



EASA
European Aviation Safety Agency

THE EUROPEAN PLAN FOR AVIATION SAFETY

EPAS 2019-2023



European Plan for Aviation Safety (EPAS) 2019-2023
including the Rulemaking and Safety Promotion Programmes

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Volume I



1 Executive Summary

The European Plan for Aviation Safety (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 environmental friendly implementation of new business models and new technologies.

EPAS is consistent with the goals and objectives of the Global Aviation Safety Plan (GASP) to enhance the level of safety in aviation and to support MSs in fostering mature safety management capabilities.

This EPAS edition captures the GASP goals under a new vision:

‘achieve constant safety improvement within a growing aviation industry’

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. In the field of air traffic management (ATM), the performance ambitions adopted with the ATM Master Plan (ATM MP)¹ reflect this overall objective.

The 2019-2023 EPAS edition integrates safety information from various sources, such as the Annual Safety Review (ASR), the Standardisation Annual Report (SAR), and the ATM MP, which is the European plan implementing the Global Air Navigation Plan (GANP). The objective is to obtain an overarching, consolidated aviation safety picture at European level, supporting the prioritisation of safety actions. More specifically, as safety is the highest priority for the implementation of the European ATM MP, this EPAS edition embraces European actions stemming from the ATM MP. It thus establishes an initial alignment with the ATM MP.

This EPAS edition reflects the new priorities agreed for the implementation of the new Basic Regulation (NBR), which entered into force on 11 September 2018. The related implementing rules will be aligned accordingly over the following years. The precise scope as well as the near-term priorities for 2019-2021 were agreed at the June 2018 EASA Management Board (MB) meeting, on the basis of a roadmap defining on the one hand how the work ahead to adapt to the NBR will be addressed and on the other hand setting related priorities for EASA rulemaking. While certain NBR provisions were already considered under the 2018-2022 EPAS edition, the NBR prioritisation has a major impact on this EPAS edition.

As an integral part of the NBR roadmap, EASA will provide MSs with targeted support in order to complement the Standardisation activities and to reinforce the common understanding and implementation of the European aviation safety regulations, thus enabling a robust and harmonised European aviation system.

¹ The ATM Master Plan (<https://www.atmmasterplan.eu>) is developed by the Single European Sky ATM Research (SESAR) Joint Undertaking (SJU) and is adopted by the SJU governing bodies. It provides an integrated view of the European ATM system outlining the essential operational and technological changes required to deliver the SESAR contributions to the Single European Sky performance objectives.



The 2019-2023 EPAS edition comprises two distinct volumes:

- **Volume I** provides the executive summary as well as an introduction, describes the strategy and includes the key indicators. It consists of Chapters 1 to 4.
- **Volume II** contains the detailed list of EPAS actions. It consists of Chapters 5 to 8, dedicated to the four drivers ‘safety’, ‘environment’, ‘efficiency/proportionality’ and ‘level playing field’.

Strategic priorities are described in Section **3.1**. The strategic priorities identified in the previous edition have been further refined and now specifically consider the *safe integration of new technologies and concepts*. As a result, all items previously included under ‘emerging issues’ are now addressed as part of this new strategic priority. A better link between EPAS and the EASA Standardisation process is presented in Section **3.2 Strategic enablers**. This section includes also a new enabler, *safety promotion* and presents the first lines of a new strategic approach to communicate with the aviation community.

Chapter 4 ‘Performance’ now includes former Chapter 4 ‘Key indicators’, as well as a proposal for a set of performance indicators to support the monitoring of EPAS implementation and effectiveness of actions so that safety achievements become more tangible. These safety performance indicators (SPIs) do not override those established under the Single European Sky (SES) ATM Performance Scheme. The ASR is the document where the new indicators will be reported in the future.



2 Introduction

2.1 The Global Aviation Safety Plan (GASP)

EPAS considers the objectives and priorities of the GASP to enhance the level of safety in aviation and to better prepare the MSs for the Universal Safety Oversight Audit Programme (USOAP) audits of their State Safety Portfolios (SSPs). The International Civil Aviation Organization (ICAO), based on USOAP audit results, identified that the States' inability to effectively oversee aviation operations remains a global safety concern. Thus, the GASP objectives call for States to put in place robust and sustainable safety oversight systems that should progressively evolve into more sophisticated means of managing safety. These objectives are aligned with ICAO Standards and Recommended Practices (SARPs) for the implementation of SSP by States and safety management systems (SMS) by service providers, and are addressed in EPAS in Section **5.1.1. Safety management**.

