State Plan for Aviation Safety in Malta

2021-2025

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Foreword

2020 has been an extraordinary year with unprecedented operational scenarios and an everchanging operational environment. The COVID-19 pandemic has hit the world in a way unknown to us before, and the aviation sector is no exception. The industry has experienced considerable negative impact, with widespread reduction in operations, job-losses, employee redeployment and company liquidation. Nevertheless, even in the face of such adverse realities, safety remains crucial in our daily operation as an aviation regulator. This has always been one of the values that Transport Malta Civil Aviation Directorate embraced and consider it as a key aspect in our growth strategy.

Aviation is now at a crossroad. One cannot look at a ramp-up of operations in isolation to aviation safety. Safe air travel plays an important role in the recovery of the aviation industry. Furthermore, we must consider a new variable – public health concerns. Governments and entities must work together to re-establish confidence in air travel among consumers. A holistic and coordinated approach is the way forward. The path is still uphill, but initiatives being presented at both international and regional level are encouraging and play a key role in rebuilding the aviation sector. We must all do our part.

The Malta State Plan for Aviation Safety is another significant document aimed at assisting the management of safety at a National level, in-line with regional and global targets. Together with our oversight programme, this document is an additional tool to offer guidance to our stakeholders, and part of a wider implementation of the Safety Management System.

The aviation industry operates in a very dynamic scenario and 2020 confirmed this. We must remain attentive to our operational environment and constantly identify operational risks and monitor the implemented mitigations for effectiveness. COVID-19 has required us to adapt our business models, oversight, hazards and risks. We must keep on striving to ensure that aviation remains on a growth path and industry safety standards kept at the highest levels.

Capt. Charles Pace

Director General for Civil Aviation Transport Malta

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SPAS in Malta Amendment Record

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Third-party documents relevant to this Issue

- European Plan for Aviation Safety (EPAS) 2021-2025
- European Aviation Safety Programme
- ICAO Global Aviation Safety Plan (GASP)
- Annex 19 to the Convention on International Civil Aviation (Safety Management)

Revision details

Issue No	Date	Details
01/2014	May 2014	Publication of TM-CAD State Safety Plan 2014-2017
02/2020	December 2020	Publication of State Plan for Aviation Safety in Malta 2020-2024 to reflect MST actions published in EPAS 2020-2024. Specific actions from EPAS 2018-2022 and 2019-2023 were also included.
03/2021	November 2021	Publication of State Plan for Aviation Safety in Malta 2021-2025 to reflect MST actions published in EPAS 2021-2025, including specific actions from previous EPAS publications

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Abbreviations

ALoS	Acceptable Level of Safety
AOC	Air Operator's Certificate
ASR	Annual Safety Report
CA	Competent Authority
CAD	Civil Aviation Directorate
CAT	Commercial Air Transport
CFIT	Controlled Flight Into Terrain
EASA	European Aviation Safety Agency
EC	European Commission
EPAS	European Plan for Aviation Safety
FDM	Flight Data Monitoring
FOD	Foreign Object Debris / Foreign Object Damage
GA	General Aviation
GCOL	Ground Collision
GH	Ground Handling
GHSP	Ground Handling Service Provider
ICAO	International Civil Aviation Organisation
KRA	Key Risk Areas
LOC-I	Loss of Control In-flight
MAC	Mid-Air Collision
MOR	Mandatory Occurrence Report
MS	Member State
NCO	Non-Commercial Operations
NoA	Network of Analysts
RE	Runway Excursion
RI	Runway Incursion
RNO	Return to Normal Operations
SMM	Safety Management Manual
SMS	Safety Management System
SPAS	State Plan for Aviation Safety
SPAS in Malta	State Plan for Aviation Safety in Malta
SPI	Safety Performance Indicator
SPO	Specialised Operations
SPT	Safety Performance Target
SSP	State Safety Programme
TM-CAD	Transport Malta Civil Aviation Directorate
UAS	Unmanned Aircraft Systems
USOAP CMA	Universal Safety Oversight Audit Programme Continuous Monitoring Approach

1. European Plan for Aviation Safety (EPAS)

The European Plan for Aviation Safety (EPAS) is the instrument to prioritise and manage actions to maintain and further improve aviation safety and environmental protection, while ensuring efficiency, proportionality and level playing field.

EPAS is the aviation safety action plan derived from the main safety risks identified at European level and a key element of the European aviation safety strategy. EPAS is built on a proactive approach to support the future growth of aviation while securing a high and uniform level of safety for all Member States (MSs). This proactive approach allows the European Commission (EC), the European Aviation Safety Agency (EASA) and MSs to take the necessary actions at the right time in order to prioritise the risks to be managed and to face the challenges posed by the increasing complexity and continued growth in civil aviation, as well as to ensure safe, secure and environmentally friendly implementation of new business models and new technologies.

The overall safety objective is to maintain and whenever feasible to further improve the present safety performance level of the European aviation system in the face of upcoming changes. EPAS is a five-year plan that is constantly being reviewed and improved through annual updates. The plan is an integral part of EASA's work programme and is developed by EASA, in close consultation with the EASA MSs and industry. It is consistent with the ICAO Global Aviation Safety Plan (GASP). A copy of the EPAS can be downloaded from the EASA website under the Safety Management & Promotion page.

The EPAS actions assigned to the Member States are included in the State Plan for Aviation Safety in Malta. Aviation stakeholders must process, document, and implement the actions where applicable to their operation.



Figure 1 - Flow of EPAS Strategic Priorities Adapted from (EASA, 2020)

2. State Plan for Aviation Safety in Malta

2.1 Role of the Safety Plan in aviation safety management

The State Plan for Aviation Safety in Malta (SPAS in Malta) is the master planning document containing the strategic direction of a State for the management of aviation safety for a set period. This plan contains the actions identified in the EPAS and also lists national safety issues with respective SPI's and SPT's to help address identified safety deficiencies and maintain/achieve an acceptable level of aviation safety. The SSP and SPAS in Malta take into consideration the appropriate actions and procedures needed to ensure that functions are appropriately addressed and executed. All documentations are considered as 'live-documents' and are updated periodically to reflect changing scenarios.

Aviation is a global business and hence requires States to work together and in a coordinated effort to ensure that safety is achieved across the different domains of the industry. In view of this, the major international and regional bodies provide various initiatives, documents and policies to help coordination at various levels.



Figure 2 - Top-down and bottom-up approach of safety-management.

The SPAS in Malta is compiled and published by Transport Malta Civil Aviation Directorate and is reviewed annually to ensure that the safety priorities reflect the changing scenario within aviation world. These safety priorities are developed from the various data sources of TM-CAD, such as the occurrence reporting system, organisation oversight and information sharing. Additionally, any new actions identified in the EPAS which are relevant to the aviation scenario of Malta will also be updated. Ultimately, safety management is implemented by the aviation stakeholder through their own safety management system.

2.2 Structure of the SPAS in Malta

The SPAS in Malta is divided into four sections including appendices, whereby each section is addressing specific matters of information. The two noteworthy action areas can be found in Section 3 and in the relevant Appendices.

Section 1 and **Section 2** provide a general overview of the EPAS framework, the role of the SPAS and the approach adopted towards safety management by the various levels of the aviation industry.

Section 3 is divided into four sub-sections. **Sub-section 3.1 and 3.2** deals with the Systemic and Operational safety actions, mostly as identified in Volume II of the EPAS and address the actions referenced as 'MST'. Each task identified in these two sub-sections has been identified with a unique SPAS in Malta reference number. A correlation list for these references can be found in **Appendix II.**

Each action includes a brief rationale and the objective the State would like to achieve. The objective is supported with deliverables, specific actions and a timeline. The effective stakeholder's and responsibilities are also identified in these sections.

Sub-section 3.3 provides insight on the specific operational risks which are deemed crucial in enhancing operational safety and promotion of safety among the various domains. The data sources are mainly from the EPAS publications and following the analysis of reports submitted via the mandatory occurrence reporting system.

Sub-section 3.4 presents the individual domain data which is tabulated in **Appendix I**. This section is based on the information presented in the EPAS and data gathered from occurrence reports received by TM-CAD and assessed as additional safety operational risks in relation to Maltese aviation activity.

The **Appendices** section is made up of two parts. **Appendix I** provides information about the State Safety Objectives and related SPI's and SPT's. Information effective for each aviation domain is addressed in these appendices and are be processed in relation to the organisation's operation and adapted as required. **Appendix II** tabulates all actions in this publication.

3. Safety Plan Actions

The actions provided in this section are linked to priorities assigned to Member States as identified in Volume II of the EPAS 2021-2025. The actions identified in the EPAS are specific to areas where they can have the largest positive impact and ensure that safety standards are not compromised as air traffic density, and the safety risks associated with that, continue to grow.

3.1 Systemic Safety & competence of personnel

EPAS (2021-2025), Vol II, Chapter 5

Systemic issues are system-wide problems that affect the aviation system as a whole. These problems may be related to an array of factors, including but not limited to human performance, competence of personnel, socio-economic factors or to deficiencies in organisational processes and procedures, whether at authority or industry level. Any such problems might contribute towards unwanted incidents or accidents if kept unnoticed and unmanaged.

Identifying systemic threats is an important part of the whole aviation safety chain. In most scenarios, such threats become evident by various triggering factors and play a significant role in the development of safety occurrences.

SYS.MST.001 – Implementation of State Safety Programme (SSP)

EPAS (2021-2025) reference: MST.0001 - Member States to give priority to the work on SSPs.

Rationale:

As defined by ICAO, the State Safety Programme (SSP) is an integrated set of regulations and activities aimed at improving safety. The programme is part of a comprehensive management system for the administration of safety by the State. It is the responsibility of the State to create and implement an effective SSP.

State Objective:

TM-CAD strives to ensure that Regional and International aviation safety standards are observed, implement an effective SSP and maintain up-to-date safety management policies.

Deliverable(s)	Timeline
SSP document made available.	2021
SSP effectively implemented.	2025

Stakeholders – F	Roles and responsibilities
TM-CAD	SSP maintenance, development and implementation.
Aviation organisations	Analysis of the Malta SSP and SPAS and processed in-line with their operations.

