships to attract, recruit and train qualified and sufficient technical personnel and develop a strategy for their retention (CE-4).
	6G – Establish and implement a process for the development and promulgation of technical guidance, tools and the provision of safety-critical information, in collaboration with other States, ICAO and/or other stakeholders, with the understanding that these materials need to be tailored to the KCASR and operational environments (CE-5) of State of Kuwait.
	6H – While working to improve safety oversight, work with RASG to address national high-risk categories of occurrences.
References	**6A to 6G** Doc 9734, *Safety Oversight Manual* ICAO Technical Cooperation Bureau RASGs RSOOs and COSCAPs **6H** GASP Library – Regional Aviation Safety Plans

Safety enhancement initiative	**SEI-7 – Provision of the primary source of safety information to ICAO by completing, submitting and updating all relevant documents and records**
Stakeholder	**Kuwait DGCA - ASD**
Actions	7A – Update USOAP corrective action plan items
	7B – Complete and submit the self-assessment checklist based on USOAP CMA PQs
	7C – Complete and submit the State aviation activity questionnaire
	7D – Complete and submit the compliance checklists on electronic filing of differences system
	7E – Update documents and records, as required, in a timely manner
References	Doc 9735, *Universal Safety Oversight Audit Programme Continuous Monitoring Manual*, sections 2.8, 2.14 and 2.15 iSTARS USOAP CMA Computer-based Training USOAP CMA Online Framework USOAP CMA Workshops ICAO iPACK – Preparing for ICAO USOAP CMA Activities

PHASE 2 – IMPLEMENTATION OF A SAFETY OVERSIGHT SYSTEM (CE-6 TO CE-8)

Safety enhancement initiative	**SEI-8 – Consistent implementation of ICAO SARPs at the national level**
Stakeholder	**Kuwait DGCA - ASD**
Actions	8A – Work at the national level to address, if any, Significant Safety Concerns as a priority.
	8B – Increase the level of compliance with ICAO SARPs and the EI of CEs at the national level (all CEs, emphasis on CE-6 to CE-8).
References	Doc 9735, *Universal Safety Oversight Audit Programme Continuous Monitoring Manual* iSTARS safety audit information (ICAO secure portal login required)

Safety enhancement initiative	**SEI-9 – Continued implementation of and compliance with ICAO SARPs at the national level**
Stakeholder	**Kuwait DGCA- ASD**
Actions	9A – Maintain licensing, certification, authorization and approval processes (CE-6)
	9B – Maintain regulatory oversight and enforcement processes (CE-7 and CE-8)
	9C – Establish a system to resolve safety issues identified via accident and incident investigations, surveillance activities, safety reports and other means (CE-8)
References	9A Doc 8335, *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance* 9B Doc 9756, *Manual of Aircraft Accident and Incident Investigation* 9C Annex 13 – *Aircraft Accident and Incident Investigation,* Attachment C – *List of examples of serious incidents*

Safety enhancement initiative	**SEI-10 – Strategic allocation of resources to enable effective safety oversight**
Stakeholder	**Kuwait DGCA / State**
Actions	10A – Use SEI-1 and SEI-5 to identify resource requirements (CE-6 to CE-8)
	10B – Leverage regional groups such as the RASG to identify additional resources
References	ICAO Fund for Aviation Safety (SAFE) ICAO Technical Cooperation Bureau RASGs ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA)

Safety enhancement initiative	**SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner**
Stakeholder	**Kuwait DGCA- ASD**
Actions	11A – Based on the identified hazards and safety deficiencies, establish and maintain a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues (CE-6 to CE-8).
	11B – Reserved.
	11C – Provide assistance via RASG to other States for the conduct of surveillance activities (CE-7)
	11D – Use technical guidance, tools and safety-critical information, developed in collaboration with other States, ICAO and/or other stakeholders, to enable technical personnel to perform their safety oversight functions effectively (CE-6 to CE-8)
	11E – While working to improve safety oversight, continue to work with RASG to address national high-risk categories of occurrences if any.
References	RASGs RSOOs and COSCAPs Appendix B – *OPS Roadmap* GASP Library – Regional Aviation Safety Plans

Safety enhancement initiative	**SEI-12 – Continued provision of the primary source of safety information to ICAO by updating all relevant documents and records as progress is made**
Stakeholder	**Kuwait DGCA- ASD**
Actions	12A – Update USOAP corrective action plan items
	12B – Update and submit the self-assessment checklist based on USOAP CMA PQs
	12C – Update and submit the State aviation activity questionnaire (SAAQ)
	12D – Update and submit the compliance checklists (CCs) on the electronic filing of differences (EFOD) system
References	Doc 9735, *Universal Safety Oversight Audit Programme Continuous Monitoring Manual*, sections 2.8, 2.14 and 2.15 iSTARS ICAO iPACK – Preparing for ICAO USOAP CMA Activities

COMPONENT 2 – STATE SAFETY PROGRAMME

Safety enhancement initiative	**SEI-13 – Start of SSP implementation at the national level**
Stakeholder	**Kuwait DGCA- ASD**
Actions	13A – Secure State-level commitment to improve safety.
	13B – Conduct and update SSP gap analysis (checklist) as well as the detailed SSP self-assessment.
	13C – Maintain an SSP implementation team.
	13D – Develop an implementation plan for the SSP.
	13E – Maintain updated SMS regulations for service providers and verify SMS implementation.
	13F – Identify and share safety management best practices.
References	KCASR 19 – *Safety Management*, Chapter 3 Doc 9859, *Safety Management Manual* Safety Management Implementation Website ICAO USOAP CMA Online Framework iSTARS SSP gap analysis (ICAO secure portal login required) Safety Management International Collaboration Group (SM ICG), *10 Things You Should Know About SMS* **13A, 13C and 13E** SM ICG, *The Frontline Manager's Role in SMS* SM ICG, *The Senior Manager's Role in SMS* SM ICG, *SMS Evaluation Tool* CANSO Standard of Excellence in Safety Management Systems SM ICG, *How to Support a Successful SSP and SMS Implementation – Recommendations for Regulators*

Safety enhancement initiative	**SEI-14 – Strategic allocation of resources to start SSP implementation**
Stakeholder	**Kuwait DGCA**
Actions	14A – Establish a process for planning and allocation of resources to enable SSP implementation and identify areas where resources are needed.
	14B – Obtain resources from national and appropriate authorities' leadership and stakeholders within the State to support SSP implementation.
	14C – Work with the ICAO Regional Office to make use of available means (e.g. Technical Cooperation Bureau) to acquire assistance needed for SSP implementation.
	14D – Work with other States and other organizations, as appropriate to train qualified technical personnel to fulfil their duties and responsibilities regarding SSP implementation
References	**14A and 14B** Annex 19 – *Safety Management*, Chapter 3 Doc 9859, *Safety Management Manual* ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA) **14C** ICAO Technical Cooperation Bureau regional coordinator **14D** SM ICG, SMS Inspector Competency Guidance

Safety enhancement initiative	**SEI-15 – Strategic collaboration with key aviation stakeholders to start SSP implementation**
Stakeholder	**Kuwait DGCA - ASD**
Actions	15A – Identify areas where collaboration/support is needed as part of the SSP implementation plan (see SEI-14)
	15B – Identify which key aviation stakeholder is relevant, including other States that are implementing or have implemented an SSP.
	15C – Develop an action plan to address the elements identified as missing or deficient during the SSP gap analysis (see SEI-13B).
	15D – Establish a process via RASG for a mentoring system, including providing assistance to States/industry, as well as sharing of best practices to support SSP implementation.
	15E – Develop and maintain a process to provide training on SSP to relevant staff, in collaboration with other States, RASG, ICAO (e.g. initial, recurrent and advanced) (see SEI-14D).
	15F – Establish, implement and maintain a process for sharing technical guidance, tools and safety-critical information related to SSP (e.g. advisory circulars, staff instructions, safety performance indicators), in collaboration with other States, RASG, ICAO and/or other stakeholders.
References	**15A to 15C** KCASR 19 – *Safety Management,* Chapter 3 Doc 9859, *Safety Management Manual* ICAO USOAP CMA Online Framework iSTARS SSP gap analysis (ICAO secure portal login required) SM ICG, SSP Assessment Tool **15D to 15F** Aviation Safety Implementation Assistance Partnership (ASIAP) ICAO Technical Cooperation Bureau (Regional coordinator) **15F** Safety Management Implementation Website

Safety enhancement initiative	**SEI-16 – Strategic collaboration with key aviation stakeholders to complete SSP implementation**
Stakeholder	**Kuwait DGCA - ASD**
Actions	16A – Work with key aviation stakeholders (identified in SEI-15) to execute the action plan for implementation
	16B – Work with key aviation stakeholders on establishing and updating SSP elements
	16C – Establish and maintain a system for the continuous improvement of the SSP, in collaboration with all key aviation stakeholders
	16D – Reserved
References	16B SM ICG, SSP Assessment Tool 16D Aviation Safety Implementation Assistance Partnership (ASIAP) ICAO Technical Cooperation Bureau (Regional coordinator) No Country Left Behind initiative safety implementation resources SM ICG, *How to Support a Successful SSP and SMS Implementation – Recommendations for Regulators*

Safety enhancement initiative	**SEI-17 – Availability of safety data and safety information to support safety management activities at the national level (step 1)**
Stakeholder	**Kuwait DGCA - ASD**
Actions	17A – Establish national laws, regulations and policies protecting safety data, safety information and related sources, in accordance with Appendix 3 of Annex 19 – *Safety Management*: i) Ensure that the protection of safety data, safety information and related sources does not interfere with the proper administration of justice or with maintaining or improving safety. ii) Ensure safety data, safety information and related sources are protected. iii) Specify the conditions under which safety data, safety information and related sources qualify for protection, including principles of exception and authoritative safeguards, such as de-identification of data. iv) Ensure that safety data and safety information remain available for the purpose of maintaining or improving aviation safety.
	17B – Maintain a State mandatory occurrence reporting system.
	17C – Establish safety data collection and processing systems (SDCPS) to capture, store, aggregate and enable the analysis of safety data and safety information to support their safety performance management activities.
	17D – Establish and maintain a process to identify hazards from collected safety data.
	17E – Establish and utilize a process to ensure the assessment of safety risks associated with identified hazards.
	17F – Maintain a State confidential voluntary safety reporting system providing data to the safety database.