In addition to the GASP objectives, ICAO has identified high-risk accident categories (global priorities). These categories were initially determined based on an analysis of accident data, for scheduled commercial air transport (CAT) operations, covering the period 2006-2011. Feedback from the Regional Aviation Safety Groups (RASGs) indicates that these priorities still applied during the development of the 2017-2019 GASP edition. The global priorities are addressed in the following Sections: **5.2.1. Aircraft upset in flight (LOC-I)**, **5.2.2. Runway safety** and **5.2.6. Terrain collision**.

Since 2017 the ICAO Regional Office for the EUR/NAT region and EASA have been working together to develop a Regional Aviation Safety Plan (RASP) based on EPAS, thus allowing all States that are part of the EUR/NAT region to benefit from this approach. The aim of the RASP is to facilitate the achievement of the GASP goals at a regional level. The RASG-EUR is the main body to monitor the EUR RASP implementation and to collect feedback from stakeholders with the assistance of ICAO and EASA.

In May 2018, the draft EUR RASP was endorsed at the combined meeting of the coordination groups of the European Air Navigation Planning Group (EANPG) and RASG – EUR region (RASG-EUR) of ICAO. It is expected to be finally adopted by both groups in November 2018.

2.2 The ATM MP and the GANP

The **ATM MP** is the European planning tool for setting ATM priorities. The ATM MP ensures that the Single European Sky ATM Research (SESAR) 'Target Concept', which is aligned with the ICAO GANP, becomes a reality. The SESAR 'Target Concept' aims at achieving a high-performing ATM system by enabling airspace users to fly their optimum trajectories through effective sharing of information between air and ground. The ATM MP is evolving and is built in collaboration with and for the benefit of all ATM stakeholders. The ATM MP also provides stakeholders with a business view of what deployment will mean in terms of return on investment.

The alignment between EPAS and the ATM MP requires two actions. Firstly, that the ATM MP identifies solutions that can mitigate related safety risks identified by the European aviation safety system, and secondly that EPAS makes references to those solutions from the ATM MP that are actually mitigating those identified safety risks.



This alignment is now ensured as follows²:

- Volume I is in line with the ATM MP Level 1 (Executive View), Edition 2019; and
- Volume II is aligned with the ATM MP Level 3, Edition 2018, and includes references to those existing solutions in the ATM MP that aim to mitigate existing safety risks.

Future versions of both documents will mature in line with this alignment concept. For future editions, it is also envisaged to evolve to further align in terms of environment and interoperability of ATM systems.

The **GANP** represents a rolling, 15-year strategic methodology which leverages existing technologies and anticipates future developments based on State/industry agreed operational objectives. It offers a long-term vision that will assist ICAO, States and industry to ensure continuity and harmonisation among their modernisation programmes.

EASA is the body responsible for the SES safety pillar. Safety is one of the key performance indicators (KPIs) within the SES ATM Performance Scheme, and the ATM MP contributes to achieving the ambitions within the SES ATM Performance Scheme. EPAS actions and ATM MP solutions should be aligned where possible and the changes made in this EPAS edition constitute an important step towards such alignment. Such changes materialise through the inclusion of new actions for MSs and the referencing of specific research projects stemming from SESAR.

2.3 How EPAS is developed

2.3.1 The programming cycle

EPAS covers a five-year time frame. In line with NBR Article 6(1), EPAS is updated on a yearly basis. Hence, EPAS is developed as a rolling five-year plan.

EPAS is developed in close cooperation with stakeholders, drawing increasingly from an evidence-based approach. There are two distinct programming phases, each with a dedicated stakeholder consultation.

- During the strategic phase, the strategic priorities developed for the previous programming cycle (Chapter 3) are aligned with EASA's Single Planning Document (SPD). They are subsequently discussed with the EASA Advisory Bodies (ABs).
- Based on these strategic priorities, a draft EPAS is then developed and provided to the ABs for detailed comments.

Following the AB consultation, the final draft EPAS is consolidated. Following its formal approval by the EASA Management Board (MB), it is published on the EASA website³.

The EASA ABs were formally consulted on the 2019-2023 EPAS edition from 26 June to 7 September 2018. By the end of the commenting period, 382 comments were received, out of which 139 were minor and 243 were substantial. Feedback was provided to the ABs on the outcome of the

² The correspondence between this edition of EPAS and the ATM MP actions is labelled in each applicable EPAS action in Volume II.

³ <https://www.easa.europa.eu/easa-and-you/safety-management/european-plan-aviation-safety>



consultation in the form of a comment-response document, provided together with a summary of the AB comments.