Actions		Target Date
i	TM-CAD will work with industry stakeholders, including State authorities in order to ensure that there is effective safety management coordination.	Continuous
	MST.0001	
ii	TM-CAD will ensure that it effectively implements its authority requirements and address deficiencies in its oversight capabilities.	Continuous
	MST.0001	
iii	TM-CAD will ensure that it has the necessary resources to achieve the oversight capabilities and management elements identified in the SSP.	Continuous
	MST.0001	
iv	TM-CAD will ensure that inspectors have the right competencies to support the evolution towards risk- and performance-based oversight.	Continuous
	MST.0001	
v	TM-CAD will ensure that policies and procedures are in place for RBO and PBO.	Continuous
	MST.0001	
vi	TM-CAD will ensure that its policies and procedures for safety data collection, analysis, exchange, and protection are in accordance with Regulation (EU) no 376/2014	Continuous
	MST.0001	
vii	Ensure that a process is established to determine SPIs at State-level.	Continuous
	MST.0001	
viii	Ensure that the Malta SSP is regularly reviewed and assessed. The document shall be made available and shared with the other Member States and EASA	Continuous
	MST.0001	

Status:

The Malta SSP has been effective in its initial implementation stages and served as a good basis for the aviation community and growth on the Island. A revised version of the SSP has been published in August 2020, based on the ICAO Safety Management Manual Doc 9859 (4th Edition) and also taking into consideration information provided from other streams such as EASA publications and the ICAO GASP.

TM-CAD will continuously strive to improve the documentation of the Malta SSP and its effectiveness within the aviation industry as a means to enhance the industry's overall safety management.

SYS.MST.002 - Promotion of SMS

EPAS (2021-2025) reference: MST.0002 - Promotion of SMS.

Rationale:

As part of a holistic SMS framework, safety promotion plays a crucial part in aviation SMS. Safety promotion helps drive a healthy safety culture and contributes towards ensuring safety assurance activities stemming from an effective safety reporting system

Safety promotion is one of the key aspects embraced TM-CAD. This is primarily done by providing the necessary support during each phase of an organisation operation. Additionally, promotion and discussions are conducted during annual meeting organised by TM-CAD and during the general oversight of the organisations.

State Objective:

TM-CAD will continue supporting all organisations under its oversight in having an effective SMS as part of their framework. Additionally, TM-CAD encourages the implementation of promotional material developed by Regional and/or International aviation entities about safety management.

Deliverable(s)	Timeline
Guidance/training material/best practices.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Dissemination of safety management information and continue offering support to its industry partners, while ensuring that there are clear communication paths between the CAD and the operators/organisations.
Aviation organisations	Implement SMS evaluation tools and adopt an effective safety culture.

Actions		Target Date
i	Continuously raise safety awareness among the various levels of aviation activities carried out in the State.	Continuous
ii	Share information published by specialised groups such as SMICG to provide further tools for organisations as assistance to their SMS.	Continuous

iii	Provide the necessary support and guidance to organisations/entities under its oversight.	Continuous	
	MST.0002		

Status:

Malta has always valued the importance of safety in the aviation industry and embraces new methods that enhance the overall SMS. TM-CAD will continue promoting SMS among operators/organisations under its oversight through various sharing methods and meetings.

SYS.MST.026 – SMS assessment

EPAS (2021-2025) reference: MST.0026 - SMS assessment.

Rationale:

A safety management system (SMS) is defined as a systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures. Such system is supported by a strong assurance function that monitors compliance and performance as well as change management.

TM-CAD conducts various oversight audits among its organisations as part of its monitoring programme and makes use of checklists and assessment methods in-line with EASA standards. The new EASA Management System assessment tool is also being taken into consideration.

State Objective:

TM-CAD will continue to pursue its performance-based oversight and harmonise evaluation criteria for SMS audits by means of adopting recommendations in relation to new assessment tools.

Deliverable(s)	Timeline
Feedback on the use of the tool.	Continuous
Feedback on the status of SMS compliance and performance.	Continuous

Stakeholders – Roles and responsibilities		
TM-CAD	Make use of SMS assessment tools in a drive to harmonise evaluation criteria.	

Action		Target Date
i	Provide feedback on the EASA Management System assessment tool.	Continuous with bi-annual
	MST.0026	reporting

ii	ii	Provide feedback on the status of SMS compliance and performance.	Continuous with bi-annual
		MST.0026	reporting

<u>Status:</u>

TM-CAD provides feedback on the SMS compliance of organisations/operators under its oversight as required in the appropriate channels (bi-annual reporting) and/or through standardisation visits.

SYS.MST.027 – Develop Just Culture across aviation partners

EPAS (2018-2022) reference: MST.027 - Develop Just Culture in GA (this is extended to all aviation activities)

Rationale:

TM-CAD promotes a culture in which it aims, in particular, to ensure confidence of aviation professionals in occurrence reporting systems and encourages them to reports any relevant safety information with a view to contribute to the enhancement of aviation safety and accidents prevention. To this end, TM-CAD requires organisations to adopt Just Culture principles in their procedures and Safety Managements.

Nevertheless, Just Culture must not be used as a means to exonerate individuals from their responsibilities but rather to find a balance between full impunity and blame culture. However, TM-CAD and legislation provide exceptions to the principle of Just Culture. Exceptions are granted in cases of wilful misconduct, and situations where there has been a manifest, severe and serious disregard of an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or property, or which seriously compromises the level of aviation safety.

State Objective:

To maintain a strong 'Just Culture' at all levels among all aviation industry stakeholders by means of appropriate regulatory frameworks, tool and processes.

Deliverable(s)	Timeline
Greater cooperation and understanding of Just Culture to encourage reporting of occurrences and enhance the safety culture.	Continuous

Stakeholders – Roles and responsibilities		
TM-CAD	Provide support and guidance on Just Culture, while ensuring that this is also being implemented in organisations under its oversight.	
Aviation organisations	Embrace Just Culture within their management systems.	

Action		Target Date
i	Provide guidance material on Just Culture and promote as necessary.	Continuous
	MST.027	

Status:

TM-CAD continuously promotes Just culture among the organisations under its oversight. Additionally, the CAD will continue enhance any State functions to offer the necessary protection to aviation users as additional tools towards safeguard Just culture principles.

SYS.MST.028 - Implementation of State Plan for Aviation Safety in Malta

EPAS (2021-2025) reference: MST.0028 - Member States to establish and maintain a State Plan for Aviation Safety.

Rationale:

A State Plan for Aviation Safety is the master planning document containing the strategic direction of a State for the management of aviation safety for a set time period. This plan lists national safety issues, sets national aviation safety goals and targets, and presents a series of initiatives to address identified safety deficiencies and achieve the national safety goals and targets.

State Objective:

TM-CAD maintains the Malta State Plan for Aviation Safety (SPAS) and carries responsibility for its publishing, promotion and implementation of actions assigned to it and to other industry stakeholders.

Deliverable(s)	Timeline
SPAS established.	Q4 2021

Stakeholders – Roles and responsibilities		
TM-CAD	SPAS maintenance, development and implementation.	
Aviation organisations	Analysis of the Malta SPAS and implemented in accordance with their operations.	

Action		Target Date
i	Identify SPIs and SPTs for the recently revised SPAS.	Q4 2021
	MST.001, MST.0028	

ii	TM-CAD will publish the reviewed SPAS for the effective period and made publicly available.	Q4 2021
iii	TMST.0028 TM-CAD will maintain and regularly review the SPAS and taking into consider the pan-European safety risk areas identified in EPAS for the various aviation domains.	Continuous
	MST.0028	
iv	TM-CAD will identify in SPAS the main safety risks affecting the national civil aviation safety system and set out the necessary actions to mitigate those risks.	Continuous
	MST.0028	
v	Review SPIs and SPTs for and published in each SPAS review.	Continuous
	MST.0001, MST.0028	

<u>Status:</u>

The first SPAS in Malta (formerly known as TM-CAD State Safety Plan) was published by TM-CAD in 2014, effective for period 2014-2017. This document has now evolved and known as SPAS in Malta and reflects the applicable elements identified in the EPAS publication/s.

SYS.MST.028-1 – Malta aviation safety risk management

EPAS (2020-2024) reference: MST.028 - Member States to establish and maintain a State Plan for Aviation Safety.

Rationale:

Safety risk management will cover the different domains within the aviation industry and, which are part of the Maltese oversight, whereby acceptable levels of safety are identified to ensure that the aviation operational environment will be safe for all users. Nevertheless, each stakeholder is responsible for the safety of its own operations. Each aviation organisation, as part of their SMS, must identify their operational hazards/threats and assess their risks, determine an acceptable level of risk and implement any actions that contribute to eliminate or reduce the risks.

State Objective:

To maintain an effective safety risk management framework and comply with ICAO and EASA requirements in such domain.

Deliverable(s)	Timeline
The identification of national aviation safety risks and included within the SPAS in Malta.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Implement a safety risk framework to identify operational risks across domains and implemented in the SPAS in Malta.
Aviation organisations	Implement safety risk management frameworks relevant to their operation and organisation.

Action		Target Date
i	Implement and maintain an aviation safety risk framework.	Continuous
	MST.028	

Status:

The SPAS in Malta is updated annually. This element will be in continuous development to ensure that the risk management of the different domains remains up-to-date and reflects the real aviation environment.

3.2 Human factors and human performance

EPAS (2021-2025), Vol II, Chapter 5

As new technologies and/or operating concepts emerge, including the continuous evolving complexity of systems, it is of key importance to properly assess human factors and human performance. This assessment must encompass both its limitations and contribution towards safety, as part of the implementation of safety management.

SYS.MST.037 – Human Factors Competence for Regulator Staff

EPAS (2021-2025) reference: MST.0037 - Foster a common understanding and oversight of Human Factors.

Rationale:

Common guidance material aimed at competent authorities will contribute towards a common understanding and oversight of Human Factors. This guidance material will assist in the organisation and implementation of the competency framework, planning and execution of the training for the respective regulatory staff.

State Objective:

The objective of TM-CAD is to maintain a competent workforce to ensure its oversight and analysis function remain effective especially with regards to human factors and human performance.

Deliverable(s)	Timeline
Guidance for competency assessment of regulatory staff	2023
Guidance for competency for trainers	2023

Stakeholders – Roles and responsibilities	
TM-CAD	Organise the implementation of the competency framework, and plan and conduct the training for its respective regulatory staff.

Action	Action	
i	The importance and impact of human factors are constantly taken into account in TM-CAD's regulatory work.	Continuous
	MST.0037	

Status:

Human factors knowledge is part of the competencies that staff engaged by TM-CAD should possess. In absence of such, the appropriate training is provided to assist them in their duties. Recurrent training is also part of each inspecting staff development programme. The CAD will evaluate any guidance material and tools provided in order to streamline competency in human factors oversight.

