



NATIONAL AVIATION SAFETY PLAN

RWANDA CIVIL AVIATION AUTHORITY

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Approval

31 March 2022

In line with the ICAO global Aviation Safety Plan (GASP), Rwanda has developed a national aviation safety plan considering that aviation safety is key to the development of the aviation industry and the economy of Rwanda. Aviation plays a significant role in the national economy as well as regional and global economic development as it is the enabler for globalization. For aviation to remain the best and reliable mode of transport, safety will have to remain at the center of the whole aviation system.

Rwanda aviation safety plan (RASP) is the planning document containing the strategic direction of Rwanda for the management of aviation safety for a period of 5 years (2021-2025). 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.

Rwanda is committed to enhancing aviation safety and to the resourcing of supporting activities. The purpose of Rwanda aviation safety plan (RASP) is to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a national aviation safety strategy. A safe aviation system contributes to the economic development of Rwanda and its industries.

RASP promotes the effective implementation of Rwanda's safety oversight system, a risk-based approach to managing safety, as well as a coordinated approach to collaboration between Rwanda and other States, regions and industry. All stakeholders in Rwanda aviation system are encouraged to support and implement the RASP as the strategy for the continuous improvement of aviation safety.

Approved by:


Silas Udahemuka
Director General



Record of Revisions

Rev. No.	Revision Date	Ini-tials	Supv Insp.	Rev. No.	Revision Date	Initials	Supv Insp.
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ABBREVIATIONS AND ACRONYMS

ACAS	Airborne Collision Avoidance System
ACI	Airports Council International
AFCAC	African Civil Aviation Commission
ANSP	Air Navigation Services Providers
AOC	Air Operator Certificate
ATC	Air Traffic Control
CANSO	Civil Air Navigation Services Organisation
CAP	Corrective Action Plan
CASSOA	Civil Aviation Safety and Security Oversight Agency
CAST	Commercial Aviation Safety Team
CFIT	Controlled Flight into Terrain
CICTT	CAST/ICAO Common Taxonomy Team
EI	Effective Implementation
GA	General Aviation
GASP	Global Aviation Safety Plan
HRC	High Risk Category
ICAO	International Civil Aviation Organization
IOSA	IATA Operational Safety Audit
LOC-I	Loss of Control In-flight
MAC	Mid Air Collision
MININFRA	Ministry of Infrastructure
OLF	Online Framework
OPS	Operational Safety
PBN	Performance Based Navigation
PQ	Protocol Question
RASG	Regional Aviation Safety Group
RASP	Rwanda Aviation Safety Plan
RCAA	Rwanda Civil Aviation Authority
RE	Runway Excursion
RI	Runway Incursion
RSOO	Regional Safety Oversight Organisation
SDCPS	Safety Data Collection and Processing Systems
SEI	Safety Enhancement Initiatives
SMS	Safety Management System
SOI	Safety Oversight Index
SPI	Safety Performance Indicator
SSO	State Safety Oversight
SSP	State Safety Programme
STCA	Short Term Conflict Alert
UAS	Unmanned Aircraft Systems
USOAP	Universal Safety Oversight Audit Programme

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Section 1

INTRODUCTION

1.1 STRUCTURE OF THE RASP

This plan presents the strategy for enhancing aviation safety for a period of 5 years. It is comprised of the Introduction, the purpose of the RASP, Rwanda strategic approach to managing aviation safety, the national operational safety risks identified for the 2021-2025 RASP, other safety issues addressed in the RASP, and a description of how the implementation of the safety enhancement initiatives (SEIs) listed in the RASP is going to be monitored.

1.2 RESPONSIBILITY FOR THE RASP DEVELOPMENT, IMPLEMENTATION AND MONITORING

RCAA is responsible for the development, implementation and monitoring of RASP in collaboration with stakeholders in the aviation industry. The stakeholders include; Accident and Incident investigation directorate, Aviation Service providers, military Aviation Authority and the Unmanned Aircraft Systems (UAS) Service Providers in Rwanda. RASP was developed in consultation with national operators and other stakeholders in alignment with the ICAO Doc 10004 (GASP).