2.3.2 The safety risk management process

The safety actions in EPAS are developed through the European safety risk management (SRM) process, which consists of five steps as shown below:



Figure 1. European SRM process

— Identification of safety issues

This is the first step in the SRM process. It is performed through analysis of occurrence data and supporting information from the Collaborative Analysis Groups (CAGs). The resulting candidate safety issues are formally captured by EASA and are then subject to a preliminary safety assessment (PIA). This assessment then informs the decision on whether a candidate safety issue should be included formally within the relevant safety risk portfolio or be subject to other actions. Advice is taken from the Network of Analysts (NoAs) and CAGs. Through MS experts participating in these groups, MSs can provide inputs to the SRM process based on the risk information they have access to at State level; in particular, where it is considered that a safety issue identified at State level is also relevant at the European level. The outputs of this step are the domain safety risk portfolios. Within the portfolios, both the key risk areas and safety issues are prioritised.

— Assessment of safety issues

Once a safety issue is identified and captured within the safety risk portfolio, it is subject to a formal safety assessment. These assessments are prioritised within the portfolio. The assessment process is led by EASA and is supported by the NoAs and the CAGs. In addition, group members are encouraged to participate in the assessment itself. This external support is vital to achieving the best possible results. The result of the assessment is the production of scenario-based bow tie models that help to identify weak controls for which potential actions can be identified. This forms the safety issue assessment (SIA), which provides potential actions for EPAS. SIA is followed by PIA, which assesses the wider implications and benefits of different options and makes recommendations on the actions to be implemented in EPAS.



— **Definition and programming of safety actions**

Using the combined SIA/PIA process, formal EPAS action proposals are then made. During the established consultation process, ABs are expected to provide their views on the strategic priorities and individual actions. Once discussed and agreed upon, the actions are then included in the next EPAS edition.

— **Implementation and follow up**

The next step in the process involves the implementation and follow-up of the actions that have been included in EPAS. There is a number of different types of action within EPAS (refer to Section 2.4). Section 2.5 describes how EPAS is monitored.

— **Safety performance measurement**

The final stage in the process is the measurement of safety performance. This serves two purposes, firstly to monitor the changes that have resulted from the implementation of safety actions, and secondly, it serves to monitor the aviation system so that new safety issues can be identified. To ensure that there is a systematic approach to the work in this step of the SRM process, a safety performance framework has been developed that identifies different tiers of outcome-based SPIs. Tier 1 transversally monitors all the domains and provides the overview of the performance in each domain. Tier 2 then covers the key risk areas at domain level, whilst Tier 2+ monitors the safety issues. Section 4.2 provides an overview of outcome-based SPIs and also proposes a number of system- and process-based SPIs.

The ASR is the annual review of the safety performance framework. It identifies safety trends and highlights priority domains, key risk areas and safety issues. From this step, the SRM process begins again.

Evaluation is another tool to measure performance whose intent is to conclude whether the existing regulations are delivering the results they were designed for and in which areas improvements are needed. Additional information on evaluations is provided in Section 2.4.

2.3.3 How to submit a new proposal to be included in EPAS

A new proposal, such as a new issue or a proposal for a new action to be included in EPAS can be submitted at any moment in the programming cycle. For this purpose, a 'Candidate issue identification form'⁴ has been created. This form replaces the old Rulemaking Proposal Form and is meant to encompass a larger range of proposals for actions, including proposals for new rulemaking tasks/activities as well as the identification of new issues in the EPAS areas of safety, environmental protection, level playing field or efficiency/proportionality.

An initial review of the received candidate issue identification forms is carried out in order to identify the type of proposal. While the safety-related proposals are dealt with through the European SRM process, the non-safety-related proposals are subject to an initial review carried out by the operational Directorates (Flight Standards and Certification Directorates). The core data on the candidate issues and the outcome of the proposals is recorded in a 'candidate issue register'. Accepted proposals are included in EPAS after they have been carefully assessed.

⁴ <https://www.easa.europa.eu/rulemaking-proposal-candidate-issue-identification-form>



2.4 How EPAS is structured

The 2019-2023 EPAS edition comprises two distinct volumes:

- **Volume I** provides the executive summary as well as an introduction, describes the strategy and includes the key indicators. It consists of Chapters 1 to 4.
- **Volume II** contains the detailed list of EPAS actions. It consists of Chapters 5 to 8, dedicated to the four drivers 'safety', 'environment', 'efficiency/proportionality' and 'level playing field'.

Volume I

Volume I provides an executive summary with the main highlights of each edition. This is followed by an introductory chapter where the link with other planning documents at European and global level is explained. Chapter 2 also explains the structure of the document, how actions are presented as well as how new proposals to be included in EPAS can be submitted.