SYS.MST.033 – Sharing of best practices for language proficiency requirements

EPAS (2021-2025) reference: MST.0033 - Language proficiency requirements — share best practices, to identify areas for improvement for the uniform and harmonised language proficiency requirements implementation.

Rationale:

The decision to address language proficiency requirements (LPRs) for pilots and air traffic controllers was first made by the 32nd Session of the ICAO Assembly in which the lack of proficiency in English was identified as a contributing factor to fatal accidents. The intent is to improve the level of language proficiency in aviation worldwide and reduce the communication breakdowns caused by a lack of language skills.

State Objective:

To provide feedback to EASA on how the LPRI is implemented, including the uptake by ATOs to deliver training in English, for the purpose of harmonisation and uniform implementation.

1	Deliverable(s)	Timeline
I	Provide feedback to EASA on how the LPRI is implemented.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Ensure that a proper feedback is recorded and provided to EASA as appropriate.
Aviation organisations	Provide feedback to TM-CAD on training programmes and related implementation.

Action		Target Date
i	Ensure that feedback channels are in place and that the related outcome is shared with EASA when requested.	Continuous
ii	TM-CAD to ensure that examination procedures are effective and part of its internal oversight function.	Continuous

<u>Status:</u>

TM-CAD utilises ICAO Doc 9835 and FCL.055 as its basis for guidelines in relation to the implementation of Language Proficiency Requirements. Nevertheless, procedures are in place for continuous monitoring of such language proficiency and to ensure that an adequate level of clear communication is obtained.

SYS.MST.036 – PPL/LAPL learning objectives

EPAS (2021-2025) reference: MST.0036 - PPL/LAPL learning objectives in the Meteorological Information part of the PPL/LAPL syllabus.

Rationale:

Member States should develop proportionate learning objectives in the 'Meteorological Information' part of the PPL/LAPL syllabus.

State Objective:

To develop learning objectives of a basic, non-academic nature and address key learning objectives in relation to:

- practical interpretation of ground-based weather radar, strengths and weaknesses;
- practical interpretation of meteorological satellite imagery, strengths and weaknesses;
- forecasts from numerical weather prediction models, strengths and weaknesses.

Deliverable(s)	Timeline
Learning objectives, with related question bank.	Q4 2021

Stakeholders – Roles and responsibilities	
TM-CAD	To develop proportionate learning objectives to strengthen the competency of PPL and LAPL pilots in meteorological information.

Action		Target Date
i	PPL and LAPL training programmes updated with learning objectives concerning meteorological information.	Continuous
	MST.0036	

SYS.MST.032 – Oversight and Standardisation

EPAS (2021-2025) reference: MST.0032 - Oversight capabilities/focus areas.

Rationale:

The capability and ability to conduct oversight and standardisation is a critical element of any competent authority, and EASA as the regional oversight agency. It is therefore necessary that for CAD, as the competent authority to have the necessary resources to allow it to perform its oversight function in a safe and effective way. The aim is to achieve an effective risk-based and compliance-based oversight to address operational and safety-related issues.

State Objective:

The objective of TM-CAD is to maintain an effective level of oversight and continuous ability to conduct its responsibilities within a robust EASA oversight system. Such objective can be achieved with particular focus on:

- adequate personnel employed/contracted with TM-CAD;
- cooperative oversight in all sectors (as required)
- organisation's management system in all sectors

Deliverable(s)	Timeline
Effective plan and allocation of tasks to ensure the adequate availability of personnel.	Continuous
Where necessary, cooperation agreements with other competent authorities are in place to ensure sufficient and effective oversight.	Continuous
Ability of TM-CAD to assess and oversee the organisations' management system in all sectors	Continuous

Stakeholders – F	Stakeholders – Roles and responsibilities		
TM-CAD	Create procedures and measurement tools to ensure that its oversight functions can be conducted in an effective manner.		

Action		Target Date
i	Member States to ensure that adequate personnel are available to discharge their safety oversight responsibilities.	Continuous
	MST.0032	
ii	Assessment, monitoring and improvement of knowledge and capabilities of TM-CAD workforce in a modern aviation environment.	Continuous
	MST.0032	
iii	Provisions are in place for cooperative oversight in all sectors. Ensure that each organisation's activities are duly assessed and adequately overseen.	Continuous
	MST.0032	
iv	Oversight activities for organisations under TM-CAD's oversight and monitoring and analysis of organisational safety performance.	Continuous
	MST.0032	
v	SPAS is established.	Q4 2021
	MST.0032	

Status:

TM-CAD has procedures in place to ensure that the oversight programme is planned as stipulated by regulation and conducted rigorously to a high standard. The CAD is continuously investing in personnel and oversight tools as one of the means to maintain an effective and standardised oversight function across different domains.

SYS.MST.035 – Oversight capabilities/focus area: fraud cases in Part-147

EPAS (2021-2025) reference: MST.0035 - Oversight capabilities/focus area: fraud cases in Part-147.

Rationale:

Part-147 organisations play a crucial role in aviation training for maintenance personnel. It is therefore essential that such organisations and oversight authorities ensure that the competence level is achieved in a fair and correct way. Stakeholders must ensure that necessary control measures are in place, and any changes are conducted in a controlled manner.

State Objective:

To focus on mitigating the risk of fraud in examinations, including by adding specific items in audit checklists and collecting data on the actual cases of fraud. Exchanging and sharing information about known cases will also contribute towards achieving wider knowledge and implementation of best practices during oversight.

Deliverable(s)	Timeline
Provide feedback on the implementation status.	Continuous

Stakeholders – Roles and responsibilities		
TM-CAD	-CAD Ensure that a proper feedback is recorded and provided to EASA as appropria	
Aviation organisations	Provide feedback to TM-CAD on known cases of examination frauds.	

Action		Target Date
i	Ensure that feedback channels are in place and that the related outcome is shared with EASA when requested.	Continuous
	MST.0035	

<u>Status:</u>

TM-CAD treats cases of fraud or tentative fraud in a serious manner. Reporting channels are available for organisations that identify any wrongdoings. In addition, as part of its oversight cycle, the CAD conducts checks at examination locations from among its approved organisations.

SYS.CAD.071 – Strategy for Cybersecurity in aviation and risks

EPAS (2019-2023) reference: SPT.071, RMT.0720.

Rationale:

The new generation of aircraft have their systems connected to the ground in real time. Air traffic management technologies rely on internet and wireless connections between the various ground centres and the aircraft. The multiplication of network connections increases the vulnerability of the whole system. In order to address those concerns, a strategy for cybersecurity in aviation was developed by the EC and EASA and first published in September 2019 by the European Strategic Coordination Platform (ESCP).

Identifying cybersecurity risks will help contribute to the protection of aviation systems from unlawful cyber-attacks and their related consequences. To achieve this objective, it is proposed to introduce provisions for the management of information security risks by organisations in all the aviation domains (design, production, continuing airworthiness management, maintenance, operations, aircrew, ATM/ANS, aerodromes). These provisions would include high-level, performance-based requirements, and would be supported by AMC & GM and industry standards.

State Objective:

To monitor developments and participate in regional and international consultations on cybersecurity strategy and related risks. The aim is to ensure that cybersecurity threats are identified and manage the threats and risks caused by them in an effective manner.

Measurable deliverable/s:

Cybersecurity is included in the SPAS in Malta and further developed based on the information gathering and sharing at a European level.

Stakeholders shall have methods for identifying threats and managing risks related to cybersecurity.

Stakeholders – Roles and responsibilities	
TM-CAD	Integrating cybersecurity in the SPAS in Malta. Monitor any consultation publications issued by EASA.
Aviation organisations	Identify cybersecurity threats to their operation and manage the related risks.

Action		Target Date
i	Implement a regulatory framework for cybersecurity risk management covering all aviation domains.	Q4 2022
	Owner: EASA, RMT.0720	

Status:

TM-CAD will gather the necessary data both on a National level and among local aviation stakeholder in order to ensure the implementation of such important operational aspect. Correct coordination among aviation stakeholders and Local Authorities responsible of Cybersecurity management is crucial.

3.3 Operational Safety

EPAS (2020-2024) Chapters 6-15

3.2.1 Flight operations - aeroplanes

EPAS (2021-2025) reference: Vol II, Section 6 Flight operations - aeroplanes

The operational domain CAT and NCC by aeroplane remains the greatest focus of the EASA safety activities. This sub-section provides insight on actions in the area of CAT by

aeroplane (airlines and air taxi, passengers/cargo, aeroplanes of all mass categories), noncommercial operations with complex motor-powered aircraft (NCC), as well as specialised operations (SPO) involving aeroplanes of all mass categories.

The top three KRAs identified in the EASA ASR 2020 for CAT aeroplane and NCC operations are:

KRA 1	KRA 2	KRA 3
Airborne collision	Runway excursions	Aircraft upset

OPS.MST.024 - Loss of separation between civil and military aircraft

EPAS (2021-2025) reference: Section 6, MST.0024 – Loss of separation between civil and military aircraft.

Rationale:

There are two major airspace users in the world today - civil and military, with both sectors being essential to global stability and economies. However, both usually cannot operate simultaneously within the same block of airspace, thus requiring the establishment of boundaries and segregation to safeguard both civil and military aviation airspace activity. Several EU Member States have reported an increase in losses of separation involving civil and military aircraft including an increase in non-cooperative military traffic over the high seas. Due to the possible hazard to civil aviation safety, the EC mandated EASA to perform a technical analysis of the reported occurrences.

State Objective:

Even though such events are not so frequent in Maltese airspace, Malta will evaluate any measures and recommendations which contribute towards the safe operation of its airspace.

Deliverable(s)	Timeline
Report.	2021

Stakeholders – Roles and responsibilities		
TM-CAD	Report relevant events to EASA and monitor developments including evaluating and endorsing any recommendations issued by regional or international bodies.	
Aviation organisations	Report to TM-CAD any encounters with military operated aircraft.	

Action		Target Date
i	Report relevant occurrences to EASA.	2021
	MST.0024	

OPS.MST.030 – Implementation of SESAR solutions aiming to reduce the risk of midair collision en-route and in terminal manoeuvring areas

EPAS (2021-2025) reference: Vol II, Section 6, MST.0030 - Implementation of SESAR solutions aiming to reduce the risk of mid-air collision en-route and in terminal manoeuvring areas.

Rationale:

Member States should evaluate together with ANSPs delegated to provide services in their airspace the needs for implementing SESAR solutions related to enhanced Short-Term Conflict Alerts (STCA)/enhanced safety nets such as solutions #60 & #69. These SESAR solutions, designed to improve safety, should be implemented as far as it is feasible.