References

17A to 17F

KCASR 19 – *Safety Management*

Doc 9859, *Safety Management Manual*

Safety Management Implementation website

17B to 17D

Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT)

ICAO Accident/Incident Data Reporting (ADREP) Taxonomy

SM ICG, *Development of a Common Hazard Taxonomy*

SM ICG, *Hazard Taxonomy Examples*

17E

SM ICG, *Risk-based decision-making principles*

Safety enhancement initiative	**SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2)**
Stakeholder	**Kuwait DGCA - ASD**
Actions	18A – Establish the safety objectives to be achieved through the SSP.
	18B – Develop safety performance measurement methodologies, aligned with the regional safety metrics, using the established safety risk management process (see SEI-17E).
	18C – Develop and update the safety performance indicators and safety performance targets using the established safety risk management process.
	18D – Maintain the establishment of mandatory safety reporting systems by service providers.
	18E – Ensure establishment of voluntary safety reporting systems as part of service providers' SMS.
	18F – Promote safety awareness and the two-way communication, sharing and exchange of safety-relevant information within the aviation organizations of the State and encourage sharing of safety information with industry within the State.
	18G – Contribute information on operational safety risks, including SSP safety performance indicators and emerging issues to the RASG.
References	**18A to 18F** Doc 9859, *Safety Management Manual* **18A to 18D** SM ICG, *A Systems Approach to Measuring Safety Performance – The Regulator Perspective* SM ICG, *Measuring Safety Performance Guidelines for Service Providers* **18E and 18F** RASG regional safety reports **18G** Secure Portal on Operational Safety Risks and Emerging Issues

Safety enhancement initiative	**SEI-19 – Acquisition of resources to increase the proactive use of risk modelling capabilities**
Stakeholder	**Kuwait DGCA**
Actions	19A – Identify resources needed to support safety intelligence collection and processing, advanced data analysis, risk modelling and information-sharing capabilities.
	19B – Attract, recruit, train and retain qualified technical personnel to specialize in risk modelling.
	19C – Ensure that the Civil Aviation Safety Inspector workforce is trained to perform safety oversight of service providers that have implemented SMS.
References	**19B and 19C** ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA)

Safety enhancement initiative	**SEI-20 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities**
Stakeholder	**Kuwait DGCA - ASD**
Actions	20A – Identify areas where collaboration/support is needed to ensure that stakeholders understand and foster a positive safety culture that creates a high degree of trust and respect between personnel and management and promotes safety reporting.
	20B – Establish a process for a mentoring system, including providing assistance to industry, as well as the sharing of best practices, to support positive safety culture development and the proactive use of risk modelling.
	20C – Reserved.
	20D – Collaborate with key aviation stakeholders to establish a mechanism for the regular sharing and exchange of safety information, analyses, safety risk discoveries/lessons learned and best practices within a confidential and non-punitive environment.
References	**20A** CANSO Safety Culture Definition and Enhancement Process SKYbrary Safety Culture in Aviation **20D** ICAO Safety Information Monitoring System (SIMS)

Safety enhancement initiative	**SEI-21 – Advancement of safety risk management at the national level**
Stakeholder	**Kuwait DGCA - ASD**
Actions	21A – Establish and update 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, EI scores, etc.).
	21B – Develop risk modelling capabilities to support monitoring system safety issues and accident/incident prevention.
	21C – Encourage information-sharing with industry.
References	**21A and 21B** EUROCONTROL Voluntary ATM Incident Reporting (EVAIR) European Authorities Coordination Group on Flight Data Monitoring (EAFDM) FAA Aviation Safety Information Analysis and Sharing Program FAA Aviation Voluntary Reporting Programs IATA Flight Data eXchange (FDX) IATA Safety Trend Evaluation, Analysis and Data Exchange System (STEADES) Global Aviation Safety Data Sharing Program iMPLEMENT

Safety enhancement initiative	**SEI-22 – Establishment of the AIG office**
Stakeholder	**AIG Office**
Actions	22A – Amend the primary law to establish an independent AIG authority by 2025.
	22B – Establish an independent accident and incident office core infrastructure and function by 2025.
	22C – Develop competent staff by 2025.
References	**22A, 22B and 22C** - KCASR 13 and Annex 13 - Related ICAO Docs 9756, CIR 298, DOC 9946, DOC 9962

1.2.2 Industry

COMPONENT 1 – STATE SAFETY OVERSIGHT SYSTEM

PHASE 1 – ESTABLISHMENT OF A SAFETY OVERSIGHT FRAMEWORK (CE-1 TO CE-5) (as per figure 2 above)

Safety enhancement initiative	**SEI-1 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner**
Stakeholder	**Industry**
Actions	1A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues. (CE-1 to CE-5)
	1B – Provide input to States, as applicable, for the development of national regulations. (CE-2)
	1C – Reserved
	1D – Address national high-risk categories of occurrences, as applicable, in coordination with States of Kuwait DGCA/ASD.
References	**1A** Doc 9734, *Safety Oversight Manual* Doc 9859, *Safety Management Manual* RASGs **1D** Appendix B – *OPS Roadmap* National Aviation Safety Plans (NASP)

PHASE 2 – IMPLEMENTATION OF A SAFETY OVERSIGHT SYSTEM (CE-6 TO CE-8) (as per figure 2 above)

Safety enhancement initiative	**SEI-2 – Improvement of industry compliance with applicable regulations**
Stakeholder	**Industry**
Actions	2A – Work together within industry to ensure compliance with applicable regulations. (CE-6 to CE-8)
	2B – Encourage service providers to participate in the corresponding, ICAO- recognized industry assessment programmes. (CE-8)
	2C – Reserved
References	2B – ACI Airport Excellence (APEX) in Safety – CANSO Standard of Excellence in Safety Management Systems – FSF Basic Aviation Risk Standard (BARS) – IATA Operational Safety Audit (IOSA) – IATA Safety Audit for Ground Operations (ISAGO) – International Business Aviation Council (IBAC) International Standard for Business Aircraft Operations (IS-BAO).

Safety enhancement initiative	**SEI-3 – Allocation of industry resources to support effective safety oversight**
Stakeholder	**Industry**
Actions	3A – Identify resources that are available to support safety enhancement initiatives for the States of Kuwait. (all CEs, emphasis on CE-6 to CE-8)
	3B – Participate in government/industry collaborative safety enhancement initiatives.
References	Aviation Safety Implementation Assistance Partnership (ASIAP)

Safety enhancement initiative	**SEI-4 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner**
Stakeholder	**Industry**
Actions	4A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues. (CE-6 to CE-8)
	4B – Assist in resolving safety issues identified via accident and incident investigations, safety reports and other means. (CE-8)
	4C – Continue to work with national high-risk categories of occurrences
References	**4A** RASGs **4B** Doc 9756, *Manual of Aircraft Accident and Incident Investigation* **4C** National Aviation Safety Plans

COMPONENT 2 – STATE SAFETY PROGRAMME

Safety enhancement initiative	**SEI-5 – Improvement of industry compliance with applicable SMS requirements**
Stakeholder	**Industry**
Actions	5A – Implement a safety management system (SMS) in accordance with KCASR 19.
	5B – Notify Kuwait DGCA-ASD when there may be discrepancies in the application of SMS requirements.
	5C – Utilize available guidance material (e.g. from States or non-governmental organizations) to assist with SMS implementation.
References	**5A to 5C** KCASR 19 Doc 9859, *Safety Management Manual* **5A** KCASR 19 **5C** Safety Management Implementation Website SM ICG, *SMS for Small Organizations* CANSO Standard of Excellence in Safety Management Systems

Safety enhancement initiative	**SEI-6 – Resources for service providers to effectively implement SMS**
Stakeholder	**Industry**
Actions	6A – Work in collaboration with the State and industry associations to advance SMS implementation and identify expectations that cannot be efficiently resourced.
	6B – Identify areas where resources are needed as part of the SMS implementation plan developed following the SMS gap analysis.
	6C – Establish a process for resource planning and allocation to enable SMS implementation, including resources which may be obtained from industry organizations.
	6D – Obtain commitment from the accountable executive within the service provider for the necessary resources to enable SMS implementation.
	6E – Encourage other service providers (e.g. interlining operators) to implement SMS within their operation by providing resources, such as qualified technical personnel to assist them.
References	KCASR 19 Doc 9859, *Safety Management Manual* Safety Management Implementation Website ICAO Safety Management Training Programme (SMTP) CANSO Standard of Excellence in Safety Management Systems IATA Safety Management for Airlines Diploma

Safety enhancement initiative	**SEI-7 – Strategic collaboration with key aviation stakeholders to complete SSP implementation**
Stakeholder	**Industry**
Actions	7A – Help identify key aviation stakeholders involved in implementing SSP.
	7B – Work with key aviation stakeholders to support an action plan for SSP implementation.
	7C – Support SSP implementation.
	7D – Provide input to the process for sharing technical guidance, tools and safety critical information related to SSP and SMS (e.g. advisory circulars, staff instructions, safety performance indicators), in collaboration with Kuwait DGCA – ASD and other stakeholders.
	7E – Support continuous improvement of SSP, in collaboration with Kuwait DGCA – ASD and other stakeholders.
	7F – Continue to work with national high-risk categories of occurrences.
References	**7A to 7E** KCASR 19 Doc 9859, *Safety Management Manual* National SMS requirements of the State **7D** Safety Management Implementation Website **7F** National Aviation Safety Plans

Safety enhancement initiative	**SEI-8 – Availability of safety data and safety information to support safety management activities at the service provider level (step 1)**
Stakeholder	**Industry**
Actions	8A – Comply with national laws, regulations and policies protecting safety data, safety information and related sources, in accordance with KCASR 19 – *Safety Management.*
	8B – Establish mandatory safety reporting systems.
	8C – Provide information to Kuwait DGCA - ASD safety data collection and processing systems (KCAAS-Pulse).
	8D – Establish internal mechanisms related to the protection of safety data, safety information and related sources for the purpose of safety improvement.
	8E – Establish voluntary and confidential hazard/occurrence reporting systems as part of the SMS.
	8F – Establish and maintain a safety database for technical personnel to monitor system safety issues within the service provider.
	8G – Establish and utilize a safety risk management process.
References	**8A** KCASR 19 – *Safety Management,* **8B** Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT) ICAO Accident/Incident Data Reporting (ADREP) Taxonomy SM ICG, *Development of a Common Hazard Taxonomy* SM ICG, *Hazard Taxonomy Examples* **8B to 8G** KCASR 19 – *Safety Management,* Doc 9859, *Safety Management Manual*