The structure of Chapter 3 'Strategy' is revised in this edition.

Section 3.1 'Strategic Priorities' now addresses the following priorities:

- 3.1.1 Systemic safety
- 3.1.2 Operational safety
- 3.1.3 Safe integration of new technologies and concepts
- 3.1.4 Environment

The new Section 3.1.3 addresses the need to facilitate the safe implementation of emerging technologies and innovation.

Section 3.2 'Strategic enablers' now includes two new enablers:

- 3.2.2 Safety promotion
- 3.2.4 Digitalisation

The text of the existing sections has been revised to reflect the latest developments.

Moreover, two new Sections are included in Chapter 3 as follows:

- 3.3 'Better regulation'
- 3.4 'New Basic Regulation'

The strategic priorities included in the previous EPAS edition under Section 3.1.4 'Efficiency' and Section 3.1.5 'Level playing field' are reallocated on the basis of the new Chapter 3 structure.

Volume II

The list of EPAS actions in Volume II is structured around four main drivers, which correspond to different chapters. The drivers are:

- **Safety (Chapter 5):** the actions in this category are driven by the need to increase or maintain the current level of safety in the aviation sector.



- **Environment (Chapter 6):** the actions in this category are driven by the need to improve the current environmental protection in the aviation sector, while striving to ensure a level playing field globally.
- **Efficiency/proportionality (Chapter 7):** the actions in this category are primarily driven by the need to ensure that rules are cost-effective in achieving their objective, as well as proportionate to the risks identified. Having included an action in this category by no means signals that there are no related safety objectives; however, the effects on efficiency and proportionality prevail over those on safety.
- **Level playing field (Chapter 8):** the actions in this category are mainly driven by the need to ensure that all players in a certain segment of the aviation market can benefit from the same set of rules, thereby promoting innovation, supporting fair competition and ensuring free movement of persons and services. This is particularly important for technological or business advancements where common ‘rules of the game’ need to be defined for all actors. ‘Level playing field’ may either relate to ensuring standardisation within EASA MSs or address the need to harmonise with the rules of main EASA counterparts, such as the Federal Aviation Administration (FAA) or the Transport Canada Civil Aviation (TCCA), in order to ensure fair competition or facilitate the free movement of goods, persons and services. Actions in this category will directly contribute to maintaining or even increasing the current level of safety.

These four drivers should be understood as *main* drivers. A number of actions could well fall under several of these drivers, but to avoid duplication they are included under the most relevant one.

Chapters 5 to 8 are further organised in ‘safety issue categories’ and ‘action areas’. Each action area shows the issue, the objective and the related actions. An action area may contain several actions and types of tasks: rulemaking task (RMT), safety promotion task (SPT), focused attention topic (FOT), evaluation task (EVT), as well as research actions (RES⁵). These chapters also include MSs tasks ‘MSTs’.

RMTs lead to new or amended regulatory material (implementing rules, AMC or GM), but the related work is usually not limited to rules drafting. Depending on the scope and issues addressed, an RM project may also include supporting activities, such as the organisation of conferences, workshops, roadshows, the creation of frequently asked questions (FAQs), etc. An RMT may also be supported by a dedicated SPT managed in accordance with EASA’s Safety Promotion Strategy (see Section 3.2.2), or by a research task.

MSTs tasks are EPAS actions based on safety priorities identified in collaboration with MSs and owned by them. Most of them are continuous actions to ensure continuous monitoring of the underlying safety risks and regular reporting on progress of those MS actions. Results are discussed with MSs during the regular Safety Management Technical Body (SM TeB) meetings. Different implementation approaches, difficulties or best practices are brought up and discussed to enhance the collaboration amongst MSs and between MSs and EASA.

⁵ The list of research tasks includes only the ones which are covered by a financing source. Other research needs, not covered in this list, can be found in the EASA research agenda (<https://www.easa.europa.eu/easa-and-you/safety-management/research>).



In **Section 5.2** 'CAT by aeroplanes', a 'miscellaneous' category is created to gather the actions that are too broad to be classified under only one category because they impact multiple aviation domains while involving different types of actions.

Chapter 6 (Environment) is divided in two main environmental topics: climate change and aircraft noise.

Chapters 7 (Efficiency/proportionality) and **8** (Level playing field) are grouped as per the main stakeholders affected by the actions.

Evaluations

In Chapter 7, Section 7.2 includes all EVT's that are planned for the coming years. These projects intend to conclude whether the existing regulations are delivering the results they were designed for and in which areas improvements are still needed.