1.3 NATIONAL SAFETY ISSUES, GOALS AND TARGETS

A. RASP addresses the following safety issues:

1. Loss of control In-flight (LOC-I)
2. Controlled Flight into Terrain (CFIT)
3. Runway Incursion (RI)
4. Runway Excursion (RE)
5. Mid Air Collision (MAC)
6. Bird Strikes

B. In order to address the issues listed above and enhance safety at the national level, Rwanda's goal is to maintain a continuously reducing accident and incident rate through establishment of safety enhancement initiatives (SEIs). Rwanda aviation safety plan (RASP) will address the GASP HRCs mentioned above and other identified safety issues.



1.4 OPERATIONAL CONTEXT

- A. There is only one certified aerodrome in Rwanda, which is Kigali International Airport and one operational domestic aerodrome which is Kamembe airport (HRZA). Kigali International Airport is the only international aerodrome of entry and departure for international air traffic, where all formalities concerning customs, immigration, health and similar procedures are carried out and air traffic services are available on a regular basis.
- B. The airspace of Rwanda is classified into Classes A, C, D and G. The classes B, E and F are not applicable in the Rwanda airspace.
- C. There were 40,899 international aircraft movements; 11,493 domestic aircraft movements and 6,161 overflight movements in Rwanda over a period of 2018-2019. There are currently 2 air operator certificates (AOCs) issued by Rwanda, and there are no GA operators conducting international commercial air transport operations. Rwanda also has 1 operator that operates domestic air taxi services, primarily on turbo prop aircraft. The common challenge in Rwanda is topography.

End of Chapter

Section 2

PURPOSE OF RWANDA'S AVIATION SAFETY PLAN

- A. RASP is the master planning document containing the strategic direction of Rwanda for the management of aviation safety for a period of 5 years, 2021-2025.
- B. 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 to achieve the national safety goals and targets.
- C. It is important to note that even though some of the safety issues listed above have not occurred in Rwanda, still are considered as national safety issues because they are common in aviation and therefore can occur if not dealt with proactively.
- D. In this plan, some of the safety issues for which the authority has no historical data, we will endeavor to identify factors that may contribute to such occurrences and strategize on how to mitigate such risks.
- E. Rwanda Civil Aviation Authority 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.
- F. RASP contains in-depth information specific to aviation safety aspects in Rwanda Civil Aviation Authority Strategic Plan 2019/2020 - 2023/2024. RASP has been developed using international safety goals, safety targets and HRCs from GASP (www.icao.int/gasp).
- G. The SEIs listed in GASP support the improvement of safety at the wider regional and international levels, include several actions to address specific safety risks, and recommended SEIs for individual States as reflected in the global aviation safety plans.
- H. At the time of developing this plan the regional aviation safety plan is not available therefore Rwanda has adopted SEIs from GASP and has included them in RASP.

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Section 3

RWANDA'S STRATEGIC APPROACH TO MANAGING AVIATION SAFETY

- A. RASP presents the SEIs derived from the SSP, including Rwanda's safety risk management process, safety data collection and processing systems, as well as the work undertaken by service providers in the development and implementation of their safety management systems (SMS).
- B. This plan is developed and maintained by Rwanda Civil Aviation Authority, in coordination with all stakeholders and is updated at least every 2 years.
- C. RASP 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.

Goal	Target	Indicators	Link to GASP and RASP
1. Achieve a continuous reduction of operational safety risks	1.1. Maintain zero or decreasing trend of the national accident and serious incident rate.	<p>1.1.1 Number of accidents occurring in the State per 10,000 departures.</p> <p>1.1.2 Percentage of accidents occurring due to runway excursions. (At the time of developing this plan Rwanda had no accidents related to Runway excursions)</p>	This goal is directly linked to Goal 1 and Target 1.1 of the GASP.
2. Strengthen the State's safety oversight capabilities	<p>2.1 By 2022, reach an effective implementation score of 85%.</p> <p>By 2025, reach an effective implementation score of 98%.</p>	<p>2.1.1 Overall EI score for Rwanda in 2021 is 79.29%</p> <p>2.1.2 Percentage of priority PQs implemented nationally.</p> <p>2.1.3 Percentage of completed corrective action plans (CAPs) completed nationally.</p>	This goal is directly linked to Goal 2 and Target 2.1 of the GASP