Safety enhancement initiative	**SEI-9 – Availability of safety data and safety information to support safety management activities at the service provider level (step 2)**
Stakeholder	**Industry**
Actions	9A – Develop safety performance measurement methodologies, aligned with harmonized safety metrics within industry, via the established safety risk management process.
	9B – Develop safety performance indicators and safety performance targets, as well as associated alert settings, via the established safety risk management process.
	9C – Encourage the use of globally harmonized metrics for the development and monitoring of safety performance indicators, as part of the service providers' SMS.
	9D – Encourage sharing and use of information from within industry to identify hazards and safety deficiencies, and mitigate safety risks.
	9E – Encourage sharing of information from industry to Kuwait DGCA - ASD to assist in the development of national and regional aviation safety plans.
References	**9A to 9D** KCASR 19 – *Safety Management* Doc 9859, *Safety Management Manual* **9A and 9B** SM ICG, *A Systems Approach to Measuring Safety Performance – The Regulator Perspective* SM ICG, *Measuring Safety Performance Guidelines for Service Providers* **9B** Safety performance indicators developed by non-governmental organizations: ACI CANSO IATA IBAC International Coordinating Council of Aerospace Industries Associations (ICCAIA) **9E** ICAO iPACK – Developing a National Aviation Safety Plan (NASP)

Safety enhancement initiative	**SEI-10 – Allocation of industry resources to support continuous improvement of SSP and SMS**
Stakeholder	**Industry**
Actions	10A – Ensure competent technical personnel are allocated, at the service provider level, to support the requirements of the SSP infrastructure 10B – Provide safety analysis results from service providers to support the SSP
References	**10A** – ICAO iPACK – Supporting Civil Aviation Entities in Conducting a Training Needs Analysis (TNA) **10B** – Safety Management Implementation Website

Safety enhancement initiative	**SEI-11 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities**
Stakeholder	**Industry**
Actions	11A – Work with key aviation stakeholders to leverage best practices with safety information analysis.
	11B – Share safety risk identification with stakeholders for mitigation and monitoring strategies.
	11C – Actively participate with States and organizations engaged in risk modelling.
References	Commercial Aviation Safety Team General Aviation Joint Steering Committee International Helicopter Safety Team RASGs

Safety enhancement initiative	**SEI-12 – Advancement of safety risk management at the service provider level**
Stakeholder	**Industry**
Actions	12A – Verify that a legal framework related to the protection of safety data, safety information and other related sources is implemented and effective.
	12B – Develop risk modelling capabilities to support the monitoring of system safety issues and accident/incident prevention.
	12C – Monitor safety information exchange networks for continuous improvements.
References	**12A** FAA Aviation Safety Information Analysis and Sharing Program IATA Flight Data eXchange (FDX) IATA Safety Trend Evaluation, Analysis and Data Exchange System (STEADES) Global Aviation Safety Data Sharing Program

1.3 Emerging Risks ROADMAP

1.3.1 GNSS Interference

GNSS interference and Spoofing, including intentional and unintentional signal interference, has been identified as a major safety issue.

Flight Data Exchange analysis showed that most of the GPS Signal Lost or false data (Spoofing) were detected within or near Turkish airspace (Ankara FIR and Istanbul FIR) and in the Eastern Mediterranean area. Compared to the previous analysis, the identified hot spots have expanded into the Anatolian peninsula, including Istanbul FIR.

Key Actions

- Share data analysis from operators and IATA with ICAO MED-Region,
- Raise awareness on the potential impact of GNSS interference on the aviation
- Urge Operators/Airlines to report interference.
- Issue Safety Bulletins.

1.3.2 Safe Operations of UAS (civil drones)

The number of drones at the local level has increased. Available evidence demonstrates an increase in drone's activities around aerodromes and the need to mitigate the associated risk. Kuwait DGCA/ASD is responsible for ensuring aviation safety and protecting the public from aviation hazards. Operators of aircraft, whether manned or unmanned, are likewise responsible for operating safely.

Key Action

- Promulgation of Drone and Light Sport Legislation.
- Implementation KCASR 22 (UAS regulatory framework) as required.
- Establish a system to monitor and control drone activity.
- Involve all other stakeholders to promote safety and security.
- Approve the Aerodrome response plane for UAS.

1.3.3 5G interference with Radio Altimeter

Radar altimeters (RA), operating at 4.2-4.4 GHz, are the only sensors onboard a civil aircraft which provide a direct measurement of the clearance height of the aircraft over the terrain or other obstacles (i.e. the Above Ground Level - AGL - information).

The RA systems' input is required and used by many aircraft systems when AGL is below 2500 ft. Any failures or interruptions of these sensors can therefore lead to incidents with catastrophic outcome, potentially resulting in multiple fatalities. The radar altimeters also play a crucial role in providing situational awareness to the flight crew. The measurements from the radar altimeters are also used by Automatic Flight Guidance and Control Systems (AFGCS) during instrument approaches, and to control the display of information from other systems, such as Predictive Wind Shear (PWS), the Engine-Indicating and Crew-Alerting System (EICAS), and Electronic Centralized Aircraft Monitoring (ECAM) systems, to the flight crew.

There is a major risk that 5G telecommunications systems in the 3.7–3.98 GHz band will cause harmful interference to radar altimeters on all types of civil aircraft-including commercial transport airplanes; business, regional, and general aviation airplanes; and both transport and general aviation helicopters. If there is no proper mitigation, this risk has the potential for broad impacts to aviation operations in the United States as well as in other regions where the 5G network is being implemented next to the 4.2-4.4 GHz frequency band.

List of potential equipment failures:

Auto land functions, EICAS/ECAM, False or missing GPWS alert, Unreliable instrument Indications, and Abnormal behaviours in Automatic Flight Systems.

The 5G interference with Radar Altimeter SEIs/safety actions covered under CFIT SEI.

Key Actions

- Develop a guidance material on safeguarding measures to protect Radio Altimeter from potential harmful interference from 5G Operation.
- Raise awareness of Operators and promote the guidance material.
- Insure operator's adherence to issued NOTAMs.
- To avoid installation of any new 5G Towers in the Kuwait Airport fascinate in cooperation with Kuwait CITRA, reference to Figure 3 below.

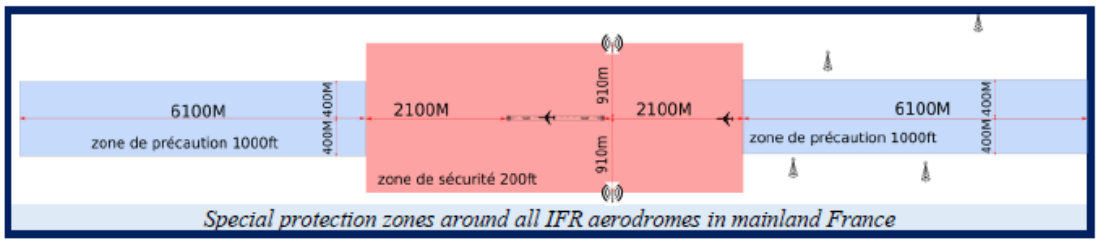


Figure 3

precautionary area 1000ft

security zone 200ft

1.3.4 Management of Security Risks with Safety Impact

The crash of flight MH17 immediately raised the question why the aero plane was flying over an area where there was an ongoing armed conflict. Similar events had occurred in the MID region. Thus, military or terrorist conflicts may occur in any State at any time and pose risks to civil aviation. This is why it's important for governments, aircraft operators, and other airspace users such as air navigation service providers (ANSPs), to work together to share the most up-to-date conflict zone risk-based information possible to assure the safety of civilian flights.

Furthermore, flying over or nearby conflict zones is related to both security and safety management and requires an integrated risk management process, as proposed by ICAO in the second edition of the Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (Doc 10084) as an activity for further development. Several steps have to be taken, as part of the continuous risk assessment cycle including: the collection of information and intelligence; the subsequent threat analysis; the security risk assessment; the hazard identification; the safety risk assessment; the determination of the acceptable risk level and lastly information sharing. Each mitigating action should be accompanied with the identification of (new) hazards as a result of unintended consequences of the risk assessment mitigating actions.

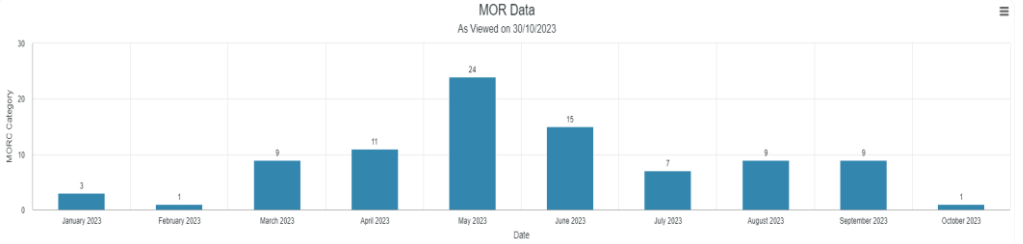
The crash of flight MH17 shows, safety and security are intertwined. To manage the risks related to flying over conflict zones and other risks at the interface of safety and security as good as possible, closer cooperation between both worlds is necessary.

Key Actions taken/planned
a- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones
b- Organize seminar/Symposium to exchange experiences and good practices on assessing the risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG
c- Issue NOTAMs to share threats information emanated from conflict zones within their airspaces.

1.4 Other Safety Issues

1.4.1 Wildlife.

Kuwait is located in the path of seasonal migration routes of bird from Central Asia to Africa and vice versa, in addition to small bird inhabiting Kuwait. As a result, we are witnessing an increase of generally small birds strikes but very frequent during Take Off, Landings and Final Approach phases. As shown in the chart below.



Actions:

- Request the procuring of bird deterrent equipment by Kuwait Airport.
- Insuring landscape and vegetation in and around the aerodrome do not encourage birds or wild life nesting behaviour.
- Kuwait Airport to cooperate with the government environmental entity (Public Authority of Agriculture Affairs and Fish Resources) to control wild life's in and around Kuwait Airport.

Appendix 2 (ROADMAP SEIs and RASP / NASP Targets)

This appendix presents the link between the organizational challenges (ORG) roadmap SEIs and the supported GASP / NASP targets.