Two main criteria are taken into account in order to decide on future evaluations conducted by EASA. The first one is whether there is an obligation in the existing regulation to undertake an evaluation. The second criterion is whether the rules are controversial, complex, potentially sensitive, generating safety risks and/or regulatory inefficiencies. Guideline questions were elaborated to assess the second criterion:

- Which are the rules that generate requests for exemptions (NBR Articles 70 and 71 (Article 14 in the previous Basic Regulation), requests for alternative means of compliance (AltMoC), many queries by stakeholders?
- Which are the rules identified by the stakeholders as creating undue administrative burden, regulatory inefficiencies, or imposing costs that exceed benefits?
- Which are the permanently open findings from the Standardisation continuous monitoring activities, standardisation actions that request/recommend evaluation on this subject?
- Which are the rules that create a serious inconsistency or are not coherent with other related rules?
- Which are the rules that are outdated, unnecessary or ineffective that request/recommend evaluation on the subject?



How individual actions are presented

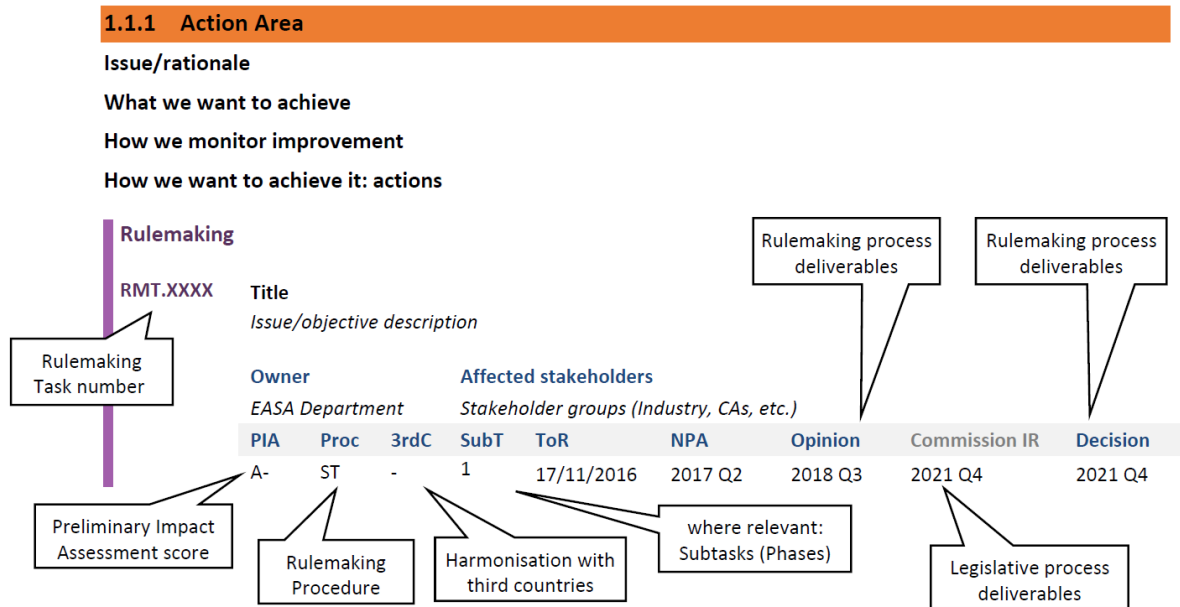


Figure 2: Overview of the conventions used in this plan

For each EPAS action, the following information is provided as a minimum:

- the objective and main timelines (task schedule); and
- the rationale as well as basic information related to responsibility for the action and affected stakeholders.

The results from PIAs are presented, where available, in the form of a score consisting in a letter and a numeric value. The letters indicate strategic ('A'), standard ('B') or regular update ('C') tasks. The numeric value represents the result of the cost-effectiveness indicator that takes into account the level of potential benefits divided by the level of associated implementation costs of a specific action (for example, if the benefit level is equal to 3 and the cost level equal to 1, the final PIA indicator would be 3). A value higher than 1 indicates that the action is estimated to be cost-efficient. Please note that 'n/a' for a PIA score is attributed when the task has been previously justified by a former indicator (i.e. Pre-RIA score), which is no longer used.