	2.2 By 2021, maintain a safety oversight index greater than 1, in all categories.	2.2.1 maintaining a safety oversight index greater than 1 in all categories 2.2.2 Air navigation with SOI greater than 1 (SOI of Air Navigation= 1.04, SOI of Operations=1.52, SOI of Support= 1.68)	This goal is directly linked to Goal 2 and Target 2.2 of the GASP.
3. Implement effective State safety programmes (SSPs)	3.1 By end of 2022, fully implement the foundation of an SSP (100%)	3.1.1 Percentage of each subject area implemented related to the SSP foundational PQs completed by State (using OLF). 3.1.2 Percentage of satisfactory SSP foundational PQs (At the time of developing this plan Rwanda stands at 93.73% of satisfactory SSP foundation PQs) 3.1.3 Percentage of required CAPs related to the SSP foundational PQs submitted by State (using OLF) (6.27%) 3.1.4 Percentage of required CAPs	This goal is directly linked to Goal 3 and Target 3.1 of the GASP.
	3.2 By 2025, all service providers to maintain an effective SMS as appropriate to their aviation system complexity.	3.2.1 Level of maturity achieved in Annex 19 PQs. 3.2.2 All service providers have implemented SMS. Rwanda has five service providers and operators who have implemented SMS.	This goal is directly linked to Goal 3 and Target 3.2 of the GASP.

4. Increase collaboration at the State level	4.1 By 2022, participate in providing assistance to service providers to strengthen their safety management capabilities.	4.1.1. RCAA provided assistance to all Service Providers to strengthen their safety management capabilities	This goal is directly linked to Goal 4 and Target 4.1 of the GASP.
	4.2 By 2022, contribute information on safety risks, including HRCs to RASG-AFI	4.2.1 One Occurrence report for 2020-2021 was submitted to RSOO (CASSOA)	This goal is directly linked to Goal 4 and Target 4.2 of the GASP.
	4.3 By 2022, to actively participate in RASGs' safety risk management	4.3.1 Rwanda has not yet participated in RASG safety risk management	This goal is directly linked to Goal 4 and Target 4.3 of the GASP.
5. Expand the use of industry programmes	5.1 By 2020, all service providers to use globally harmonized SPIs as part of their safety management system (SMS)	5.1.1 Five service providers use globally harmonized metrics for their SPIs	This goal is directly linked to Goal 5 and Target 5.1 of the GASP.
	5.2 By 2022, increase the number of service providers participating in the corresponding ICAO recognized industry assessment programmes.	5.2.1 Three service providers will participate in the corresponding ICAO-recognized industry assessment programmes. Rwanda service providers have participated in IOSA, ACI and CANSO programs	This goal is directly linked to Goal 5 and Target 5.2 of the GASP.
6. Ensure the appropriate infrastructure is available to support safe operations	6.1 By 2022, to implement the air navigation and airport core infrastructure	6.1.1 One certificated aerodrome 6.1.2 One aerodrome with PBN procedures implemented	This goal is directly linked to Goal 6 and Target 6.1 of the GASP.



- D. The SEIs in this plan are implemented through Rwanda's existing safety oversight capabilities and the service providers' SMS. SEIs derived from the ICAO global aviation safety plan and roadmap were identified to achieve thenational safety goals and targets presented in RASP. The national SEIs are linked to GASP goals and will help to enhance safety globally.
- E. The full list of the SEIs is presented in the **Appendix 1** to RASP. RASP also addresses emerging issues which 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.
- F. It is important that we remain vigilant on emerging issues to identify potential safety risks, collect relevant data and proactively develop mitigations to address them. RASP addresses the followingemerging issues, which were identified by an analysis conducted by Rwanda civil Aviation Authority in collaboration with the relevant stakeholders for further analysis.
 - 1. Unmanned Aircraft systems operations within the national Airspace.
 - 2. COVID -19 related safety issues.
 - 3. Human factors issues related to new Technologies such as; Automation and automated systems in Aviation etc.

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Section 4

NATIONAL OPERATIONAL SAFETY RISKS

- A. RASP includes SEIs that address national operational safety risks, derived from lessons learned from operational occurrences and from a data-driven approach. These SEIs may include actions such as: rule-making, policy development, targeted safety oversight activities, safety data analysis and safety promotion. Separate sections are provided to address commercial air transport and general aviation, in order to make the information more accessible to stakeholders.
- B. RCAA publishes RASP on its website (www.caa.gov.rw) and is updated whenever necessary. The summary of accidents and serious incidents that occurred in Rwanda and those for aircraft registered in Rwanda involved in commercial air transport and aircraft in general aviation is shown in the table below.