Table 1. Organizational challenges (ORG) roadmap – States

States Component 1 – State safety oversight system

Phase 1 – Establishment of a safety oversight framework (CE-1 to CE-5)	
Safety enhancement initiative	*Supported GASP / NASP targets*
SEI-1 – Consistent implementation of ICAO SARPs at the national level	2.1
SEI-2 – Development of a comprehensive regulatory oversight framework	2.1
SEI-3 – Establishment of an independent accident and incident investigation authority, consistent with Annex 13 – Aircraft Accident and Incident Investigation	1.1 2.1
SEI-4 – Strategic allocation of resources to enable effective safety oversight	2.1 4.1
SEI-5 – Qualified technical personnel to support effective safety oversight	1.1 2.1 3.1 4.1
SEI-6 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	1.1 2.1 3.1 4.1
SEI-7 – Provision of the primary source of safety information to ICAO by completing, submitting and updating all relevant documents and records	2.1

Phase 2 – Implementation of a safety oversight system (CE-6 to CE-8)	*Supported KCASR targets*
SEI-8 – Consistent implementation of ICAO SARPs at the national level	2.1
SEI-9 – Continued implementation of and compliance with ICAO SARPs at the national level	1.1 2.1
SEI-10 – Strategic allocation of resources to enable effective safety oversight	2.1 4.1
SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	1.1 2.1 3.2 4.1
SEI-12 – Continued provision of the primary source of safety information to ICAO by updating all relevant documents and records as progress is made	2.1

States Component 2 – State safety programme

Safety enhancement initiative	***Supported KCASR targets***
SEI-13 – Start of SSP implementation at the national level	3.1 3.2
SEI-14 – Strategic allocation of resources to start SSP implementation	3.2 4.1
SEI-15 – Strategic collaboration with key aviation stakeholders to start SSP implementation	3.2 4.1
SEI-16 – Strategic collaboration with key aviation stakeholders to complete SSP implementation	3.2 4.1
SEI-17 – Availability of safety data and safety information to support safety management activities at the national level (step 1)	1.1 3.1 3.2 4.3 5.1

SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2)	1.1
	3.1
	4.3
	5.1
SEI-19 – Acquisition of resources to increase the proactive use of risk modelling capabilities	1.1
	3.1
	3.2
	4.3
SEI-20 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities	1.1
	3.1
	3.2
	4.3
	5.1
SEI-21 – Advancement of safety risk management at the national level	1.1
	3.1
	3.2
	4.3
	5.1
SEI-22 – AIG Office	7.1
	7.2

Table 2. Organizational challenges (ORG) roadmap – Industry

Industry Component 1 – State safety oversight system

Phase 1 – Establishment of a safety oversight framework (CE-1 to CE-5)	
Safety enhancement initiative	***Supported KCASR targets***
SEI-1 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	1.1
	2.1
	5.1
Phase 2 – Implementation of a safety oversight system (CE-6 to CE-8)	
SEI-2 – Improvement of industry compliance with applicable regulations	2.1
	4.2
	5.1
SEI-3 – Allocation of industry resources to enable effective safety oversight	2.1
	4.2
	5.1
SEI-4 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	1.1
	2.1
	3.1
	4.1
	5.1

Industry Component 2 – State safety programme

Safety enhancement initiative	***Supported KCASR targets***
SEI-5 – Improvement of industry compliance with applicable SMS requirements	3.1
	3.2
	4.1
SEI-6 – Resources for service providers to effectively implement SMS	3.1
	3.2
	4.1
SEI-7 – Strategic collaboration with key aviation stakeholders to complete SSP implementation	1.1
	3.2
	4.1
	5.1

SEI-8 – Availability of safety data and safety information to support safety management activities at the service provider level (step 1)	1.1
	3.1
	3.2
	4.2
	4.3
	5.1
SEI-9 – Availability of safety data and safety information to support safety management activities at the service provider level (step 2)	1.1
	3.1
	3.2
	4.2
	4.3
	5.1
SEI-10 – Allocation of industry resources to support continuous improvement of SSP and SMS	1.1
	3.1
	4.3
	5.1
SEI-11 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities	1.1
	3.1
	4.3
	5.1
SEI-12 – Advancement of safety risk management at the service provider level	3.1
	5.1

Appendix 3 Safety Monitoring and Implementation

Kuwait DGCA – ASD will continuously monitor the implementation of the SEIs listed in the NASP and measure safety performance of the national civil aviation system, to ensure the intended objectives are achieved, using the mechanisms presented below.

In addition to the above, ASD shall review the NASP every 3 years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. The Kuwait DGCA - ASD will periodically review the safety performance of the initiatives listed in the NASP to ensure the achievement of national safety goals and targets. If required, will seek the support of the SSP high level committee to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks.

Through close monitoring of the SEIs, Kuwait DGCA – ASD will adjust the NASP and its initiatives, if needed, and update the NASP accordingly.

Kuwait DGCA – ASD will use the indicators of this plan to measure safety performance of the civil aviation system and monitor each national safety target. A periodic safety report will be published to provide stakeholders with relevant up-to-date information on the progress made in achieving the national safety goals and targets, as well as the implementation status of the SEIs.

In the event that the national safety goals and targets are not met, the root causes will be presented. If Kuwait DGCA - ASD identifies critical operational safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the NASP.
Kuwait DGCA – ASD adopted a standardized approach to provide information at the regional level, for reporting to the RASGs. This allows the region to receive information and assess operational safety risks using common methodologies.
Any questions regarding the NASP and its initiatives, and further requests for information, may be addressed to Kuwait DGCA – ASD.

Risks Type
Emergi... | Operat... | Organi... | Other i...

Stakeholder
ASD... | ASD ... | ASD ... | ASD ... | ASD ... | ASD ... | DGCA | DGC... | DGC... | DGC... | Indu...