State Objective:

It is our objective to minimise the risk of MACs in airspace under Malta control and to ensure that the applicable SESAR solutions are implemented as practically as possible.

Deliverable(s)	Timeline
SPAS established and included.	Q4 2021

Stakeholders – Roles and responsibilities	
TM-CAD	Evaluate the SESAR solutions together with the relevant ANSP.
Aviation organisations	ANSP's to identify the implementation process.

Action		Target Date
i	SESAR solutions are implemented as far as feasible.	On-going
	MST.0030	

OPS.MST.003 - Maintain regular dialogue with aircraft operators on FDM programmes

EPAS (2021-2025) reference: Vol II, Section 6, MST.0003 - Member States should maintain a regular dialogue with their national aircraft operators on flight data monitoring programmes.

Rationale:

Flight Data Monitoring (FDM) offers an efficient solution to enhance safety in the aviation industry. By downloading and analysing aircraft flight recorder data on a regular and routine basis, this element is of importance to an organisation's safety management. The increased capture and analysis of data parameters has enhanced the potential of FDM programmes. TM-CAD fully embraces the importance of such FDM programmes in an organisation and promotes the importance of such analysis as an additional support tool for both safety management and organisational operational efficiency.

State Objective:

TM-CAD strives to promote the use and analysis of such programmes, together with encouraging the use of good-practice documents. Additionally, TM-CAD will share relevant information to increase awareness about the European operators FDM forum (EOFDM).

Deliverable(s)	Timeline
Information on EOFDM published in the SMS section of TM-CAD website	2021
Report of the information event	2021
Detailed report of the workshop	Q2 2022

Stakeholders – Roles and responsibilities	
TM-CAD	Promote the importance of FDM programmes via appropriate forums and/or conferences.
Aviation organisations	AOC holders (CAT): Participate in FDM-related events organised by TM-CAD. Analyse operational demands and pursue paths allowing for FDM analysis.

Action		Target Date
i	Promote and encourage the use of analysis through FDM programmes.	Continuous
	MST.0003	
ii	Encourage operators to make use of good-practice documents produced by EOFDM and similar safety initiatives.	Continuous
	MST.0003	
III	Publish relevant documentation on TM-CAD website.	Continuous
	MST.0003	

OPS.MST.019 – Better understanding of operators' governance structure

EPAS (2021-2025) reference: MST.0019 - Better understanding of operators' governance structure.

Rationale:

Each organisation has to identify the responsibilities related to its post-holder and other key personnel roles. EASA prepared specific guidance material, namely: "Practical Guide: Management of hazards related to new business models of commercial air transport operators." A practical guide issued by EASA can be found in the website's document library <u>https://www.easa.europa.eu/document-library/general-publications/management-hazards-related-new-business-models-commercial-air</u>

It is the responsibility of the organisations' management to ensure that any threats associated with the business model are addressed in the company's SMS, including change management procedures where required.

State Objective:

Identify the various business models and the related risks to their operation.

Deliverable(s)	Timeline
Guidance material.	Q4 2021 / Q1 2022

Stakeholders – Roles and responsibilities		
TM-CAD	Information gathering and oversight.	
Aviation organisations	AOC holders (CAT): Risk management, SMS and Compliance monitoring functions.	

Action		Target Date
i	Understand the operator's organisational structure, the identification of operational risks including the extensive use of outsourcing, financial stakeholders and management personnel.	Continuous
ii	The agency (EASA) will support this MST by providing guidance on how to effectively oversee group operations.	2021 / 2022

OPS.MST.034 - Oversight capabilities/focus area: flight time specification schemes

EPAS (2021-2025) reference: MST.0034 - Oversight capabilities/focus area: flight time specification schemes.

Rationale:

It is important that TM-CAD possesses the required competence to approve and oversee the operators' flight time specification schemes; in particular, those including fatigue risk management. TM-CAD should focus on the verification of effective implementation of processes established to meet operators' responsibilities requirements and to ensure an adequate management of fatigue risks. Due consideration should be given to the latter when performing audits of the operator's management system.

State Objective:

It is our objective to ensure that TM-CAD staff has the right competencies to discharge their duties and keep abreast of changes that are aimed at ensuring safety operations.

Deliverable(s)	Timeline
Report on actions implemented to foster capabilities.	2021

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor the progress on standardisation in the OPS domain, specifically on the effective implementation of operators' flight time specifications schemes.
Aviation organisations	AOC holders (CAT) to ensure that their flight time scheduling reflects discussions and implemented rules.

3.2.2 Rotorcraft

EPAS (2021-2025) reference: Vol II, Section 7, Rotorcraft

On a regional level, the aim of the EASA Roadmap is to significantly reduce the number of rotorcraft accidents and incidents across the spectrum of operations. The strategy incorporates safety and transversal issues that are affected by related functions such as training, operations, initial and continuing airworthiness, environment and innovation. To date in Malta, there were no major events deriving from helicopter operations.

This area includes three types of operations involving certified helicopters:

- Commercial Air Transport (CAT) operations, passenger and cargo conducted by EASA Member States' AOC holders, including passenger and cargo flights to and from offshore oil and gas installations in CAT;
- Specialised Operations (SPO), such as advertisement, photography, with an EASA Member State as the State of operator or State of registry; and
- Non-Commercial Operations (NCO) with helicopters registered in an EASA Member State or for which an EASA Member State is the State of operator (this section includes in particular training flights).

EPAS 2021-2025 has identified the following top three KRAs for each of the three types of operation:

CAT operations helicopters

KRA 1	KRA 2	KRA 3		
Aircraft upset	Terrain collision	Airborne collision		
SPO helicopters (aerial work)				
KRA 1	KRA 2	KRA 3		
Aircraft upset	Terrain collision	Obstacle collision in flight		
NCO helicopters				
KRA 1	KRA 2	KRA 3		
Aircraft Upset	Terrain Collision	Obstacle collision in flight		

To date, helicopter operators under CAD's oversight do not operate in any of the above operation brackets, albeit one which may, as it has the required capability to perform SPO operations. Nevertheless, the CAD is the oversight authority for an ATO as Part-NCO. In view of the above, the related KRA's must be risk assessed by the respective helicopter operator and ensure measures are in place to help reduce such threats.

ROT.MST.015 – Helicopter Safety events

EPAS (2021-2025) reference: MST.0015 - Helicopter Safety events.

Rationale:

CAs, in partnership with industry representatives, are encouraged to organise helicopter safety events annually or every two years. The EHEST, IHST, CA, Heli Offshore or other sources of safety promotion materials could be freely used and promoted.

State Objective:

It is our objective to ensure a high level of safety among rotorcraft users and TM-CAD is committed in ensuring that this safety is maintained, even if the rotorcraft activity is much less than fixed-wing operations.

Deliverable(s)	Timeline
Workshops/meetings/forums.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Coordinate with industry representatives to organise helicopter safety events/disseminate promotional material to increase safety awareness within this domain.

Aviation organisations	Promote safety awareness among its operational levels.
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Action		Target Date
i	To coordinate helicopter safety events annually or every two years.	Continuous
	MST.0015	

ROT.MST.031 – Implementation of SESAR solutions aiming to facilitate safe instrument flight rules operations

EPAS (2021-2025) reference: MST.0031 - Implementation of SESAR solutions aiming to facilitate safe instrument flight rules operations.

Rationale:

Member States together with their ANSPs and their flight procedure designers (if different from ANSPs) should evaluate the possibility to establish a network of low-level IFR routes in their airspace to facilitate safe helicopter operations. These SESAR solutions, such as solution #113 (SESAR Solutions Catalogue 2019 Third Edition) that are designed to improve safety, should be implemented as far as it is feasible.

State Objective:

It is our objective to ensure that the introduction of any IFR procedures specifically designed for rotorcraft enables the safe integration into controlled airspace without adversely affecting existing fixed-wing operations.

Deliverable(s)	Timeline
IFR routes/reports.	2025

Stakeholders – Roles and responsibilities	
TM-CAD	Evaluate the SESAR solutions together with the relevant ANSP.
Aviation organisations	ANSP's, together with relevant parties, is to evaluate and identify the possibility of establishing a network of low-level IFR routes in their airspace.

Action		Target Date
i	SESAR solutions are implemented as far as feasible.	2025
	MST.031	

3.2.3 General Aviation

EPAS (2021-2025) reference: Vol II, Section 8, General Aviation

General Aviation (GA) has been since its origin the cradle for innovation and recruitment of young professionals and a means to connect people across Europe. Addressing safety risks in GA in a proportionate and effective manner is a strategic priority. In the last years, accidents involving recreational aeroplanes have led the GA to be one sectors of aviation with the highest yearly number of fatalities across Europe.

Based on the data for non-commercially operated small aeroplanes (MTOMs below 5,700kg), the following top three KRAs can be highlighted from the EASA ASR 2020:

Non-commercially operated small aeroplanes

KRA 1	KRA 2	KRA 3
Aircraft upset	Terrain collision	Obstacle collision in flight

With regards to events happening in Maltese airspace or on 9H- registered aircraft, there were no fatalities however this is no means to wait for the first fatality before taking any necessary actions.

GA.MST.025 – Dissemination of safety messages

EPAS (2021-2025) reference: MST.0025 - Improvement in the dissemination of safety messages.

Rationale:

Sharing of safety information is a key element to increase awareness of threats and help identify safety issues and related mitigation measures.

State Objective:

It is our objective to ensure a safe environment for all GA users, especially since Malta has a particular scenario whereby all GA activities on the island depart and land at an International Airport.

Deliverable(s)	Timeline
Safety-related workshops or forums.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Promote safety information.

Aviation organisations	Ensure a proactive approach on providing, creating and disseminating information to respective users.
organisations	Information to respective users.

Action		Target Date
i	Share and appropriately disseminate information among GA community.	Continuous
	MST.0025	
ii	Organise discussion forums for GA community periodically.	Continuous
	MST.0025	

GA.MST.027 – Safety culture in GA

EPAS (2021-2025) reference: MST.0027 - Promotion of safety culture in GA.

Rationale:

TM-CAD values the importance of aviation safety and its promotion to enhance this culture among aviation professionals. While processes are well adhered to within CAT it is noticed that safety culture and reporting among the GA community has margins of improvement.

State Objective:

It is our objective to ensure that all GA users, and all aviation professionals, are aware of a strong Just Culture within the Maltese aviation environment and hence encourages occurrence reporting as a means to improve safety within the industry.