Year	Fatal accidents	Non-fatal accidents	Serious incidents
Commercial air transport occurrences in Rwanda			
2015-2020	0	0	3
2021	0	0	0
General aviation aircraft occurrences in Rwanda			
2015-2020	0	0	0
2021	0	0	0



Year	Fatal accidents	Non-fatal accidents	Serious incidents
Occurrences involving commercial air transport aircraft registered in Rwanda			
2015-2020	0	0	0
2021	0	0	0
Occurrences involving general aviation aircraft registered in Rwanda			
2015-2020	0	0	0
2021	0	0	0
Occurrences involving Helicopters registered in Rwanda			
2015-2020	0	0	0
2021	0	0	0



- A. The data in the table above was derived from the database of occurrences reported by accident investigation Authority as well as the SDCPS of RCAA.
- B. Rwanda aviation safety plan aims at addressing the HRCs as reflected in the current edition of the ICAO global aviation safety plan (GASP). The following are the HRCs;
 - 1. Runway excursions.
 - 2. Runway incursion.
 - 3. Mid Air Collision.
 - 4. Controlled Flight into Terrain.
 - 5. Loss of Control In-flight.
- C. In addition to the national operational safety risks listed above, the following additional categories of operational safety risks have been identified:
 - 1. Wildlife hazard related incidents (Bird strikes)
- D. The aviation occurrence categories from the CAST/ICAO Common Taxonomy Team (CICTT) were used to assess risk categories in the process of determining national operational safety risks. The CICTT Taxonomy is found on the ICAO website at <https://www.icao.int/safety/airnavigation/AIG/Pages/Taxonomy.aspx>
- E. In order to address the national operational safety risks listed above, RCAA identified the following contributing factors that can lead to HRCs and will implement a series of SEIs when required, some of which are derived from the ICAO OPS roadmap, contained in the GASP:

4.1. HRC 1: RUNWAY EXCURSIONS

This plan presents the strategy for enhancing aviation safety for a period of 5 years. It is comprised of the Likely causes;

- 1. Ineffective SOPs.
- 2. Failure to adhere to the appropriate SOPs.
- 3. Long/floated/bounced/firm/off-center/crabbed landing.
- 4. Inadequate approach procedures design.
- 5. Inadequate regulatory oversight.

4.2. HRC 2: RUNWAY INCURSIONS

Likely causes;

- 1. Operations in low visibility conditions.
- 2. Complex or inadequate aerodrome design.
- 3. Complexity of traffic (multiple simultaneous line-ups).
- 4. Many runway/taxiway crossings by vehicles.

4.3. HRC 3: MID-AIR COLLISIONS

Likely causes;

1. Traffic conditions - traffic density, complexity, mixture of aircraft types and capabilities, etc.
2. ATC performance related to workload, competence, teamwork, procedures, commitment, etc., as well as the influence of air navigation services providers' (ANSP) safety management.
3. Flight crew training and corporate culture with workload, competence, teamwork, procedures, commitment etc., and the influence of aircraft operator's safety management.
4. 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.
5. Aircraft equipment - autopilots, transponders and ACAS, but also aircraft performance (e.g. rate-of-climb) and their physical size.
6. Navigation infrastructure - both coverage and quality.
7. Surveillance - both coverage and quality.

4.4. HRC 4: CONTROLLED FLIGHT INTO TERRAIN (CFIT)

Likely causes;

1. Deficiency in technology and Equipment.
2. Poor Visibility.
3. Navigation Aids malfunction/ not available.
4. Flight crew errors.
5. Deficiency in safety management.
6. Deficiency in regulatory oversight.

4.5. HRC 5: LOSS OF CONTROL IN FLIGHT (LOC-I)

Likely causes;

1. Weather and terrain issues e.g lack of visual reference.
2. Unstable approaches.
3. Vertical, lateral or speed deviation.
4. Deficiency in safety management.
5. Flight Crew errors.
6. Deficiency in regulatory oversight.