STATE OF KUWAIT NASP TABLE

Risks Type	Safety Enhancement Initiative (SEI)	Supported Goal	Supported Target	Stakeholder	Target Selected	Metrics/Indicators	Timeline	Priority	Action	Monitoring Activity	Examples of Further Contingency Actions	Development	Follow-up	Status	Remarks
Operational Risks	Mitigate contributing factors to LOC-I accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**ASD / OPS**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following LOC-I safety actions: a) Require upset prevention and recovery training in all full flight simulator type conversion and recurrent training programmes. b) Require more time devoted to training for the pilot monitoring role.	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	3. Identify additional contributing factors for example: a) Distraction. b) Adverse weather and or Spatial Disorientation. c) Complacency. d) Inadequate standard operating procedures (SOPs) for effective flight management. e) Insufficient height above terrain for recovery. f) Lack of awareness or competence in procedures for recovery from unusual aircraft attitudes. g) Inappropriate flight control inputs in response to a sudden awareness of an abnormal bank angle.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for LOC-I: a) Increase the effectiveness of regulatory oversight. b) Improve regulations.	5. Conduct continuous evaluations of the performance of the SEIs	**100 % Completed**	
Operational Risks	Mitigate contributing factors to LOC-I accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following LOC-I safety actions: a) Aircraft upset prevention recovery training in all full flight simulator type conversion and recurrent training programmes. b) More time devoted to training multi-crew pilots for the monitoring role. c) Promote bank angle alerting systems into all multi-engine aircraft. d) Training on manual aircraft handling of approach to stall and stall recovery (including at high altitude). e) Recurrent training on flight mechanics. f) Simulator fidelity.	2. Validate the effectiveness of the SEIs through the analysis of FDM and pilot reports (apply safety management methodologies).	3. Identify additional contributing factors, for example: a) Distraction. b) Adverse weather and or Spatial Disorientation. c) Complacency. d) Inadequate SOPs for effective flight management. e) Insufficient height above terrain for recovery. f) Lack of awareness or competence in procedures for recovery from unusual aircraft attitudes. g) Inappropriate flight control inputs in response to a sudden awareness of an abnormal bank angle.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for LOC-I.	5. Conduct continuous evaluations of the performance of the SEIs.		
Operational Risks	Mitigate contributing factors to MAC accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**ASD / OPS & ATC**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following MAC safety actions: a) Establish guidance and regulations to ensure aircraft are equipped with Airborne Collision Avoidance System (ACAS), in accordance with KCASR 6 – Operation of Aircraft. b) Ensure adherence to ACAS warning procedures. c) Promote the improvement of air traffic control (ATC) systems, procedures and tools to enhance conflict management. d) Promote the improvement of communications systems and procedures, such as controller-pilot datalink.	2. Validate the effectiveness of the SEIs through the analysis of MORs and VORs and accident/incident investigations (apply safety management methodologies), and oversight activity.	3. Identify additional contributing factors, for example: a) Traffic conditions - traffic density, complexity, mixture of aircraft types and capabilities, etc. b) ATC performance related to workload, competence, teamwork, procedures, commitment, etc., as well as the influence of air navigation services providers' (ANSP) safety management. c) Flight crew training and corporate culture with workload, competence, teamwork, procedures, commitment, etc., and the influence of the aircraft operator's safety management. d) ATC systems - flight data processing, communication, short term conflict alert (STCA), etc., as well as the interaction with the human operators and the aircraft systems, and the procurement policy of the ANSP. e) Aircraft equipment – autopilots, transponders and ACAS, but also aircraft performance (e.g. rate-of-climb) and their physical size. f) Navigation infrastructure - both coverage and quality. g) Surveillance - both coverage and quality. h) Flight plan processing - efficiency and reliability of flight plan submission, approval and distribution. i) Airspace - complexity of airspace design, route layout, extent of controlled or uncontrolled airspace, proximity of military operational or training areas, etc. j) Flight in adverse environmental conditions that may influence conflict management and collision avoidance.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for MAC.	5. Conduct continuous evaluations of the performance of the SEIs.	**50 % Completed**	c) Promote the improvement of air traffic control (ATC) systems, procedures and tools to enhance conflict management. d) Promote the improvement of communications systems and procedures, such as controller-pilot datalink
Operational Risks	Mitigate contributing factors to MAC accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following MAC safety actions: a) Equip aircraft with ACAS. b) Consider equipping aircraft with auto-pilot/flight director ACAS response. c) Increase adherence to ACAS warning procedures. d) Consider the implementation of STCA, including Short Term Conflict Alert (STCA) suitable for terminal areas. e) Improve reliability and consistency of safety nets to provide early and dependable warning, and to reduce nuisance alerts. f) Improve aircraft systems to alert pilots to any non-availability of transponders and ACAS. g) Improve ATC systems, procedures and tools to enhance conflict management – this can include predictability of aircraft trajectories, so that conflicts can be predicted and resolved at an earlier stage, using Medium-Term Conflict Detection (MTCD) and similar systems. h) Improve communications systems and procedures, such as Controller-Pilot Datalink Communication (CPDLC).	2. Validate the effectiveness of the SEIs through the analysis of FDM*, pilot and ATC reports** (apply safety management methodologies). *Traffic alert and collision avoidance system resolution advisories (TCAS-RA), TCAS traffic advisories (TCAS-TA). **Separation and airspace infringement, level busts, aircraft proximity (AIRPROX), gross navigation errors (GNE) and large height deviations (LHD).	3. Identify additional contributing factors, for example: a) Traffic conditions – traffic density, complexity, mixture of aircraft types and capabilities, etc. b) ATC performance related to workload, competence, teamwork, procedures, commitment, etc., as well as the influence of ANSPs' safety management. c) Flight crew training and corporate culture related to workload, competence, teamwork, procedures, commitment, etc., and the influence of the aircraft operator's safety management. d) ATC systems – flight data processing, communication, STCA, etc., as well as the interaction related to human operators and the aircraft systems, and the procurement policy of the ANSP. e) Aircraft equipment – autopilots, transponders and ACAS, but also aircraft performance (e.g. rate-of-climb) and their physical size. f) Navigation infrastructure – both coverage and quality. g) Surveillance – both coverage and quality. h) Flight plan processing – efficiency and reliability of flight plan submission, approval and distribution. i) Airspace – complexity of airspace design, route layout, extent of controlled or uncontrolled airspace, proximity of military operational or training areas, etc. j) Flight in adverse environmental conditions that may influence conflict management and collision avoidance.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for MAC	5. Conduct continuous evaluations of the performance of the SEIs		
Operational Risks	Mitigate contributing factors to RE accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**ASD / OPS, ACS & ANS**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following RE safety actions: a) Ensure the establishment and implementation of a State runway safety programme and runway safety teams. b) Promote the establishment of policy and training on rejected landings, go-arounds, crosswind and tailwind landings (up to the maximum manufacturer-demonstrated winds). c) Promote equipage of runway overrun awareness and alerting systems on aircraft. d) Ensure effective and timely reporting of meteorological and aerodrome conditions (e.g. runway surface condition in accordance to the ICAO global reporting format in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations braking action and revised declared distances). e) Certify aerodrome in accordance with KCASR 14, Volume I, as well as PANS-Aerodromes (ICAO-Doc 9981). f) Promote the installation of arresting systems if runway end safety area (RESA) requirements cannot be met. g) Ensure that procedures systematically reduce the rate of un stable approaches to runways are developed and used.	2. Validate the effectiveness of the SEIs through the analysis of MORs, VORs and accident/incident investigations (apply safety management methodologies), and oversight activity.	3. Identify additional contributing factors, for example: a) Ineffective SOPs. b) Failure to adhere to the appropriate SOPs. c) Long/floated/bounced/off-centre/crabbed landing. d) Inadequate approach procedures design. e) Inadequate regulatory oversight.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RE.	5. Conduct continuous evaluations of the performance of the SEIs.	**25 % Completed**	
Operational Risks	Mitigate contributing factors to RE accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following RE safety actions: a) Active participation in runway safety programmes and runway safety teams. b) Policy and training on rejected landings, go-arounds, crosswind and tailwind landings (up to the maximum manufacturer-demonstrated winds). c) Equip the aircraft with runway overrun awareness and alerting systems. d) Effective and timely reporting of meteorological and aerodrome conditions (e.g. runway surface condition in accordance with the ICAO global reporting format in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations braking action and revised declared distances). e) Comply with runway-related provisions in KCASR 14, Volume I as well as PANS-Aerodromes (ICAO Doc 9981). f) Consider an arresting system if RESA requirements cannot be met. g) Procedures to systematically reduce the rate of un stable approaches to runways.	2. Validate the effectiveness of the SEIs through the analysis of FDM* and pilot reports** (apply safety management methodologies). *For example, long landings, excessive height and speed at threshold, aircraft configuration at 1 000 ft above aerodrome level (AAL), speed at 1 000 ft AAL, tailwind, heading deviation during final approach, use of retardation devices (spoilers, reverse thrust, autobrakes) **Braking action, adverse weather, navigational aid (navaid) malfunctions	3. Identify additional contributing factors, for example: a) Ineffective SOPs. b) Failure to adhere to the appropriate SOPs. c) Long/floated/bounced/hard/off-centre/crabbed landing. d) Inadequate approach procedures design. e) Inadequate regulatory oversight.	4. Implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RE.	5. Conduct continuous evaluation of the performance of the SEIs.		
Operational Risks	Mitigate contributing factors to RI accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**ASD / OPS, ACS & ANS**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following RI safety actions: a) Ensure the establishment and implementation of a State runway safety programme and runway safety teams. b) Promote the establishment of policy, procedures and training that supports situational awareness for controllers, pilots and airside vehicle drivers. c) Ensure effective use of suitable technologies to assist the improvement of situational awareness, such as improved resolution airport moving maps (AMM), electronic flight bags (EFBs), enhanced vision systems (EVS) and head-up displays (HUD), advanced-surface movement guidance and control systems (ASMGCS), stop bars and runway incursion warning systems (ARWS). d) Certify aerodrome in accordance with KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations, as well as PANS-Aerodromes (Doc 9981). e) Ensure the use of standard phraseologies in accordance with applicable State regulations and ICAO provisions (e.g. ICAO Doc 9432, Manual of Radiotelephony). f) Ensure the identification and publication in the aeronautical information publication (AIP) of hot spots at aerodromes. g) Ensure that suitable strategies to remove hazards or mitigate risks associated with identified hot spots are developed and executed.	2. Validate the effectiveness of the SEIs through the analysis of MORs, VORs and accident/incident investigations (apply safety management methodologies), and oversight activity. *For example, long landings, excessive height and speed at threshold, aircraft configuration at 1 000 ft above aerodrome level (AAL), speed at 1 000 ft AAL, tailwind, heading deviation during final approach, use of retardation devices (spoilers, reverse thrust, autobrakes). **Braking action, adverse weather, navigational aid (navaid) malfunctions	3. Identify additional contributing factors, for example: a) Operations in low visibility conditions. b) Complex or inadequate aerodrome design. c) Complexity of traffic (multiple simultaneous line-ups). d) Conditional clearances. e) Simultaneous use of intersecting runways. f) Late issue of or late changes to departure clearances. g) Phraseology use (e.g. non-standard vs. standard, call-sign confusion). h) Concurrent use of more than one language for ATC communications. i) English language competence despite the introduction by KCASR of a system of validating competence in aviation English. j) Inadequate manoeuvring area driver training and assessment programme.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RI	5. Conduct continuous evaluations of the performance of the SEIs	**25 % Completed**	