Deliverable(s)	Timeline
Provisions to facilitate and promote safety culture as part of SSP/SPAS.	Continuous

Stakeholders – Roles and responsibilities	
TM-CAD	Promote the importance of occurrence reporting while ensuring that reporting is used solely to promote safety within the aviation industry.
Aviation organisations	Ensure that all users of the GA aircraft are aware of their reporting obligations.

Action		Target Date
i	Provisions to facilitate and promote safety culture as part of SSP/SPAS.	On-going
	MST.0027	

ii	Provide the necessary support to encourage occurrence reporting.	Continuous
	MST.0027	

3.2.4 ATM/ANS

EPAS (2021-2025) reference: Vol II, Section 11, Air traffic management/air navigation services (ATM/ANS).

There is still a lack of harmonised rules based on ICAO SARPs in order to ensure compliance with the essential requirements that apply to ATM/ANS. In addition, Regulation (EC) No 552/2004 has been repealed, so new rules must ensure that ATM/ANS systems and their constituents are successfully designed, manufactured and installed. If not, the achievement of the overall objectives of ATM/ANS may be compromised.

The top three KRAs for ATM/ANS as identified in the EASA ASR 2020 are:

ATM/ANS

KRA 1	KRA 2	KRA 3
Runway collision	Airborne collision	Runway excursion

3.2.5 Aerodromes

EPAS (2021-2025) reference: Vol II, Section 12, Aerodromes.

This sub-section addresses aerodrome design and operations, as well as aerodrome operators with a focus on safety and management of potential risks. The ultimate aim is to maintain a high uniform level of safety across Member States, ensuring compliance with the ICAO SAPRs and a harmonised approach which will support the free movement of services within the Member States.

The top three KRAs for aerodromes and ground handling as identified in the EASA ASR 2020 are:

Aerodromes and Ground handling (ADR and GH)

KRA 1	KRA 2	KRA 3
Ground damage	Aircraft upset	Runway collision

ADR.MST.029 – Implementation of SESAR runway safety solutions

EPAS (2021-2025) reference: Section 12, MST.0029 – Implementation of SESAR runway safety solutions.

Rationale:

Member States should evaluate together with the ADR operators and ANSPs the needs for implementing the related SESAR solutions such as those related to ground situational awareness, airport safety net vehicles and enhanced airport safety nets.

State Objective:

The objective is to maintain a high level of runway safety in Malta and ensure a pro-active approach by implementing positive industry solutions.

Deliverable(s)	Timeline
Include the requirement in Appendix I of the SPAS in Malta.	Q4 2021

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor and assist organisations in the implementation of industry solutions.
Aviation organisations	ADR, AOC holders, ANSPs to assess the scope of implementation and introduce the identified solutions.

Action		Target Date
i	Implementation of SESAR runway safety solutions	Continuous
	MST.029	

3.4 Enhancing operational safety and promotion

The SPAS in Malta also includes the threats identified at international level which are published in the EPAS. Specifically, this section includes those MST actions related to specific threats of which mostly were identified in EPAS 2018-2022, namely:

- Loss of control in flight (LOC-I)
- Runway excursions (RE)
- Runway incursions (RI)
- AIRPROX/Mid-air collisions (MAC)
- Ground safety
- Controlled flight into terrain (CFIT)
- Fire, smoke and fumes
- Airspace infringement (AI)

In addition, this section will identify specific threats within Malta airspace, and which must be risk assessed by the relevant parties, namely:

- Management of Fatigue
- Threats of Laser Attacks
- Threats from Firework displays
- Safety operation of UAS

The COVID-19 pandemic has created an unprecedented operating environment for all players within the aviation industry. During such uncertain times, the CAD followed closely the developments and challenges encountered by aviation organisations under its oversight and the guidance material provided by EASA and ECDC. Based on this operating scenario, the CAD's main interest remained to ensure safety both during low-operations and in every ramp-up attempt towards a return to normal operations (RNO).

In view of this, the CAD issued various Notices aimed at the various aviation domains. Hazard-log reviews for the new operating scenario were required. The CAD's oversight programme has also be amended and remote inspections were conducted as far as practicable. Physical audits were rescheduled and controlled on the basis of risk-based oversight.

CAD.MST.004 – Aircraft upset in flight (LOC-I)

Source: EPAS (2018-2022)

Rationale:

Loss of control usually occurs because the aircraft enters a flight regime which is outside its normal envelope, usually, but not always, at a high rate, thereby introducing an element of surprise for the flight crew involved. Prevention of loss of control is a strategic priority.

State Objective:

Reduce LOC-I risks by means of data gathering from clear occurrence reporting, efficient organisational FDM analysis and effective mitigation measures.

Stakeholders – Roles and responsibilities		
TM-CAD	Identify events of LOC-I and monitor for threats. Include LOC-I in Appendix I of the SPAS in Malta.	
Aviation organisations	 AOC, ATO, ANS, ADR, SPO: Operators must process LOC-I threats as part of their safety management, including but not limited to: assessing risks in their own operations; define the ALoS including the necessary management and respons levels; define and implement the required actions; monitor the effectiveness of their actions. 	

CAD.MST.007 – Runway Excursions (RE)

Source: EPAS (2018-2022)

Rationale:

Runway excursions covers materialised runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties in maintaining the directional control of the

aircraft or of the braking action during landing, where the landing occurred long, fast, offcentred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing.

State Objective:

Reduce REs by continuously assessing and improving risk control measures.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor events of REs to identify threats and trends. Include RE in Appendix I of the SPAS in Malta.
Aviation organisations	 AOC holders, ATOs, ANS, ADR, SPO: Identify and address RE threats based on operations and as part of their safety management, including but not limited to: assessing risks in their own operations; define the ALoS including the necessary management and response levels; define and implement the required actions; monitor the effectiveness of their actions. Process and implement Runway safety recommendations/solutions published by regional or international groups.

CAD.MST.014 – Runway Incursions (RI)

Source: EPAS (2018-2022)

Rationale:

Runway incursions refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection, which can potentially lead to runway collision as the most credible accident outcome.

State Objective:

Reduce RIs by continuously assessing and improving risk control measures.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor events of RIs to identify threats and trends. Include RI in Appendix I of the SPAS in Malta.

Aviation organisations	 AOC holders, ATOs, ANS, ADR, SPO: Identify and address RI threats based on operations and as part of their safety management, including but not limited to: assessing risks in their own operations; define the ALoS including the necessary management and response levels; define and implement the required actions; monitor the effectiveness of their actions.
	Process and implement Runway safety recommendations/solutions published by regional or international groups.

CAD.MST.010 – Mid-Air Collision

Source: EPAS (2018-2022)

Rationale:

Airborne conflict refers to both actual collisions as well as near misses in the air. It includes direct precursors such as separation minima infringements, genuine traffic collision avoidance system (TCAS) resolution advisories or airspace infringements. This key risk area has been raised by a number of Member States through the NoAs and also by some airlines, specifically in the context of the collision risk posed by aircraft without transponders in uncontrolled airspace. This is one specific safety issue that is a main priority in this key risk area.

State Objective:

Assess and improve risk controls to mitigate the risk of mid-air collisions.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor events of Airprox/Mid-air Collision to identify threats and trends. Include Airprox/MAC events in Appendix I of the SPAS in Malta.
Aviation organisations	 AOC, SPO, ATO, ANS: Organisations must process Airprox/ Mid-air Collision threats as part of their safety management by assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels; defining and implementing the required actions; monitor the effectiveness of their actions. Assess and implement effective procedures based on evidence and technology-driven assisting tools which help avoid/inform about potential conflicts.

CAD.TM.001 – Management of Fatigue risks

Source: National

Rationale:

Fatigue is the end-effect following a particular cause or activity that affects an individual's ability to conduct the task in a normal way, potentially leading to an unsafe execution of the task at hand. Fatigue may happen in a relatively short time after some significant physical or mental activity (acute) or else it may occur gradually over several days or weeks.

State Objective:

While regulatory frameworks are aimed to help reduce fatigue related events and risks, this will still occur due to the various operational challenges and scenarios within the aviation industry. In view of this, TM-CAD will monitor organisations' fatigue risk monitoring and processes to help mitigate the risk and prevent operation under fatigue conditions.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor fatigue-related events for threats and trends. Include Fatigue-related events in Appendix I of the SPAS in Malta.
Aviation organisations	Fatigue risk management procedures, including managing crew fatigue, quality sleep, roster planning among others all in relation to its business operation.

CAD.MST.018 – Ground Safety

Source: EPAS (2018-2022)

Rationale:

Ground-handling and apron management is an important process within the overall turnaround of an aircraft operation. The safety element at such stage of operation is crucial, especially when considering the different levels of service providers roaming around the aircraft from arrival to its departure. On a regional level, it has been noticed that the risk score for such operations warranted the inclusion as part of a stand-alone domain.

State Objective:

Assess and improve risk controls to mitigate the risk from ground-safety and rampmanagement events.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor ground-safety events for threats and trends. Include ground-safety in Appendix I of the SPAS in Malta.

Aviation organisations	 AOC, GH, ANS, ADR: Addressing threats to ground handling and apron management in their operations. Organisations must process these threats as part of their safety management by assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels;
	 defining and implementing the required actions; monitor the effectiveness of their actions.

CAD.MST.005 – Fire, Smoke and Fumes

Source: EPAS (2018-2022)

Rationale:

Uncontrolled fire on board an aircraft, especially when in flight, represents one of the most severe hazards in aviation. In-flight fire can ultimately lead to loss of control, either as a result of structural or control system failure, or again as a result of crew incapacitation. Fire on the ground can take hold rapidly and lead to significant casualties if evacuation and emergency response is not swift enough. Smoke or fumes, whether they are associated with fire or not, can lead to passenger and crew incapacitation and will certainly raise concern and invite a response. Even when they do not give rise to a safety impact, they can give rise to concerns and need to be addressed.

State Objective:

Assess and improve risk controls to mitigate the risk from fire, smoke and fumes events.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor fire, smoke and fumes events for threats and trends. Include fire, smoke and fumes in Appendix I of the SPAS in Malta.
Aviation organisations	 AOC, AIR, ATO: Addressing threats to fire, smoke and fumes in their operations. Organisations must process these threats as part of their safety management by assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels; defining and implementing the required actions; monitor the effectiveness of their actions.