Further information provided only for RMTs indicates whether they are harmonised with third countries (field '3rdC') in order to alleviate differences between EASA and other aviation authorities, while ensuring an equivalent level of safety. RMTs that follow a special rulemaking procedure (EASA Management Board Decision No 18/2015 'Rulemaking Procedure', Article 15 'Direct publication' or Article 16 'Accelerated procedure') are indicated in the field for the procedure type called 'Proc'. Accelerated procedure is identified as 'AP', direct publication as 'DP', and standard procedure as 'ST'. For all documents already delivered, the document reference and publication date is provided (date format DD/MM/YYYY). For tasks not yet delivered, the planned date is given by quarter (YYYY QX).

As a general rule the planning indicates two years from the publication of an opinion to the publication of the related decision by the EC. In some cases this is adjusted to reflect specific requirements.

Tasks that have been newly added to the plan are identified by using red colour in the **action number**.



Appendices

EPAS is complemented by a number of appendices with additional information on action status and progress, the link between the EPAS and the EC strategic priorities and the EASA strategic plan respectively.

An overview of new, de-prioritised and deleted tasks is available in Appendix C.

Relevant EASA policies providing direction to specific EPAS actions are also included as appendices to EPAS.

Finally, Appendix H provides a full index of EPAS actions per type of action, for easy access.

2.5 How EPAS is monitored

Reporting on State actions (MSTs)

In previous years, the actions owned by MSs (MSTs) were monitored by means of an online survey. The survey was addressed to all EASA MSs, as well as non-EASA MSs applying EPAS, and initiated once EPAS was published. The survey sought States' feedback on the status of implementation of MST EPAS actions. The results were summarised in an implementation report⁶. EASA will discontinue the EPAS survey and the production of implementation reports by the end of 2018.

In 2019-2020, EASA will focus on providing implementation support to facilitate compliance with the new requirements of NBR Chapter II. States are required to develop a State Plan for Aviation Safety (SPAS), taking into consideration the actions they own in EPAS and providing justifications when such actions are not considered relevant to them.

SPAS will be the primary tool for MSs to report on action implementation. States are expected to provide an up-to-date SPAS at least annually or, where the SPAS is not updated annually, a report on the implementation of EPAS actions. EASA will make available an online platform for MSs to upload their SSP, SPAS and any other relevant material. The online platform is also intended to facilitate the exchange of information amongst States on EPAS and SSP implementation.

Reporting on other actions in EPAS (RMT, FOT, SPT, RES and EVT)

For the remaining actions, where EASA is in the lead, feedback on implementation is regularly provided during AB meetings. Most of the deliverables planned in EPAS are published on the EASA website (see [rulemaking process site](#), [safety promotion site](#), [research projects site](#) and [evaluation of rules site](#)).

⁶ Latest States' implementation report on EPAS 2017- 2021: <https://www.easa.europa.eu/document-library/general-publications/states-implementation-report-epas-2017-2021>



3 Strategy

In the 2017-2021 programming cycle, EASA introduced the notion of strategic priorities for EPAS. The strategic priorities were based on the [Commission's Aviation Strategy](#) and EASA's strategic plan (see Appendix D). The safety priorities are based on the European Safety Risk Portfolios published in the [ASR](#). The efficiency and level playing field priorities are based on stakeholder feedback. The environmental priorities are based on the [European Aviation Environmental Report \(EAER\) 2016](#) and are aligned with the 2019 issue (under preparation) of said report.

EASA consulted these priorities with stakeholders from March to May 2018. The comments received led to a number of adjustments and improvements, notably the identification of priorities to be addressed first. In the detailed Chapters 5-8 of this document, the actions linked to strategic priorities are identified with an 'A' in the PIA score field.

In line with the total system approach to aviation safety management, EPAS is evolving to ensure better integration of relevant sources and key inputs in terms of safety information, such as the ASR, the SAR, and the ATM MP. The objective is to obtain an overarching, consolidated aviation safety picture at European level, supporting strategic planning and prioritisation of safety actions.

How priorities are established

The rulemaking activities in this EPAS edition have been prioritised to take into consideration the need to make resources available to tackle NBR responsibilities (not only related to rulemaking), as explicitly requested by the EASA MB in April 2018. The NBR roadmap (see Section 3.4) clearly identifies the areas where work will need to start within the next three years, therefore not all new responsibilities will be tackled immediately. The prioritisation takes into account the compromise to continue working towards mitigating major safety risks across domains and addressing the strategic priorities which are described in this chapter and have been agreed with industry and States.

In order to revert back to a more manageable rulemaking throughput in the near future, the EC and EASA have also agreed to put a temporary hold on the publication of further EASA Opinions initially planned in 2018. In parallel, the EC and EASA set priorities for the Opinions to be published in 2019, taking due account of the work already performed and Opinions already delivered to the EC, with due consideration of the calendar of the EASA Committee meetings in 2019.