Operational Risks	Mitigate contributing factors to RI accidents and incidents	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following RI safety actions: a) Active participation in a runway safety programme and runway safety teams. b) Policy, procedures and training that support situational awareness for controllers, pilots and airside vehicle drivers. c) Effective use of suitable technologies to assist the improvement of situation awareness, such as improved resolution AMM, EFB, EVS and HUD, Advanced Surface Movement Guidance & Control System (A-SMGCS), stop bars and Autonomous Runway Incursion Warning System (ARIWS). d) Comply with runway-related provisions in KCASR 14 – Aerodromes, Volume I – Aerodrome Design and Operations, as well as PANS-Aerodromes (ICAO Doc 9981). e) Use of standard phraseologies in accordance with applicable State regulations and ICAO provisions (e.g. ICAO Doc 9432, Manual of Radiotelephony). f) Identification and publication in the AIP of Hot Spots at aerodromes. g) Suitable strategies to remove or mitigate hazards associated with identified hot spots.	2. Validate the effectiveness of the SEIs through the analysis of ATC data*, and reports from stakeholders (apply safety management methodologies). *Transcripts, number of conflicts detected by Advanced Surface Movement Guidance & Control System (SMGCS).	3. Identify additional contributing factors, for example: a) Operations in low visibility conditions. b) Complex or inadequate aerodrome design. c) Complexity of traffic (multiple simultaneous line-ups). d) Conditional clearances. e) Simultaneous use of intersecting runways. f) Late issue of or late changes to departure clearances. g) Phraseology use (e.g. non-standard vs. standard, call-sign confusion). h) Concurrent use of more than one language for ATC communications. i) English language competence despite the introduction by KCASR of a system of validating competence in aviation English. j) Inadequate manoeuvring area driver training and assessment programme.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for RI.	5. Conduct continuous evaluations of the performance of the SEIs.		
Operational Risks	Mitigate contributing factors to the risk of CFIT	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following CFIT safety actions: a) Ensure aircraft are equipped with terrain awareness and warning system (TAWS) in accordance with KCASR 6 – Operation of Aircraft. b) Promote the wider use of TAWS beyond the requirements of KCASR 6. c) Issue Safety Bulletins (SB) to increase adherence to TAWS / GPWS warning procedures. d) Promote greater awareness of approach risks. e) Consider the implementation of continuous descent final approaches (CDFA). f) Consider the implementation of Minimum Safe Altitude warning (MSAW) systems. g) Ensure the timeliness of updates and accuracy of Electronic Terrain and Obstacle Data (eTOD). h) Promote the use of GPS-derived position data to feed TAWS.	2. Analyse the mandatory occurrence reporting (MORs) and voluntary occurrence reporting systems (VORs) and accident/incident investigations (apply safety management methodologies), , and oversight activity.	3. Identify additional contributing factors, for example: a) Flight in adverse environmental conditions b) Approach design and documentation (e.g. approaches with vertical guidance (APV) or localizer performance with vertical guidance (LPV) approaches) c) Phraseology used (standard vs. non-standard) d) Pilot fatigue Situational Awareness and Spatial disorientation.	4. Conduct continuous evaluations of the performance of the SEIs	5. Conduct continuous evaluations of the performance of the SEIs	**25 % Completed**	
Operational Risks	Mitigate contributing factors to the risk of CFIT	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**High**	1. Implement the following CFIT safety actions: a) Equip aircraft with TAWS. b) Increase adherence to TAWS warning procedures. c) Develop greater awareness of approach risks. d) Promote CDFA. e) Utilize MSAW systems. f) Utilize up-to-date eTOD. g) Utilize GPS-derived position data to feed TAWS.	2. Validate the effectiveness of the SEIs presented in this roadmap through the analysis of flight data monitoring (FDM)* and pilot reports** (apply safety management methodologies). *TAWS cautions and warnings, and pilot responses to TAWS warnings. **Flight planning - failure to comply with minimum safe altitude (MSA) or military operations area (MOA) restrictions.	3. Identify additional contributing factors for example: a) Flight in adverse environmental conditions. b) Approach design and documentation. c) Phraseology used (standard vs non-standard). d) Pilot fatigue and disorientation.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for CFIT+AC13M13Y13:AA13Y13:AB13	5. Conduct continuous evaluation of the performance of the SEIs		
Organisational Challenges	SEI-01 – Consistent implementation of ICAO SARPs at the national level	Goal 2: Strengthen safety oversight capabilities.	2.1 Improve the score for effective implementation (EI) of the critical elements	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2024**	**High**	1A – Work at the national level to address, if any, Significant Safety Concerns as a priority. 1B – Address all protocol questions (PQs) of the USOAP Continuous Monitoring Approach (CMA). 1C – Establish primary aviation law and regulations, to empower the competent authority to conduct regulatory oversight, this includes separation of oversight functions and service provision functions (CE-1 and CE-2). 1D – Increase the level of compliance with ICAO SARPs and the EI of CEs at the national level (CE-1 to CE-5) . 1E – Establish a process for the identification of differences with ICAO SARPs (CE-2).	- To be in full compliance with ICAO SARPs. - OLF follow-up. - Follow-up with the legal department.	TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-01 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan	SPIs for Target 5.1: - Number of service providers using the globally harmonized SPIs. - Established safety data collection and processing systems (SDCPS) to facilitate participation in a safety information-sharing network.	**2025**	**low**	1A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues. (CE-1 to CE-5). 1B – Provide input to States, as applicable, for the development of national regulations. (CE-2). 1C – Reserved. 1D – Address national high-risk categories of occurrences, as applicable, in coordination with States of Kuwait DGCA/ASD.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-02 – Development of a comprehensive regulatory oversight framework	Goal 2: Strengthen safety oversight capabilities.	2.1 Improve the score for effective implementation (EI) of the critical elements	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**Medium**	2A – Establish and maintain an independent regulatory oversight authority, which includes separation of oversight functions from service provision functions where these exist within the authority (CE-3). 2B – Maintain an effective system to promulgate technical guidance and tools, and provide safety-critical information needed for technical personnel to effectively perform their safety oversight functions (CE-5). 2C – Establish and maintain an effective system to attract, recruit, train and retain qualified and sufficient technical personnel to support regulatory oversight (see SEI-5) (CE-3 and CE4).	Follow up with higher management to attract and maintain competent staff	TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-02 – Improvement of industry compliance with applicable regulations	Goal 2: Strengthen safety oversight capabilities. Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	2.1 Improve the score for effective implementation (EI) of the critical elements. 4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan	SPIs for Target 5.1: - Number of service providers using the globally harmonized SPIs. - Established safety data collection and processing systems (SDCPS) to facilitate participation in a safety information-sharing network.	**2025**	**Medium**	2A – Work together within industry to ensure compliance with applicable regulations. (CE-6 to CE-8) . 2B – Encourage service providers to participate in the corresponding, ICAO- recognized industry assessment programmes. (CE-8) . 2C – Reserved	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-03 – Allocation of industry resources to support effective safety oversight	Goal 2: Strengthen safety oversight capabilities. Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	2.1 Improve the score for effective implementation (EI) of the critical elements. 4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**low**	3A – Identify resources that are available to support safety enhancement initiatives for the States of Kuwait. (all CEs, emphasis on CE-6 to CE-8) . 3B – Participate in government/industry collaborative safety enhancement initiatives.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		

Organisational Challenges	SEI-03 – Establishment of an independent accident and incident investigation authority, consistent with KCASR 13 / Annex 13 – Aircraft Accident and Incident Investigation	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements	**DGCA & Civil Serves**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2024**	**High**	3A – Establish an independent accident and incident investigation authority, as per KCASR 13 / Annex 13 requirements (CE-1 and CE-3) . 3B – Develop an effective system to promulgate technical guidance and tools, and provide safety-critical information needed for technical personnel to effectively conduct accident and incident investigations (CE-5) . 3C – Establish an effective system to attract, recruit, train and retain qualified and sufficient technical personnel to support accident and incident investigations (see SEI-5) (CE-3 and CE-4).		TBD	TBD	TBD	**75 % Completed**	Established but Not effective nor Independent
Organisational Challenges	SEI-04 – Strategic allocation of resources to enable effective safety oversight	Goal 2: Strengthen safety oversight capabilities. Goal 4: Increase collaboration at the regional level to enhance safety.	2.1 Improve the score for effective implementation (EI) of the critical elements. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**low**	4A – Confirm executive or legislative mandate to receive financial resources from government or other external sources and expend them (CE-1). 4B – Establish a process for resource planning and allocation in alignment with the organisational structure of the ASD, which is required to conduct effective safety oversight (CE-2 and CE-3). SEI-1 and SEI-5 could be used to identify resource requirements (CE-1 to CE-5). 4C – Obtain a sustainable and stable source of financing through commitments from the national leadership (CE-1 to CE-3). For small scope short-term improvements: i) Utilize the ICAO Safety Technical Cooperation Bureau or other means to acquire technical assistance in coordination with the RASG/ICAO Regional Office. ii) Seek assistance from more experienced States and other stakeholders in coordination with RASG/ICAO Regional Office. 4D – Develop a process for assessing changing resource requirements and sustain necessary coordination with resource stakeholders for safety oversight improvements, as outlined in Component 1 of this roadmap (CE-1 to CE-3).	N/A	TBD	TBD	TBD	**100 % Completed**	
Organisational Challenges	SEI-04 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements. 3.1 To implement the foundation of SSP by 2024. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).			4A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues. (CE-6 to CE-8) . 4B – Assist in resolving safety issues identified via accident and incident investigations, safety reports and other means. (CE-8). 4C – Continue to work with national high-risk categories of occurrences	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-05 – Improvement of industry compliance with applicable SMS requirements	Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID.	**Industry**	3.1 Implement the foundation of SSP by 2024.	SPIs for Target 3.1: - Percentage of satisfactory SSP foundational PQs. - Percentage of required CAPs related to SSP foundational PQs submitted using the OLF.			5A – Implement a safety management system (SMS) in accordance with KCASR 19. 5B – Notify Kuwait DGCA-ASD when there may be discrepancies in the application of SMS requirements. 5C – Utilize available guidance material (e.g. from States or non-governmental organizations) to assist with SMS implementation.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-05 – Qualified technical personnel to support effective safety oversight	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements. 3.1 To implement the foundation of SSP by 2024. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**High**	5A – Establish and Maintain an effective system to identify and track qualifications and training of existing technical personnel (CE-4). 5B – Identify the gaps in qualified technical personnel and training requirements necessary to implement the oversight mandate (CE-4). 5C – Establish a compensation scheme for attracting and retaining qualified technical personnel (CE-4). 5D - Reserved. 5E – Establish human resource plans to support the hiring and retaining of the appropriate number of qualified technical personnel required (CE-4). 5F – 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) is sufficient to acquire/maintain the required qualifications and level of competence corresponding to the assigned duties and responsibilities of technical personnel (CE-4). 5G – Develop and maintain a process for assessing changing requirements for qualified technical personnel and develop procedures to update hiring, retention and training personnel	Monitoring the implementation of the Job Description Manual for qualification training as per the system in the division SOPs.	TBD	TBD	TBD	**25 % Completed**	
Organisational Challenges	SEI-06 – Resources for service providers to effectively implement SMS	Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID.	**Industry**	3.1 Implement the foundation of SSP by 2024.	SPIs for Target 3.1: - Percentage of satisfactory SSP foundational PQs. - Percentage of required CAPs related to SSP foundational PQs submitted using the OLF.			6A – Work in collaboration with the State and industry associations to advance SMS implementation and identify expectations that cannot be efficiently resourced. 6B – Identify areas where resources are needed as part of the SMS implementation plan developed following the SMS gap analysis. 6C – Establish a process for resource planning and allocation to enable SMS implementation, including resources which may be obtained from industry organizations. 6D – Obtain commitment from the accountable executive within the service provider for the necessary resources to enable SMS implementation. 6E – Encourage other service providers (e.g. interlining operators) to implement SMS within their operation by providing resources, such as qualified technical personnel to assist them.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-07 – Provision of the primary source of safety information to ICAO by completing, submitting and updating all relevant documents and records	Goal 2: Strengthen safety oversight capabilities.	2.1 Improve the score for effective implementation (EI) of the critical elements.	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**High**	7A – Update USOAP corrective action plan items. 7B – Complete and submit the self-assessment checklist based on USOAP CMA PQs . 7C – Complete and submit the State aviation activity questionnaire. 7D – Complete and submit the compliance checklists on electronic filing of differences system. 7E – Update documents and records, as required, in a timely manner	Monitoring the implementation of the Job Description Manual for qualification training as per the system in the division SOPs.	TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-07 – Strategic collaboration with key aviation stakeholders to complete SSP implementation	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	7.2 Establish an independent accident and incident office core infrastructure and function by 2025.	SPIs for Target 7.2: - Fulfilling all the establishment requirements from CE2 to CE5.			7A – Help identify key aviation stakeholders involved in implementing SSP. 7B – Work with key aviation stakeholders to support an action plan for SSP implementation. 7C – Support SSP implementation. 7D – Provide input to the process for sharing technical guidance, tools and safety critical information related to SSP and SMS (e.g. advisory circulars, staff instructions, safety performance indicators), in collaboration with Kuwait DGCA – ASD and other stakeholders. 7E – Support continuous improvement of SSP, in collaboration with Kuwait DGCA – ASD and other stakeholders. 7F – Continue to work with national high-risk categories of occurrences.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		