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Section 5

OTHER SAFETY ISSUES

- A. In addition to the national operational safety risks listed above based on the GASP, RCAA has identified othersafety issues and initiatives selected for the RASP. These are given priority in the RASP aimed at enhancing and strengthening Rwanda's safety oversight capabilities and the management of aviation safety at the national level. Wild life Hazard/Bird strikes include;
1. Bird migration.
 2. Land fill and other waste disposal sites.
 3. Agricultural activities around the Aerodrome.
 4. Habitat, open areas of grass, water and trees as well as roosting sites in vicinity of Airport.
 5. Butchers/slaughter houses in the vicinity of Airport.
- B. Rwanda Civil Aviation authority will work with all Stakeholders to address the challenges of wildlife hazard to minimize bird strikes.
- C. As per goal 2 of the GASP, it is important to strengthen the State Safety Oversight (SSO) system through ensuring that all the eight CEs of a SSO system are fully addressed.
- D. The eight critical elements (CEs) of a safety oversight system are defined by ICAO. Rwanda is committed to the effective implementation of these eight CEs, as part of its overall safety oversight responsibilities, which emphasizes Rwanda's commitment to safety in respect of its aviation activities.
- E. The eight CEs are presented in the figure below.

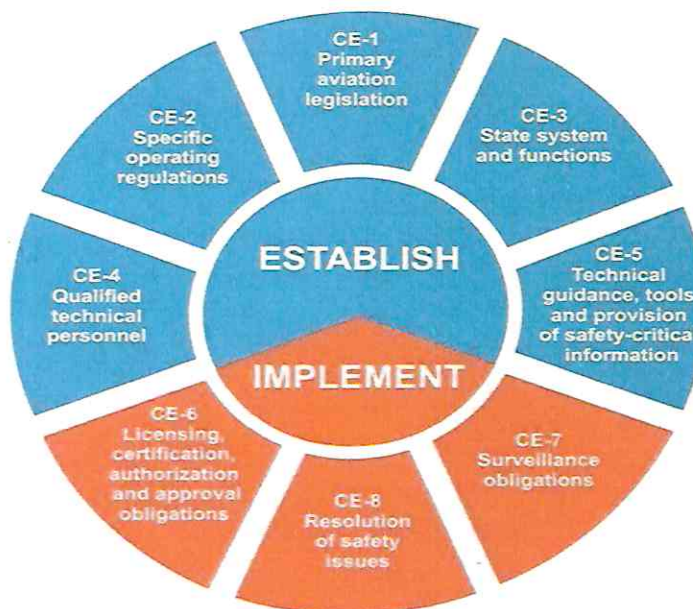


Figure 1. Critical elements of a State's safety oversight system

- F. The latest ICAO activities, which aim to measure the effective implementation of the eight CEs of Rwanda's safety oversight system, as part of the ICAO Universal Safety Oversight Audit Programme (USOAP), have resulted in the following scores:

Overall EI score							
Rwanda Overall EI score is 79.29%							
EI score by CE							
CE-1	CE-2	CE-3	CE-4	CE-5	CE-6	CE-7	CE-8
86.21%	87.91%	90.14%	89.39%	70.16%	90.91%	69.44%	59.52%
EI score by audit are							
LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
83.33%	100%	92.65%	90.53%	96.59%	36.62%	83.02%	69.16%

The Total EI score for Rwanda as of November 2021 is 79.29%

- G. The safety oversight index (SOI) of a State is an ICAO indicator of its safety oversight capabilities. Every State audited by ICAO has an SOI. It is a number greater than zero where "1" represents a level at which the safety oversight capabilities of a State would indicate the minimum expected capabilities considering the number of departures as an indication of the size of that State's aviation system. The calculations conducted by ICAO of Rwanda's SOI have resulted in the following scores:

Overall SOI score	Score in the area of Operations	Score in the area of Air Navigation	Score in the area of Support Functions
	1.52	1.04	1.68



- H. Based on the USOAP data and self-assessment in Rwanda's Context, Accident Investigation is considered of utmost priority because it is the area with the lowest EI Score.
- I. In order to address the issue of AIG, Rwanda will implement the requirements of Annex 13 and Annex 19 well as other ICAO guidance materials to ensure that AIG is functioning effectively.