A number of already programmed activities have therefore been postponed. The decision to postpone tasks has been made following a careful assessment of the impact on stakeholders. It reflects a realistic evaluation of the capacities both at EASA and EC level to process and finally adopt rulemaking deliverables, considering in particular the capacity of the EU Comitology process to 'absorb' the draft rules prepared by EASA.

This adjustment follows the below principles:

- **Certification specifications (CSs) and acceptable means of compliance & guidance material (AMC & GM)** do not impact MSs and Commission resources. In particular, CSs are needed by industry.
- **Decisions (AMC and GM) that are pending the adoption of the IR** by the Commission have a low impact on EASA resources. They complement Opinions that are now being dealt with by the Commission. Those AMC and GM have already been drafted.



- For **new Opinions**, priority has been given to strategic tasks. Some non-strategic tasks have been postponed until after 2022.
- Opinions related to **regular/non-controversial updates** of the rules have been postponed until 2022, unless EASA resources are available and they can be processed by the EC quickly due to the non-controversial nature.
- **New rulemaking tasks** will not be started unless they relate to strategic priorities and are duly justified (e.g. urgent safety issues).

Chapters 5 to 8 contain the full list of tasks that are programmed for the next 5 years. **Appendix C** provides the overview of all tasks that have been de-prioritised.

3.1 Strategic priorities

3.1.1 Systemic safety

3.1.1.1 Improve safety by improving safety management

Despite the fact that the last years have clearly brought continued improvements in safety across every operational domain, the latest accidents and serious incidents underline the complex nature of aviation safety and the significance of addressing human factor aspects. Aviation authorities and organisations should anticipate new emerging threats and associated challenges by developing SRM principles. Those principles will be strengthened by SMS implementation supported by ICAO Annex 19 and Regulation (EU) No 376/2014 on occurrence reporting, follow-up and the protection of safety information.

EASA defined an SMS policy for the regulation of SMS in the different aviation domains. This policy is included in Appendix E.

Key actions:

- Support States in implementing State Safety Programmes (MST.001) and States Safety Plans (MST.028)
- Encourage international harmonisation of SMS implementation, and human factor principles (MST.002 and SPT.057)
- Ensure that national aviation authorities have the ability to evaluate and oversee the operator's management system (FOT.008)
- Incorporate safety management requirements in initial and continuing airworthiness (RMT.0251)

See Section **5.1.1**.

3.1.1.2 Human factors and competence of personnel

EASA monitors data relating to human performance and assesses feedback from stakeholders, through the Human Factors CAG (HF CAG) and through other regulatory and oversight activities. As the aviation system changes, it is imperative to ensure that human factors and the impact on human performance are taken into account, both at service provider and regulatory levels.



Human factors and human performance are terms that are sometimes used interchangeably. While both human factors and human performance examine the capabilities, limitations and tendencies of human beings, they have different emphases:

- Human factors (HF) – this term focusses on why human beings function in the way that they do. The term incorporates both mental and physical processes, and the interdependency between the two.
- Human performance (HP) – the output of human factors is HP. This term focuses on how people do the things that they do.

Note: Throughout Chapters 5 to 8, actions with a strong HF component are identified by adding ‘HF’ in the field ‘activity sector’.

The HF CAG prioritised the following safety issues for a more in-depth analysis to be performed throughout 2018. These issues are systemic safety issues, and the other CAGs address safety issues that also have HP elements⁷.

- **Senior management knowledge, competence, and commitment to HF/HP** — Unless senior management takes the lead in implementing HF, the culture does not permeate through the organisation, with consequences for safety and efficiency.
- **Human factors competence for regulatory staff** — Without HF competencies, regulators cannot adequately oversee HF implementation in the aviation industry.
- **Design and use of procedures** — It is imperative for procedures to be designed so that they are usable, but this is increasingly difficult in the context of a complex system.
- **Organisational and individual resilience** — Organisational and individual resilience are key factors in successfully managing safety, but there is little regulatory guidance on how to apply the concept.
- **Training effectiveness and competence** — There can be too large a gap between work as imagined and work as done, resulting in ineffective or negative training. Some changes to training regimes may exacerbate the problem.

The results of the in-depth analysis of the above issues may lead to the determination of additional actions for future EPAS editions.

As new technologies and new business models or operational concepts emerge on the market and the complexity of the system continues to increase, it is of key importance for aviation personnel to have the right competencies and adapt training methods to cope with new challenges. It is equally important for aviation personnel to take advantage of the opportunity presented by new technologies to enhance safety.