Organisational Challenges	SEI-08 – Availability of safety data and safety information to support safety management activities at the service provider level (step 1)	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).			8A – Comply with national laws, regulations and policies protecting safety data, safety information and related sources, in accordance with KCASR 19 – Safety Management. 8B – Establish mandatory safety reporting systems. 8C – Provide information to Kuwait DGCA - ASD safety data collection and processing systems (KCAAS-Pulse). 8D – Establish internal mechanisms related to the protection of safety data, safety information and related sources for the purpose of safety improvement. 8E – Establish voluntary and confidential hazard/occurrence reporting systems as part of the SMS. 8F – Establish and maintain a safety database for technical personnel to monitor system safety issues within the service provider. 8G – Establish and utilize a safety risk management process.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-08 – Consistent implementation of ICAO SARPs at the national level	Goal 2: Strengthen safety oversight capabilities.	2.1 Improve the score for effective implementation (EI) of the critical elements.	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**High**	8A – Work at the national level to address, if any, Significant Safety Concerns as a priority. 8B – Increase the level of compliance with ICAO SARPs and the EI of CEs at the national level (all CEs, emphasis on CE-6 to CE-8).	Monitoring the implementation of the Job Description Manual for qualification training as per the system in the division SOPs.	TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-09 – Availability of safety data and safety information to support safety management activities at the service provider level (step 2)	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.2 Publish an updated NASP, in line with the 2023–2025 edition of the GASP, by 2023. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).			9A – Develop safety performance measurement methodologies, aligned with harmonized safety metrics within industry, via the established safety risk management process. 9B – Develop safety performance indicators and safety performance targets, as well as associated alert settings, via the established safety risk management process. 9C – Encourage the use of globally harmonized metrics for the development and monitoring of safety performance indicators, as part of the service providers' SMS. 9D – Encourage sharing and use of information from within industry to identify hazards and safety deficiencies, and mitigate safety risks. 9E – Encourage sharing of information from industry to Kuwait DGCA - ASD to assist in the development of national and regional aviation safety plans.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-09 – Continued implementation of and compliance with ICAO SARPs at the national level	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**High**	9A – Maintain licensing, certification, authorization and approval processes (CE-6). 9B – Maintain regulatory oversight and enforcement processes (CE-7 and CE-8). 9C – Establish a system to resolve safety issues identified via accident and incident investigations, surveillance activities, safety reports and other means (CE-8).		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	SEI-10 – Allocation of industry resources to support continuous improvement of SSP and	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).			10A – Ensure competent technical personnel are allocated, at the service provider level, to support the requirements of the SSP infrastructure. 10B – Provide safety analysis results from service providers to support the SSP.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-10 – Strategic allocation of resources to enable effective safety oversight	Goal 2: Strengthen safety oversight capabilities. Goal 4: Increase collaboration at the regional level to enhance safety.	2.1 Improve the score for effective implementation (EI) of the critical elements. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2023**	**low**	10A – Use SEI-1 and SEI-5 to identify resource requirements (CE-6 to CE-8) . 10B – Leverage regional groups such as the RASG to identify additional resources.	N/A	TBD	TBD	TBD	**100 % Completed**	
Organisational Challenges	SEI-11 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements. 3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	11A – Based on the identified hazards and safety deficiencies, establish and maintain a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues (CE-6 to CE-8). 11B – Reserved. 11C – Reserved. 11D – Use technical guidance, tools and safety-critical information developed in collaboration with other States, ICAO and/or other stakeholders to enable technical personnel to perform their safety oversight functions effectively (CE-6 to CE-8). 11E – While working to improve safety oversight, continue to work with RASG to address national high-risk categories of occurrences if any.	Monitoring Oversight Activity Data and Hazard Log.	TBD	TBD	TBD	**25 % Completed**	
Organisational Challenges	SEI-11 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).			11A – Work with key aviation stakeholders to leverage best practices with safety information analysis. 11B – Share safety risk identification with stakeholders for mitigation and monitoring strategies. 11C – Actively participate with States and organizations engaged in risk modelling.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		

Organisational Challenges	SEI-12 – Advancement of safety risk management at the service provider level	Goal 3: Implement effective State Safety Programme (SSP). Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	3.1 To implement the foundation of SSP by 2024. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**Industry**	3.1 Implement the foundation of SSP by 2024.	SPIs for Target 3.1: - Percentage of satisfactory SSP foundational PQs. - Percentage of required CAPs related to SSP foundational PQs submitted using the OLF.			12A – Verify that a legal framework related to the protection of safety data, safety information and other related sources is implemented and effective. 12B – Develop risk modelling capabilities to support the monitoring of system safety issues and accident/incident prevention. 12C – Monitor safety information exchange networks for continuous improvements.	to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-12 – Continued provision of the primary source of safety information to ICAO by updating all relevant documents and records as progress is made	Goal 2: Strengthen safety oversight capabilities.	2.1 Improve the score for effective implementation (EI) of the critical elements	**ASD**	2.1 Improve the score for effective implementation (EI) of the critical elements (CEs) of the safety oversight system (with focus on priority Protocol Questions (PPQs) to 75% by 2024	SPIs for Target 2.1: - Overall EI score of Kuwait. - Percentage of priority PQs implemented in Kuwait. - Percentage of required corrective action plans (CAPs) submitted using the OLF. - E3Percentage of completed CAPs using the OLF.	**2025**	**Medium**	12A – Update USOAP corrective action plan items . 12B – Update and submit the self-assessment checklist based on USOAP CMA PQs. 12C – Update and submit the State aviation activity questionnaire (SAAQ). 12D – Update and submit the compliance checklists (CCs) on the electronic filing of differences (EFOD) system.		TBD	TBD	TBD	**25 % Completed**	
Organisational Challenges	SEI-13 – Start of SSP implementation at the national level	Goal 3: Implement effective State Safety Programme (SSP).	3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028.	**ASD**	3.1 Implement the foundation of SSP by 2024.	SPIs for Target 3.1: - Percentage of satisfactory SSP foundational PQs. - Percentage of required CAPs related to SSP foundational PQs submitted using the OLF.	**2025**	**Medium**	13A – Secure State-level commitment to improve safety. 13B – Conduct and update SSP gap analysis (checklist) as well as the detailed SSP self-assessment. 13C – Maintain an SSP implementation team. 13D – Develop an implementation plan for the SSP. 13E – Maintain updated SMS regulations for service providers and verify SMS implementation. 13F – Identify and share safety management best practices.		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	SEI-14 – Strategic allocation of resources to start SSP implementation	Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**DGCA**	3.2 Implement an effective SSP by 2028	SPIs for Target 3.2: - Level of maturity achieved in SSP PQs.	**2025**	**Medium**	14A – Establish a process for planning and allocation of resources to enable SSP implementation and identify areas where resources are needed. 14B – Obtain resources from national and appropriate authorities' leadership and stakeholders within the State to support SSP implementation. 14C – Work with the ICAO Regional Office to make use of available means (e.g. Technical Cooperation Bureau) to acquire assistance needed for SSP implementation. 14D – Work with other States and other organizations, as appropriate to train qualified technical personnel to fulfil their duties and responsibilities regarding SSP implementation.		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	SEI-15 – Strategic collaboration with key aviation stakeholders to start SSP implementation	Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	3.2 To implement an effective SSP by 2028. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	3.2 Implement an effective SSP by 2028	SPIs for Target 3.2: - Level of maturity achieved in SSP PQs.	**2025**	**Medium**	15A – Identify areas where collaboration/support is needed as part of the SSP implementation plan (see SEI-14) . 15B – Identify which key aviation stakeholder is relevant, including other States that are implementing or have implemented an SSP. 15C – Develop an action plan to address the elements identified as missing or deficient during the SSP gap analysis (see SEI-13B). 15D – Establish a process via RASG for a mentoring system, including providing assistance to States/industry, as well as sharing of best practices to support SSP implementation. 15E – Develop and maintain a process to provide training on SSP to relevant staff, in collaboration with other States, RASG, ICAO (e.g. initial, recurrent and advanced) (see SEI-14D). 15F – Establish, implement and maintain a process for sharing technical guidance, tools and safety-critical information related to SSP (e.g. advisory circulars, staff instructions, safety performance indicators), in collaboration with other States, RASG, ICAO and/or other stakeholders.		TBD	TBD	TBD	**25 % Completed**	
Organisational Challenges	SEI-16 – Strategic collaboration with key aviation stakeholders to complete SSP implementation	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP).	1.1 Maintain a decreasing trend of accident/incident rate. 3.2 To implement an effective SSP by 2028.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	16A – Work with key aviation stakeholders (identified in SEI-15) to execute the action plan for implementation. 16B – Work with key aviation stakeholders on establishing and updating SSP elements. 16C – Establish and maintain a system for the continuous improvement of the SSP, in collaboration with all key aviation stakeholders. 16D – Reserved.		TBD	TBD	TBD	**25 % Completed**	
Organisational Challenges	SEI-17 – Availability of safety data and safety information to support safety management activities at the national level (step 1)	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.2 To implement an effective SSP by 2028. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	17A – Establish national laws, regulations and policies protecting safety data, safety information and related sources, in accordance with Appendix 3 of Annex 19 – Safety Management: i) Ensure that the protection of safety data, safety information and related sources does not interfere with the proper administration of justice or with maintaining or improving safety. ii) Ensure safety data, safety information and related sources are protected. iii) Specify the conditions under which safety data, safety information and related sources qualify for protection, including principles of exception and authoritative safeguards, such as de-identification of data. iv) Ensure that safety data and safety information remain available for the purpose of maintaining or improving aviation safety. 17B – Maintain a State mandatory occurrence reporting system. 17C – Establish safety data collection and processing systems (SDCPS) to capture, store, aggregate and enable the analysis of safety data and safety information to support their safety performance management activities. 17D – Establish and maintain a process to identify hazards from collected safety data. 17E – Establish and utilize a process to ensure the assessment of safety risks associated with identified hazards. 17F – Maintain a State confidential voluntary safety reporting system providing data to the safety database.		TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-18 – Availability of safety data and safety information to support safety management activities at the national level (step 2)	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	18A – Establish the safety objectives to be achieved through the SSP. 18B – Develop safety performance measurement methodologies, aligned with the regional safety metrics, using the established safety risk management process (see SEI-17E). 18C – Develop and update the safety performance indicators and safety performance targets using the established safety risk management process. 18D – Maintain the establishment of mandatory safety reporting systems by service providers. 18E – Ensure establishment of voluntary safety reporting systems as part of service providers' SMS. 18F – Promote safety awareness and the two-way communication, sharing and exchange of safety-relevant information within the aviation organizations of the State and encourage sharing of safety information with industry within the State. 18G – Contribute information on operational safety risks, including SSP safety performance indicators and emerging issues to the RASG.		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	SEI-19 – Acquisition of resources to increase the proactive use of risk modelling capabilities	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025.	**DGCA**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	19A – Identify resources needed to support safety intelligence collection and processing, advanced data analysis, risk modelling and information-sharing capabilities. 19B – Attract, recruit, train and retain qualified technical personnel to specialize in risk modelling. 19C – Ensure that the Civil Aviation Safety Inspector workforce is trained to perform safety oversight of service providers that have implemented SMS.		TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	SEI-20 – Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	20A – Identify areas where collaboration/support is needed to ensure that stakeholders understand and foster a positive safety culture that creates a high degree of trust and respect between personnel and management and promotes safety reporting. 20B – Establish a process for a mentoring system, including providing assistance to industry, as well as the sharing of best practices, to support positive safety culture development and the proactive use of risk modelling. 20C – Reserved. 20D – Collaborate with key aviation stakeholders to establish a mechanism for the regular sharing and exchange of safety information, analyses, safety risk discoveries/lessons learned and best practices within a confidential and non-punitive environment.		TBD	TBD	TBD	**75 % Completed**	