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Section 6

MONITORING IMPLEMENTATION

- A. RCAAA will continuously monitor the implementation of the SEIs listed in the RASP and measure safety performance of the national civil aviation system to ensure the intended results are achieved using the mechanisms presented in the **Appendix 1** to this plan.
- B. In addition to the above, RCAAA in collaboration with industry stakeholders will review the RASP every 2 years or earlier, if required, to keep the identified operational safety risks, safety issues and selected SEIs updated and relevant. The RCAAA will periodically review the safety performance of the initiatives listed in the RASP to ensure that the national safety goals and targets are achieved. If required, RCAAA will seek the support of MININFRA, RSOO, ICAO and other industry stakeholders to ensure the timely implementation of SEIs to address safety deficiencies and mitigate risks. Through close monitoring of the SEIs, Rwanda will adjust the RASP and its initiatives, if needed, and update the RASP accordingly.
- C. Rwanda will use the indicators listed in Section 3 of this plan to measure safety performance of the civil aviation system and monitor each national safety target. The RASP will be reviewed every 2 years 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.
- D. In the event that the national safety goals and targets are not met, the root causes will be presented. If RCAAA identifies critical safety risks, reasonable measures will be taken to mitigate them as soon as practicable, possibly leading to an unscheduled revision of the RASP.
- E. Rwanda adopted a standardized approach to provide information at the regional level, for reporting to the RASGs through AFCAC.
- F. Rwanda actively participate in providing status of implementation of Abuja Safety Targets through filling the survey forms normally administered to the state. This allows the region to receive information and assess safety risks using common methodologies.

Any questions regarding the RASP and its initiatives, and further requests for information may be addressed to the following:

Rwanda Civil Aviation Authority

info@caa.gov.rw www.caa.gov.rw

End of Chapter



APPENDIX 1 TO THE RASP

DETAILED SEIs: NATIONAL OPERATIONAL SAFETY RISKS

HRC 1: Runway excursions							
Goal 1: Achieve a continuous reduction of operational safety risks Target 1.1 Maintain a decreasing trend of the national accident rate.							
Safety enhancement initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority	Monitoring Activity
Mitigate contributing factors to RE accidents and incidents	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 c. landings, go-arounds, crosswind and tailwind landings (up to the maximum manufacturer demonstrated winds) d. Promote equipping of runway overrun awareness and alerting systems on aircraft e. Ensure effective and timely reporting of meteorological and f. aerodrome conditions (e.g. runway surface conditioning g. accordance to the ICAO global reporting format in Annex 14,	Q1 2021 to Q4 2022	RCAA	1. Aerodrome Operators 2. Pilots' associations 3. CAA inspectors 4. ANSP 5. Air operators 6. RST	4 Runway RST meetings/workshops per annum One Certified Aerodrome One Runway with RESA	High	Surveillance of operator and service providers i.e; ANSP, Air operators.



	<p>h. Volume I, braking action and revised declared distances)</p> <p>i. Certify aerodrome in accordance with ICAO Annex 14, Volume I as well as Doc 9981, PANS-Aerodrome</p> <p>j. Promote the installation of arresting systems if runway end safety area (RESA) requirements can not be met</p> <p>k. Ensure that procedures to systematically reduce the rate of unstabilized approaches to runways are developed and used</p> <p>2. Implement the following RE safety actions:</p> <p>a. Ensure the establishment and implementation of a State runway safety programme and runway safety teams</p> <p>b. Promote the establishment of policy and training on rejected</p> <p>c. landings, go-arounds, crosswind and tail wind landings (upto the maximum manufacturer- demonstrated winds)</p> <p>d. Promote equipage of runway overrun awareness and</p> <p>e. alerting systems on aircraft</p> <p>f. Ensure effective and timely reporting of meteorological and aerodrome conditions (e.g. runway surface conditioning accordance to the ICAO global reporting format in Annex 14, Volume I, braking action and revised declared distances)</p> <p>g. Certify aerodrome in accordance with ICAO Annex 14, Volume I as well as Doc 9981, PANS- Aerodrome</p> <p>h. Promote the installation of arresting systems if runway end safety area (RESA) requirements cannot be met</p> <p>i. Ensure that procedures to systematically reduce the rate of unstabilized approaches to runways are developed and used</p>						
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HRC 2: Runway Incursion							
Goal 1: Achieve a continuous reduction of operational safety risks Target 1.1 Maintain a decreasing trend of the national accident rate.							
Safety enhancement initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority	Monitoring Activity
Mitigate contributing factors to RI accidents and incidents	1. Implement the following RI safety actions a. Establishment of Runway Safety Teams b. Establish Effective Low visibility operation procedures c. Ensure proper signages and Markings of Runways and taxiways d. Ensure proper ATC communication procedures	Q1 2021 to Q4 2022	RCAA	1. Aerodrome Operators 2. Pilots' associations 3. CAA inspectors 4. ANSP 5. Air operators 6. RST	4 Runway RST meetings/workshops per annum One Certified Aerodrome One Runway with RESA	High	Surveillance of operator and service providers i.e; ANSP, Air operators.