CAD.MST.006 – Controlled flight into terrain (CFIT)

Source: EPAS (2018-2022)

Rationale:

This risk area includes the controlled collision with terrain together with undershoot or overshoot of the runway during approach and landing phases. It comprises situations where

the aircraft collides or nearly collides with terrain while the flight crew has control of the aircraft. It also includes occurrences which are the direct precursors of a fatal outcome, such as descending below weather minima, undue clearance below radar minima among others.

State Objective:

Assess and improve risk controls to mitigate the risk from CFIT.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor CFIT events for threats and trends. Include CFIT in Appendix I of the SPAS in Malta.
Aviation organisations	 Addressing threats to CFIT in their operations. Organisations must process these threats as part of their safety management by assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels; defining and implementing the required actions; monitor the effectiveness of their actions.

CAD.TM.002 – Laser Attacks

Source: National

Rationale:

Laser attacks undermine the safety and security of flight operations. They can interfere with a pilot's vision and limit the crew's ability to perform their duties. Similarly, laser attacks can cause operational problems in ATC towers. There are four primary areas of concern that can jeopardise flight safety:

- a) Distraction and startle
- b) Glare and disruption
- c) Temporary flash blindness
- d) Eye damage

State Objective:

Along the past years, this phenomenon has been constantly reported, showing increasing fluctuating trends. Mitigation and control measures are highly dependent on the origin of the laser attack. Nevertheless, CAD will monitor for effectiveness the cooperation agreements currently in place between the service providers (ATC and operators) together with the local Police Force. In addition, CAD will continue monitoring laser attacks reported in Maltese airspace and on a European level.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor Laser attack events for threats and trends. Include Laser Attacks in Appendix I of the SPAS in Malta.
Aviation organisations	 Addressing threats to Laser attack events in their operations. Organisations must process these threats as part of their safety management by assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels; defining and implementing the required actions; monitor the effectiveness of their actions.

CAD.TM.003 – Firework displays

Source: National

Rationale:

Many fireworks related to large-scale events can dispense combustible material several hundred meters into the air. Traditionally, Malta's skies are full of colour during the Summer months, mainly due to the local patron Saint celebrations held in each village. Given that the Luqa aerodrome is surrounded by villages offering such pyrotechnic displays, it is essential that the letting-off of such fireworks are known to the aerodrome and airline operators.

Even though literature and history has shown that the risk of collision with cruising aircraft is small (depending on type of operation), there is a significant threat during the take-off and landing phases of flight. Nevertheless, it is noteworthy that fireworks have the potential to distract and confuse aircrews if they encounter fireworks at low altitudes, specifically on approach to landing.

State Objective:

Along the years, the CAD was in receipt of MORs from crew members and/or the Luqa aerodrome operator regarding firework displays. These were mostly in relation to displays not being notified beforehand or in breach of the allocated timeframe. A collaboration between the Luqa aerodrome operator, Malta Police Force and Firework factory groups, is in place, which has allowed for safe control of this entertainment and low-reporting numbers. Nevertheless, the CAD will continue monitoring for effectiveness the cooperation agreements currently in place between the parties involved and explore any relevant improvements.

Stakeholders – Roles and responsibilities	
TM-CAD	Monitor firework display events for threats and trends. Include Firework threats in Appendix I of the SPAS in Malta.

	Addressing threats to Firework related events in their operations. Organisations must process these threats as part of their safety management by
Aviation organisations	 assessing risks relevant to their own operations; defining the ALoS and the necessary management and response levels; defining and implementing the required actions; monitor the effectiveness of their actions.

CAD.TM.004 – Safety promotion of Unmanned Aircraft Systems

Source: National

Rationale:

Unmanned aircraft are creating a new niche within the aviation sector. Current and predicted growth rates are making this segment economically attractive. As part of the continuous changing landscape in aviation, legislation for unmanned aircraft has also been introduced at a regional level (EU) and enhanced by national legislation where appropriate.

The European Commission's regulation of unmanned aircraft systems utilises a risk-based approach, which incorporates each stakeholders' personal responsibility for risk management based on their operations.

As part of CAD's strategy to maintain safe operations in this changing sector, the CAD will use all channels available at its disposal to share safety-related information to UAS users. These channels include, but not limited to, the Directorate's website, social media platforms and TV appearances.

State Objective:

The CAD's objective is to primarily reduce the risks associated with unmanned aircraft operations to ensure a safe and prosperous environment for both hobbyists and commercial operations. Promotion, support and sharing of information are all steps that help raise awareness at different levels of operation and UAS categories. Each category is considered in its own type of operation however it cannot be seen in isolation to the whole UAS spectrum.

Stakeholders – R	Stakeholders – Roles and responsibilities	
TM-CAD	Provide the necessary guidance material on safe use of unmanned aircraft. Promote local and regional legislative requirement for the safe operation of drones.	
UAS Operators	Unmanned aircraft users shall use the appropriate platform for registration of drones (<u>https://tmcad.idronect.com/</u>) and seek information from the appropriate websites (such as EASA - <u>https://www.easa.europa.eu/domains/civil-drones-rpas</u> and TM - <u>https://www.transport.gov.mt/aviation/drones-4444</u>).	

3.5 Safety threats for individual domains

Each domain has its share of threats related to its operation. By identifying the necessary safety nets and measuring their effectiveness, these threats can be managed and maintained at an acceptable risk level to ensure the safest operational possibility.

Appendix I addresses each of the domains and is presented in the form of a table to address the safety objective. The data source for such objectives derives from multiple sources, including EPAS recommendations and analysis of MORs submitted to the national database.

It is the responsibility of the organisation that each of these objectives are analysed and extract a realistic set of SPIs and SPTs. Each objective must take into consideration any underlying pre-cursors, which if unaddressed, may develop into a significant incident or accident.

A risk assessment is required from the individual domain operators/organisations in order to ensure that these are relevant to their type of operation and mitigated appropriately. Nevertheless, this list is non-exhaustive and may be further enhanced by the respective organisation based on the type of operation it conducts.

Appendix I – Safety Objectives, SPI's and SPT's

This Appendix provides an overview of the Safety Objective's SPI's and SPT's at Both National and Operator level. Additionally, this section will provide a list of Compliance Performance Indicators monitored by TM-CAD. Items a. and b. are addressed to TM-CAD, while item c. is aimed at the operators/organisations based on their operational domain.

The data in this appendix is gathered from multiple sources, including occurrence reports, USOAP implementation and standardisation visits and resulting into specific SPI's and SPT's.

a. Compliance performance indicators monitored by TM-CAD

The following tables present a list of Compliance Performance Indicators monitored by TM-CAD and also the Systemic and Operational-level safety objectives SPI's and SPT's at National level.

Safety Objective	SPI	SPT
Reaction to any shortcomings and the implementation of corrective measures for continuous improvement.	Findings raised during EASA or ICAO visits are addressed and corrected in the stipulated timeframe.	Excluding issues beyond TM-CAD's control, the CAD shall strive to complete a minimum of 90% of the findings within the agreed deadline.
Compliance of Safety Standards and procedures with ICAO standards and EU regulatory requirements.	USOAP Effective Implementation %	Malta aims at increasing the Effective Implementation score progressively, following ea USOAP validation mission. The current score stands at 80% (ICVM 2021).

	Findings classified as being of an Immediate Safety Concern during EASA standardisation visits / Significant Safety Concern for ICAO audits.	Malta has no Immediate Safety Concerns (raised by EASA during standardisation visits), or Significant Safety Concerns (raised by ICAO during audits).
Safety standards and operating models are to meet the EU regulatory requirements.	Implement new EU requirements.	Implementation is always performed by the issued deadline for each domain.
The safety standards and procedures comply with ICAO standards and EU requirements.	Implementation level of the Malta SSP is evaluated in accordance with ICAO criteria.	SSP full implementation target date of 2022 as provided in the ICAO GASP.

b. National objectives

National : Systemic-level			
Safety Objective	SPI	SPT	
To publish and maintain the <i>Malta SSP</i> and <i>SPAS</i> <i>in Malta</i> as key elements in identifying aviation threats and risks within a safety structure.	Key risk areas are assessed by all aviation stakeholders and considered based on their operation.	The Malta SSP and SPAS will be reviewed on an annual basis to ensure that Actions and Safety Objectives at National and operational level are kept relevant.	
To support organisations under TM-CAD oversight to implement an effective SMS compliant to regulations.	(TM-CAD) SMS oversight requirements are established in all domains.	All domains with an oversight function in the CAD will have such provisions in place by 2021 reflecting regulatory requirements.	

	(Organisations) SMS requirements are established and understood by management.	All organisations will have an active SMS in their organisation, which will be audited as part of an audit cycle by the respective CAD Unit.
To implement an organisation risk profile across all CAD domains as part of its Risk-based Oversight function.	An organisation risk profile and scoring framework is created and used to assist in planning of the oversight by the CAD inspectors	Each CAD Unit will have its own organisation portfolios/risk registers for its oversight function. The register shall have measurable parameters and scoring range to allow for a risk score outcome.
To ensure that TM-CAD has the necessary human resources to conduct its oversight responsibilities.	Man-hour plan calculation is conducted taking into consideration the current operational environment and predicted growth of the Directorate.	Each CAD Unit will have a man-hour plan relevant to its duties including its oversight capability function. This plan is to be prepared on an annual basis and shall be kept relevant to reflect available resources and workload.
	An oversight plan is created, ensuring that all organisations follow a pre-defined audit cycle.	Achieve at least an 85% completion rate of the annual planned audits. The audits shall be carried out within the established timeframe also take into consideration Risk-Based Oversight
To Identify Safety Objectives across all domains within the <i>SPAS in Malta</i> and review as required.	Safety Objectives are identified and further enhanced by process-oriented and outcome- oriented SPIs and SPTs for each domain.	Annual review and development of the SPIs and SPTs based on data gathered and feedback from stakeholders.
To implement and maintain an aviation safety management framework.	Implementation of the actions published in the SPAS in Malta.	Each Action has its own target. The CAD will monitor these actions through liaison between the CAD relevant Units and the stakeholder/s. The SCU shall maintain record of such monitoring and present internally on an annual basis.