Organisational Challenges	SEI-21 – Advancement of safety risk management at the national level	Goal 1: Achieve a continuous reduction of operational risk. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety. Goal 5: (For industry) Expand the use of industry programmes and safety information sharing networks by service providers.	1.1 Maintain a decreasing trend of accident/incident rate. 3.1 To implement the foundation of SSP by 2024. 3.2 To implement an effective SSP by 2028. 4.3 Contribute information on operational safety risks, including SSP SPIs and emerging issues, to Kuwait NASP by 2025. 5.1 Industry to maintain an increasing trend in its contribution in safety information sharing networks to Kuwait DGCA to assist in the development of national aviation safety plan.	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	21A – Establish and update 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, EI scores, etc.). 21B – Develop risk modelling capabilities to support monitoring system safety issues and accident/incident prevention. 21C – Encourage information-sharing with industry.		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	SEI-6 – Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner	Goal 1: Achieve a continuous reduction of operational risk. Goal 2: Strengthen safety oversight capabilities. Goal 3: Implement effective State Safety Programme (SSP). Goal 4: Increase collaboration at the regional level to enhance safety.	1.1 Maintain a decreasing trend of accident/incident rate. 2.1 Improve the score for effective implementation (EI) of the critical elements. 3.1 To implement the foundation of SSP by 2024. 4.1 Seek assistance to strengthen our safety oversight capabilities from ICAO-MID	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	6A – Based on the identified hazards and safety deficiencies, establish a mechanism to identify key aviation stakeholders and develop an action plan for the resolution of those safety issues (CE-1 to CE-5) . 6B – Reserved. 6C – Provide assistance via States, regions and industry to other States for primary aviation legislation development (in coordination with SEI-1B) (CE-1) 6D – Provide assistance via States, regions and industry to other States for the development of national regulations (CE-2). 6E – Establish a process via RASG for mentoring/collaboration system, including providing State/industry assistance as well as sharing of best practices and internal follow-up actions (CE-1 to CE-5, emphasis on CE-3). 6F – Collaborate with RASG, other States, ICAO, industry joint programmes and/or technical school partnerships to attract, recruit and train qualified and sufficient technical personnel and develop a strategy for their retention (CE-4). 6G – Establish and implement a process for the development and promulgation of technical guidance, tools and the provision of safety-critical information, in collaboration with other States, ICAO and/or other stakeholders, with the understanding that these materials need to be tailored to the KCASR and operational environments (CE-5) of State of Kuwait. 6H – While working to improve safety oversight, work with RASG to address national high-risk categories of occurrences.		TBD	TBD	TBD	**50 % Completed**	
Organisational Challenges	N/A	Goal 6: Allocate resources to ensure the appropriate infrastructure is available to support safe operations.	6.1 Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards	**DGCA & ASD**	6.1 Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards	SPIs for Target 6.1: - Percentage of air navigation and airport core infrastructure elements implemented.	**2025**	**Medium**			TBD	TBD	TBD	**75 % Completed**	
Organisational Challenges	N/A	Goal 6: Allocate resources to ensure the appropriate infrastructure is available to support safe operations.	6.1 Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards	**Industry**	6.1 Aims to maintain the air navigation and aerodrome infrastructure that meets relevant KCASR and ICAO Standards	SPIs for Target 6.1: - Percentage of air navigation and airport core infrastructure elements implemented.	**2025**	**Medium**		to determined by the the industry	to determined by the the industry	to determined by the the industry	to determined by the the industry		
Organisational Challenges	SEI-22 – AIG Office	Goal 7: Updating the Aviation Safety Main Primary Law to establish AIG Office by 2025.	7.1 Amend the primary law to establish an independent AIG authority by 2025. 7.2 Establish an independent accident and incident office core infrastructure and function by 2025.	**DGCA & AIG**	7.1 Amend the primary law to establish an independent AIG authority by 2025.	SPIs for Target 7.1: - Promulgation of primary law CE1.	**2025**	**Medium**			TBD	TBD	TBD	**50 % Completed**	
Emerging Risks	GNSS Interference	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**ASD / SSP-OC & OPS**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**Medium**	•Share data analysis from operators and IATA with ICAO MED-Region, •Raise awareness on the potential impact of GNSS interference on the aviation •Urge Operators/Airlines to report interference. •Issue Safety Bulletins.	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	TPD	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for GNSS	5. Conduct continuous evaluations of the performance of the SEIs	**Not Started**	
Emerging Risks	GNSS Interference	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**Medium**	- Raise awareness on the potential impact of GNSS interference on the aviation. - Courteously report events to DGCA-ASD	2. Validate the effectiveness of the SEIs through the analysis of FDM and pilot reports (apply safety management methodologies).	TPD	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for GNSS	5. Conduct continuous evaluations of the performance of the SEIs		
Emerging Risks	Safe Operations of UAS (civil drones)	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	•Promulgation of Drone and Light Sport Legislation. •Implementation KCASR 22 (UAS regulatory framework) as required. •Approve a system to monitor and control drone activity. •Involve all other stakeholders to promote safety and security. •Approve the Aerodrome response plan for UAS.	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	Collaborate with MOI and MOD.	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for UAS	5. Conduct continuous evaluations of the performance of the SEIs	**Not Started**	
Emerging Risks	Safe Operations of UAS (civil drones)	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	•To be incompliance with KCASR 22 (UAS regulatory framework). •Establish a system to monitor and control drone activity. •Promote safety and security to other stakeholders. •Stablish an Aerodrome response plan for UAS.	2. Validate the effectiveness of the SEIs through data collection and pilot reports (apply safety management methodologies).	TPD	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for UAS	5. Conduct continuous evaluations of the performance of the SEIs		
Emerging Risks	5G interference with Radio Altimeter	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**Medium**	•Develop a guidance material on safeguarding measures to protect Radio Altimeter from potential harmful interference from 5G Operation. •Raise awareness of Operators and promote the guidance material. •Insure operator's adherence to issued NOTAMs. •To avoid installation of any new 5G Towers in the Kuwait Airport fascinate in cooperation with Kuwait CITRA.	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	TPD	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for 5G	5. Conduct continuous evaluations of the performance of the SEIs	**Not Started**	
Other issues	Ineffective SMS implementation by Aerodrome Operator and ANS Provider	Goal 3: Implement effective State Safety Programme (SSP).	N/A	**Industry**		Select Target	**2025**	**Medium**	•Revise the organization structure to identify the Accountable Executive (in accordance with SMM) for the implementation of SMS in both ATS and Aerodrome Operator. •Encourage safety reporting through safety awareness activities and ensure just culture within the organization and DGCA.	TBD	TBD				
Other issues	Wild Life	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**ASD / ACS**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	•Insure the procuring of bird deterrent equipment by Kuwait Airport. •Landscape and vegetation in and around the aerodrome should not encourage birds or wild life nesting behaviour. • Promote for wild life hazards on Aviation	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	TBD	TBD	TBD	**50 % Completed**	

Emerging Risks	5G interference with Radio Altimeter	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**Continually**	**Medium**	•Insure all relevant staff are aware and familiar with 5G effects. •Insure adherence to issued NOTAMs. •Avoid installation of any new 5G Towers in the Kuwait Airport fascinate.	2. Validate the effectiveness of the SEIs through the analysis of FDM and pilot reports (apply safety management methodologies).	TPD	4. Develop and implement further SEIs to mitigate the risk of the identified contributing factors, if any, for 5G	5. Conduct continuous evaluations of the performance of the SEIs		
Other issues	Wild Life	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	•Procuring of bird deterrent equipment by Kuwait Airport. •Insuring landscape and vegetation in and around the aerodrome do not encourage birds or wild life nesting behaviour. •Kuwait Airport to cooperate with the government environmental entity (Public Authority of Agriculture Affairs and Fish Resources) to control wild life's in and around Kuwait Airport.	2. Validate the effectiveness of the SEIs in the industry through MORs and VORs systems, accident/incident investigations (apply safety management methodologies) and oversight activity.	TBD				
Other issues	Management of security risks with safety impact	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**ASD**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	a- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones b- Organize seminar/Symposium to exchange experiences and good practices on assessing the risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG. c- monitor the issue of NOTAMs to share threat information emanating from conflict zones within their airspaces.	Create a plan to cover the required actions, then monitor the plan adequately.	TBD	TBD	TBD	**Not Started**	
Other issues	Management of security risks with safety impact	Goal 1: Achieve a continuous reduction of operational risk.	1.1 Maintain a decreasing trend of accident/incident rate	**Industry**	1.1 Maintain a decreasing trend of accident/incident rate	SPIs for Target 1.1: - Number of Occurances per 1000 departures (Occurance rate). - Percentage of occurrences related to high-risk categories (HRCs).	**2025**	**Medium**	a- Circulate ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones b- Organize seminar/Symposium to exchange experiences and good practices on assessing the risks and sharing of information related to the overflying of conflict zones in coordination with RASFG-MID and MIDANPIRG. c- issue NOTAMs to share threats information emanated from conflict zones within their airspaces.	Monitoring Oversight Activity	TBD	TBD	TBD	**Not Started**	
Total	57			57	56			48	54	42				34	