HRC 3: Mid Air collision							
Goal 1: Achieve a continuous reduction of operational safety risks Target 1.1 Maintain a decreasing trend of the national accident rate.							
Safety enhancement initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority	Monitoring Activity
Mitigate contributing factors to MAC accidents and incidents	Implement the following MAC safety actions a. Ensure appropriate mix of Air Traffic controllers b. Ensure adequate training of Air traffic controllers c. Ensure adequate ATC procedures d. Ensure adequate training of pilots e. Ensure appropriate Airborne and ground based safety nets f. Ensure good Quality of Navigation and surveillance equipment g. Ensure effective safety management systems implementation	Q1 2021 to Q4 2022	RCAA	1. Aerodrome Operators 2. Pilots' associations 3. CAA Inspectors 4. ANSP 5. Air operators	2 trainings / workshops on Mid Air collision for ATC and Pilots/Annum	High	Surveillance of operator and service providers i.e; ANSP, Air operators.



HRC 4: Loss of control in-flight (LOC-I)							
Goal 1: Achieve a continuous reduction of operational safety risks Target 1.1 Maintain a decreasing trend of the national accident rate.							
Safety enhancement initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority	Monitoring Activity
Mitigate contributing factors to LOC-I accidents and incidents	Implement the following LOC-I safety actions a. Ensure effective safety management system is implemented b. Ensure that pilots comply with standard operating procedures	Q1 2021 to Q4 2022	RCAA	1. Pilots' associations 2. CAA inspectors 3. ANSP 4. Air operators	2 trainings/ Workshops of Air traffic controllers and pilots on LOC-I every year	High	Surveillance of operators and service providers i.e; ANSP, Air operators.

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HRC 5: Controlled flight into terrain (CFIT)							
Goal 1: Achieve a continuous reduction of operational safety risks Target 1.1 Maintain a decreasing trend of the national accident rate.							
Safety enhance ment initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority	Monitoring Activity
Mitigate contributing factors to CFIT accidents and incidents	Implement the following CFIT safety actions a. Implement precision approaches or PBN approaches to reduce the risk of CFIT accidents b. Adopt continuous angle non precision approaches (CANPA) c. Mandate the use of terrain awareness system	Q1 2021 to Q4 2022	RCAA	1. Pilots' associations 2. CAA inspectors 3. ANSP 4. Air operators	2 trainings/workshops of Air traffic controllers and pilots on CFIT every year	High	Surveillance of operator and service providers i.e; ANSP, Air operators.



	<p>in Air Transport Aircraft</p> <p>d. Provide to manufacturer the respective terrain data when a new Airport opens</p> <p>e. Comply with ICAO recommendations and guidelines regarding PBN implementation</p> <p>f. Train flight crews to respect weather minimum and not to penetrate weather unnecessarily</p> <p>g. Train and ensure effective implementation of SOPs, Flight crew monitoring, cross checking and pilot to pilot communication in all approaches when weather and visibility are factors</p>							
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DETAILED SEIs: OTHER SAFETY ISSUES

Issue x1: Qualified technical personnel to support effective safety oversight						
Goal 2. Strengthen the State's safety oversight capabilities Target 2.1: reach an effective implementation score of 85% by 2022 and 100% by 2025						
Safety enhancement Initiative	Action	Timeline	Responsible entity	Stakeholders	Metrics / Indicators	Priority Monitoring / Activity
SEI-5 Qualified technical personnel to support effective safety oversight	5A — Establish 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)	Q1 2020 to Q4 2022	RCAA	RCAA / AIG	a. Recruitment system updated with new recruitment package Number of training sessions on accident and incident investigations b. Number/percentage of trained and qualified inspectors and investigators c. Number/percentage of investigators and inspectors retained more than 12 months after recruitment d. Training needs analysis of inspectors/investigators	High a. Periodic training needs assessment



	5C — Establish a compensation scheme for the attraction and retention of qualified technical personnel (CE4) 5D — Make use of RSOOs, RAIOS, or equivalent means, to secure qualified								
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	<p>technical personnel to perform those functions which cannot be performed by the State acting on its own (CE-4)</p> <p>5E — Establish human resource plans to support hiring and retention of the appropriate number of qualified technical personnel required (CE-4)</p> <p>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</p>							
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	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 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-5B (CE-4)								
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End of Rwanda Aviation Safety Plan