	To maintain a safe aviation operating environment when exceptional circumstance(s) disrupt aviation operations including CAD oversight functions.	Applicable processes are to be followed. Ad-hoc procedures may be introduced in order to ensure that there is an immediate reaction to the circumstance.	The CAD shall monitor the aviation environment and react to any extraordinary circumstances that may arise. This process shall be documented through a Safety Risk Assessment and identify appropriate mitigation measures. A review period for the identified mitigation measures shall be established to ensure their effectiveness.
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National : Operational-level

	Safety Objective	SPI	SPT
		Number of aviation accidents	
		(Measuring factor: absolute number and in proportion to traffic activity)	CAT: The aim is to maintain a 'zero' accident rate.
		NAT.ACC.1: - all events classified as such and that occurred in Malta - all events classified as such and that occurred	Average CAT accident rate between period 2017-2019 stands at 0.23/100,000 hrs.
	To maintain a high level of aviation operational safety and ensure that accidents are not caused due to negligence in the Maltese aviation system.	elsewhere than in Malta to Malta-registered aircraft or to aircraft operated by a Maltese operator or with Maltese licence.	CAT accident rate for 2020 stands at 0.41/100,000FH
		NAT.ACC.2 - all events classified as such and that occurred to Malta- registered aircraft and/or to aircraft operated by a	GA and recreational aviation: The aim is to maintain a 'zero' accident rate.
		Maltese operator or with Maltese license.	GA movement at LMML between 2017-2019 is of 33,500. Average accident rate per 10,000 movements for period 2017-2019 stands at
			3.3/10,000 movements. Accident rate in 2020 stands at 0.82/10,000 movements.

	Number of fatal aviation accidents (Measuring factor: absolute number and in proportion to traffic activity) NAT.FAC.1: - all events classified as such and that occurred in Malta - all events classified as such and that occurred elsewhere than in Malta to Malta-registered aircraft or to aircraft operated by a Maltese operator or with Maltese licence. NAT.FAC.2 - all events classified as such and that occurred to Malta-	CAT: The aim is to maintain a 'zero' fatality rate. No recorded fatalities during period 2017-2020. GA: The aim is to maintain a 'zero' fatality rate.
	registered aircraft and/or to aircraft operated by a Maltese operator or with Maltese license.	No recorded fatalities during period 2017-2020.
To maintain a high level of aviation operational safety.	Number of aviation serious incidents (Measuring factor – absolute number and in proportion to traffic activity) NAT.SER.1: - all events classified as such and that occurred in Malta - all events classified as such and that occurred elsewhere than in Malta to Malta-registered aircraft or to aircraft operated by a Maltese operator or with Maltese licence. NAT.SER.2 - all events classified as such and that occurred to Malta- registered aircraft and/or to aircraft operated by a Maltese operator or with Maltese license.	CAT: The aim is to maintain a downward trend in 'serious incident' classification. Nevertheless, each event has to be taken on a case-by-case basis, since TM-CAD classifies report on the 'Worst Possible Outcome' scenario. Average CAT serious incident rate between period 2017-2019 stands at 38/100,000 FH. Serious incident rate for 2020 stands at 20/100,000 FH. Monitor the GA serious incident rate and evaluate against FH or local movements.

	Runway Excursions (RE) NAT.RE.1	 RE in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents or serious incident categorised as RE. CAD to monitor implementation of EAPPRE recommendations. Acceptance of organisation's Safety Objectives and related SPI/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process RE threats in relation to their operation and their own safety management processes. Reducing trends in RE occurrences and precursor events.
To maintain a high level of runway safety.	Runway Incursions (RI) NAT.RI.1 (this includes incursions by other aircraft, vehicles or persons which are present on the runway without clearance or incorrectly.)	 RI risks in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents or serious incident categorised as RI. Monitoring implementation of EAPPRI recommendations. Acceptance of organisation's Safety Objectives and related SPI/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process RI threats in relation to their operation and their own safety management processes. Reducing trends in RI occurrences and precursor events.

To maintain a high level of aviation operational safety.	Near misses and Mid-air collisions (MAC) NAT.MAC.1	 MAC risks in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents categorised as MAC. Monitoring implementation of EU EAPAIRR addressing Airspace infringement. Acceptance of organisation's Safety Objectives and related SPI/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process MAC threats in relation to their operation and their own safety management processes. Reducing trends in MAC occurrences and precursor events on organisation and sector basis.
	Controlled Flight Into or towards Terrain (CFIT) NAT.CFIT.1	 CFIT risks in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents categorised as CFIT. Acceptance of organisation's Safety Objectives and related SPI/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process CFIT threats in relation to their operation and their own safety management processes. Reducing trends in CFIT occurrences and precursor events on organisation and sector basis.

	Loss of Control in flight (LOC-I) NAT.LOCI.1	 LOC-I risks in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents categorised as LOC-I. Acceptance of organisation's Safety Objectives and related SPIT/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process LOC-I threats in relation to their operation and their own safety management processes. Reducing trends in LOC-I occurrences and precursor events on organisation and sector basis.
To maintain a high level of aviation operational safety.	Ground Collision (G-COL) NAT.GCOL.1	 G-COL risks in Malta will be monitored through the CAD annual safety review publication to ensure that the risk remains within acceptable levels. No accidents categorised as G-COL. Acceptance of organisation's Safety Objectives and related SPIT/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process G-COL threats in relation to their operation and their own safety management processes

To maintain a high level of ground handling operational safety.	Ground Handling Operations NAT.RAMP.1	 No fatal accidents during ground operations Acceptance of organisation's Safety Objectives and related SPI/SPT's. These shall be assessed during initial approval and subsequently during each SMS oversight. Organisations are to process ground handling operation threats in relation to their operation and their own safety management processes Reducing trends in ground operations related accidents, serious incidents and occurrences on organisation and sector basis.
To maintain a high level of UAS operational safety.	Unmanned Aircraft Systems NAT.UAS.1	 Have no infringements of No-fly Zones/restricted areas without prior notification and mitigation measures. Permits of use are issued based on regulatory requirements. A comprehensive UAS database to ensure traceability and control.

c. Objectives for Operators/Organisations by domain

The following tables present a list of Safety objectives that each Operator/Organisation shall analyse and risk-assess based on their operations. These objectives shall not replace any other specific threats identified by the operator/organisation.

The tables will provide will apply for the following areas of operation:

- Aerodrome
- ATM/ANS
- Commercial Air Transport
- Ground Handling
- General Aviation
- Unmanned Aircraft Systems (UAS)
- Airworthiness and Maintenance Organisations

In the SPI column, certain indicators might have one of the following 'layer number' attributed to it:

- 'Layer 1' Identifies the main occurrence category as presented in the ADREP taxonomy fields.
- 'Layer 2' Specific events that are part of particular occurrence categories and/or pre-cursers to an event

Note: The layer numbers specified are for event tracking purposes and do not constitute any level of importance.

Every organisation within its area of operation shall take into consideration the additional risks brought about by the COVID-19 pandemic. Apart from adapting their hazard logs, aviation stakeholders shall also refer to any relevant SIB issued by EASA and/or TM-CAD Notices. Due evaluation and implementation of any actions shall be addressed appropriately.

Aerodrome		
Safety Objective	SPI	SPT
Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
	Layer 1: Runway Excursion	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
To maintain a high level of runway safety	Layer 1: Runway Incursion (vehicle, aircraft or person)	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Implementation of EU EAPPRI recommendations as appropriate. Implementation of SESAR solutions as feasible

To maintain a high level of aerodrome movement surfaces in relation to aircraft movement areas.	Layer 2: Aerodrome surface conditions	 Identify and assess surface deficiencies. Support surface condition monitoring with an effective preventive maintenance programme.
To maintain a high level of safety in relation to FOD in aerodrome areas.	Layer 2: FOD control in manoeuvring areas and apron	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Introduce/Evaluate mitigation measures and review their effectiveness as appropriate.
To maintain a high level of safety in relation to wildlife control in the aerodrome including potential bird strikes and wildlife collisions.	Layer 1: Bird strikes	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Introduce/Evaluate mitigation measures and review their effectiveness as appropriate.
To maintain a high level of safety in relation to ground operations in aerodrome movement and manoeuvring areas.	Layer 1: RAMP- Ground Handling	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Enhance safety promotion among Ground handling service providers.
To maintain a high level of safety in relation to approach and take-off/initial climb paths.	Fireworks	 Threats are to be identified and a risk assessment is carried out as part of the operation of the Aerodrome. Increased level of coordination between parties involved and enhance safety promotion.

	To ensure a safe and progressive restart of Aerodrome Operations		 Assess SIB's issued by EASA (as revised) and adopt recommendations (ref: SIB 2020-07, 2020-13). Identify effective mitigation measures.
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M/ANS		
Safety Objective	SPI	SPT
Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
	Layer 1: Runway Excursion	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's SPT's with a reduction in trends. These are t be developed prior to commencement of operations and reviewed annually. Full implementation of EU EAPPRE recommendations as appropriately feasible.
Γο maintain a high level of runway safety	Layer 1: Runway Incursion (vehicle, aircraft or person)	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's SPT's with a reduction in trends. These are t be developed prior to commencement of operations and reviewed annually. Full implementation of EU EAPPRE recommendations as appropriate. Implementation of SESAR solutions as feasiling

To maintain a high level of safety on movement areas	Layer 1: Ground collisions – collisions while taxiing to or from a runway in use (GCOL)	 Threats are to be identified and a risk assessment is carried out as part of their operation.
To maintain a high level of airspace safety.	Layer 1: Near misses and Mid-air collisions (MAC)	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Use of operational data (ex: radar data) to support monitoring and analysis of MAC occurrences. Full implementation of EU EAPAIRR recommendations. Implementation of SESAR solutions as feasible. Level of Implementation of SESAR solutions and reviewed annually.
To maintain a high level of airspace safety.	Layer 2: IFR Helicopter Operations	- Implementation of low level IFR helicopter routes in controlled airspace, as feasible (Ref SESAR Solutions Catalogue).

	Layer 2: Air navigation services communications system malfunctions or disruptions (TECH/COM)	
To maintain a high level of ATM/ANS technical systems and relevant functions with minimal disruptions and effects on safety.	Layer 2: Air navigation services navigation system malfunctions or disruptions (TECH/NAV)	 Threats of failures to be identified and a risk assessment is carried out as part of their operation including any necessary control actions and their efficiency. Failures are to be monitored for trends.
	Layer 2: Air navigation services surveillance system malfunctions or disruptions (TECH/COM)	
To ensure that ATCO operational competencies and skills are maintained.	Layer 2: Human performance and knowledge: Maintenance of ATCO skills	 Conduct necessary assessments and identify any threats relevant to operational disruptions. Assess and adapt as appropriate recommendations deriving from EASA published material and/or accredited ATM/ANS bodies.



0	Commercial Air Transport		
	Safety Objective	SPI	SPT
	Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
	To continuously improve safety by assessing and mitigating the risks relating to Cabin Safety Events.	Layer 1: Cabin Safety Events Pre-cursors to consider: - Unruly passengers	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
	To continuously improve safety by assessing and mitigating the risks relating to Loss Of Control In- Flight events.	Layer 1: Loss of Control In-Flight (LOC-I) Pre-cursors to consider: - Unstabilised approach - Incorrect aircraft configuration	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Use of FDM data to support monitoring and analysis of LOC-I events. Ensuring all flight crews are trained in upset recognition and recovery (UPRT) procedures and CRM (as applicable).

To continuously improve safety by assessing and mitigating the risks relating to Mid-Air collisions and near misses events.	Layer 1: Airprox/ Mid-Air collisions (MAC) Pre-cursors to consider: - Level Bust(s) - TCAS RA	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Use of FDM data to support monitoring and analysis of MAC events. Full implementation of EU EAPAIRR recommendations as appropriately feasible.
To continuously improve safety by assessing and mitigating the risks relating to Controlled Flight Into Terrain events.	Layer 1: Controlled Flight Into Terrain (CFIT) Pre-cursors to consider: - Terrain Warning - Incorrect Altimeter settings	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Use of FDM data to support monitoring and analysis of CFIT events.
To maintain a high level of runway safety	Layer 1: Runway Excursion	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Full implementation of EU EAPPRE recommendations as appropriately feasible.

	Layer 1: Runway Incursion (vehicle, aircraft or person)	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Full implementation of EU EAPPRE recommendations as appropriate. Implementation of SESAR solutions as feasible.
To continuously improve safety by assessing and mitigating the risks relating to Laser attack events.	Layer 2: Laser attacks	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
To continuously improve safety by assessing and mitigating the risks relating to Fatigue-related events.	Layer 2: Fatigue	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Monitor Fatigue risk management systems and how they are addressed.
To continuously improve safety by assessing and mitigating the risks relating to Fire or Smoke on aircraft events.	Layer 1: Fire or smoke on aircraft Pre-cursors to consider: - Aircraft component failures (incl. powerplant) - Galley area electrical failures - Lithium Batteries (Thermal runaway)	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.

reduce the risk of transmission of the COVID-19 (as revised) and adopt recommendations			- Assess SD's and SIB's issued by EASA (as revised) and adopt recommendations (ref: SD 2021-04, SIB 2020-02, 2021-06).
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(Ground Handling		
	Safety Objective	SPI	SPT
	Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
	To continuously improve safety by assessing and mitigating the risks due to ground operations and	Poor-condition and preventive maintenance of ground handling equipment	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Devise a preventive maintenance schedule. Increase awareness among ground handling personnel about the importance of ground-handling equipment condition and monitoring.
	general ground handling activities.	Adherence to Apron procedures	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Increase awareness among ground handling personnel about Apron traffic diligence.

	Ground-handling induced FOD on aircraft movement areas	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
	Collision with Aircraft / Aircraft damage	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
To ensure safe return-to-operations following operational slowdown period due to COVID-19	Return to operations plan, including focus on general operations, GSE and personnel competencies	- Assess SIB's issued by EASA (as revised) and adopt recommendations (ref: SIB 2020-13).



General Aviation		
Safety Objective	SPI	SPT
Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
To continuously improve safety by assessing and mitigating the risks relating to Loss of Control In- Flight events.	Layer 1: Loss of Control In-Flight (LOC-I) Pre-cursors to consider: - Unstabilised approach	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually. Ensuring all flight crews are trained at an proper level for upset recognition and recovery (UPRT) procedures.
To continuously improve safety by assessing and mitigating the risks relating to Mid-Air collisions and near miss events.	Layer 1: Airprox/ Mid-Air collisions (MAC) Pre-cursors to consider: - Level Bust(s) - Situational awareness	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.

To continuously improve safety by assessing and mitigating the risks relating to Controlled Flight Into Terrain events.	Layer 1: Controlled Flight Into Terrain (CFIT) Pre-cursors to consider: - Incorrect Altimeter settings	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
To maintain a high level of runway safety	Layer 1: Runway Excursion	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
	Layer 1: Runway Incursion (vehicle, aircraft or person)	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.
To continuously improve safety by assessing and mitigating the risks relating to Fire or Smoke on aircraft events.	Layer 1: Fire or smoke on aircraft	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. These are to be developed prior to commencement of operations and reviewed annually.

	SCF powerplant /. Non-powerplant	 Threats related to ageing and high utilisation aircraft are identified and mitigated. Monitor common failures of component serviceability and operational lifetime
To continuously improve safety awareness among the GA community and encourage safety reporting of MOR's.	Enhance the MOR reporting knowledge among users of GA	 Increase awareness among general aviation personnel about the importance of reporting MOR's. Enhance safety promotion among general aviation users.
To ensure that safety awareness and root-cause of latent/repetitive issues are addressed in an effective manner.	Root-cause analysis following an MOR event	 Enhance the Root Cause Analysis, causal factors identification and mitigation measures for reportable events.

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U	Unmanned Aircraft Systems (UAS)			
	Safety Objective	SPI	SPT	
	To continuously improve safety by assessing and mitigating the risks in relation to UAS activities.	Risk assessment depending on type of operation	 Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends. 	
-	To ensure the safe operation of an UAS in local airspace.	Flying into No-Fly Zones/Restricted areas	 No-Fly Zones/Restricted areas of operation are identified. 	
	To ensure that Malta caters for the UAS categories and have a database of UAS models registered with TM-CAD.	Control of UAS inventory	 All UAS in operation are registered as required by regional and/or national legislation 	



Airworthiness and Maintenance Organisations		
Safety Objective	SPI	SPT
Continuous development of safety performance including the implementation of an SMS.	Performance of the organisation's SMS	Review of the organisation's SMS for effective implementation, including correct identification of threats and risks, and implementation of required actions.
To ensure that safety threats are identified and addressed in an effective manner.	Identification of occurrences related to the maintenance organisation's operations.	 Identify shortcomings in maintenance activities at a level that may put aviation safety at risk. Threats are to be identified and a risk assessment is carried out as part of their operation. Development of own Safety Objectives, SPI's, SPT's with a reduction in trends and reviewed annually.
To ensure the safe installation of correct aircraft parts during maintenance.	Layer 2: Identification of correct aircraft parts delivery before installation	 Threats are to be identified and a risk assessment is carried out as part of their operation.
To ensure the safe maintenance release and related airworthiness documentation.	Layer 2: Airworthiness documentation managements	 Threats are to be identified and a risk assessment is carried out as part of their operation.

To ensure	safe Parking / Storage / Return to	Layer 2: Contamination of the air data system/pitot static probes	 Assess SIB's issued by EASA (as revised) and
service of a	iircraft		adopt recommendations (ref: SIB 2020-14). Identify effective mitigation measures.

Appendix II – List of actions in this publication

SPAS in Malta Reference	EPAS Reference	EPAS Title	
SYS.MST.001	MST.0001	Member States to give priority to the work on SSP	
SYS.MST.002	MST.0002	Promotion of SMS	
SYS.MST.026	MST.0026	SMS assessment	
SYS.MST.027	MST.0027	Develop Just Culture in GA	
SYS.MST.028	MST.0028	Member States to establish and maintain a SPAS	
SYS.MST.028-1	MST.0028	Member States to establish and maintain a SPAS	
SYS.MST.032	MST.0032	Oversight capabilities/focus areas	
SYS.MST.033	MST.0033	Sharing of best practices for language proficiency requirements	
SYS.MST.035	MST.0035	Oversight capabilities/focus area: fraud cases in Part-147	
SYS.MST.036	MST.0036	PPL/LAPL learning objectives	
SYS.MST.037	MST.0037	Human Factors Competence for Regulator Staff	
SYS.CAD.071	SPT.071, RMT.0720	(EPAS 2019-2023): Strategy for cybersecurity in aviation (EPAS 2019-2023): Cybersecurity risks	
OPS.MST.024	MST.0024	Loss of separation between civil and military aircraft	
OPS.MST.030	MST.0030	Implementation of SESAR solutions aiming to reduce the risk of MAC en-route and in terminal manoeuvring areas	
OPS.MST.003	MST.0003	Member States should maintain a regular dialogue with their national aircraft operators on FDM programmes	
OPS.MST.019	MST.0019	Better understanding of operators' governance structure	
OPS.MST.034	MST.0034	Oversight capabilities/focus area: flight time specification schemes	
ROT.MST.015	MST.0015	Helicopter Safety events	
ROT.MST.031	MST.0031	Implementation of SESAR solutions aiming to facilitate safe instrument flight rules operations	
GA.MST.025	MST.0025	Improvement in the dissemination of safety messages	
GA.MST.027	MST.0027	Promotion of safety culture in GA	
ADR.MST.029	MST.0029	Implementation of SESAR runway safety solutions	
CAD.MST.004	MST.004	EPAS 2018-2022: Include loss of control in flight in national SSP	
CAD.MST.007	MST.007	EPAS 2018-2022: Include runway excursions in national SSP	
CAD.MST.014	MST.014	EPAS 2018-2022: Include runway incursions in national SSP	
CAD.MST.010	MST.010	EPAS 2018-2022: Include MACs in national SSP	
CAD.TM.001		Include management of Fatigue risks in national SSP	
CAD.MST.018	MST.018	EPAS 2018-2022: Include ground safety in national SSP	
CAD.MST.005	MST.005	EPAS 2018-2022: Include fire, smoke and fumes in national SSP	
CAD.MST.006	MST.006	EPAS 2018-2022: Include CFIT in national SSP	
CAD.TM.002		Include management of Laser Attacks in national SSP	

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CAD.TM.003	 Include management of Firework threats in national SSP
CAD.TM.004	 Safety promotion of Unmanned Aircraft Systems

SPAS in Malta Reference	EPAS Reference	EPAS Title
NAT.ACC.1		Number of aviation accidents (CAT)
NAT.ACC.2		Number of aviation accidents (GA)
NAT.FAC.1		Number of fatal aviation accidents (CAT)
NAT.FAC.2		Number of fatal aviation accidents (GA)
NAT.SER.1		Number of aviation serious incidents (CAT)
NAT.SER.2		Number of aviation serious incidents (GA)
NAT.RE.1		Runway Excursions
NAT.RI.1		Runway Incursions
NAT.MAC.1		Near misses and Mid-air collisions
NAT.CFIT.1		Controlled flight into or towards terrain
NAT.LOCI.1		Loss of control in flight
NAT.GCOL.1		Ground Collision
NAT.RAMP.1		Ground Handling operations
NAT.UAS.1		Unmanned Aircraft Systems (UAS)



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