The safety actions related to aviation personnel are aimed at introducing competency-based training in all licences and ratings, updating fatigue requirements, and facilitating the availability of appropriate personnel in competent authorities (CAs). These actions will contribute to mitigating related safety issues, which play a role in improving safety across all aviation domains. Training and education are considered key enablers. The new EASA strategy for technical training takes this into

⁷ As a result, the HF CAG also provides expertise to assess HF-related safety issues identified by the other CAGs.



account, i.e. '[to] continuously improve the technical competence of Agency staff and manage the harmonisation of training standards for aviation authority staff within the EASA system'.

Key actions:

- Introduce evidence- and competency-based training into all licences and ratings (RMT.0599 and SPT.012);
- Review learning objectives and syllabi for commercial pilot licenses (RMT.0595);
- Improve the fidelity of flight simulators (RMT.0196);
- Support CAs with training and expertise to attract suitably qualified staff (FOT.003).

3.1.1.3 Impact of security on safety

— Cybersecurity

Citizens travelling by air are more and more exposed to cybersecurity threats. In order for the new generation of aircraft to have their systems connected to the ground in real time, ATM technologies require internet and wireless connections between the various ground centres and the aircraft. The multiplication of network connections and the surge in digitalisation of aviation systems increases the vulnerability of the whole system. It is essential that the aviation industry and authorities share knowledge and learn from experiences to ensure systems are secure from individuals/organisations with malicious intent.

EASA signed a Memorandum of Cooperation with the Computer Emergency Response Team (CERT-EU) of the EU Institutions on 10 February 2017. EASA and CERT-EU are cooperating in the establishment of a European Centre for Cyber Security in Aviation (ECCSA)⁸. The ECCSA's mission is to provide information and assistance to European aviation manufacturers, airlines, maintenance organisations, air navigation service providers (ANSPs), aerodromes (ADR), etc. in order to protect critical elements of the system such as aircraft, navigation and surveillance systems, datalinks, etc. The ECCSA will cover the full spectrum of aviation. In addition to the information-sharing initiatives intended to be implemented through the ECCSA, the strategy to address cybersecurity risks should be focused on research and studies, event investigation and response, knowledge and competence building, international cooperation and harmonisation and regulatory activities and development of industry standards.

Key actions:

- Develop and implement a strategy for cybersecurity in aviation (SPT.071);
- Implement a regulatory framework for cybersecurity covering all aviation domains (RMT.0720 and RES.012);
- Introduce new cybersecurity provisions in the certification specifications (RMT.0648).

⁸ <https://www.easa.europa.eu/eccsa>



— Conflict zones

Since the tragic downing of Malaysian Airlines flight MH17, there is a general consensus that States shall share their information about possible risks and threats in conflict zones. Numerous initiatives have been taken to inform the airlines about risks on their international flights.

At global level, ICAO launched in April 2015 a central repository where each State can notify on a voluntary basis its information about a particular risk in conflict zones.

An EU high-level task force was set up to define further actions to be taken at European level in order to provide common information on risks arising from conflict zones. The task force handed over its final report to Ms Violeta Bulc, European Commissioner for Transport, on 17 March 2016. It contains recommendations for various stakeholders and a proposal to set up a conflict zone alerting system at European Level, through cooperation between MSs, European institutions, EASA and other aviation stakeholders.

The objective of the alerting system is to join up available intelligence sources and conflict zone risk assessment capabilities in order to enable the publication of information and recommendations on conflict zone risks in a timely manner, for the benefit of all European MSs, operators and passengers. It complements national infrastructure mechanisms, when they exist, by adding, when possible, a European level common risk picture and corresponding recommendations.

EASA acts as coordinating entity for activities not falling directly under MSs or EC's responsibility and initiates the drafting, consultation and publication of Conflict Zone Information Bulletins⁹, in cases of both availability and unavailability of a common EU risk assessment.

Key action:

- Disseminate information to air operators in order to mitigate the risk associated with overflying conflict zones (SPT.078).

3.1.1.4 Data4Safety

Data4Safety (also known as D4S) is a data collection and analysis programme that aims at collecting and gathering all data that may support the management of safety risks at European level. This includes safety reports (or occurrences), flight data (i.e. data generated by the aircraft via the flight data recorders), surveillance data (air traffic data), weather data — these being only a few from a much longer list.

More specifically, the programme will allow to identify better where the risks are (safety issue identification), determine the nature of these risks (risk assessment), and verify whether the safety actions are delivering the needed level of safety (performance measurement). It aims to develop the capability of discovering vulnerabilities in the system across terabytes of data.

An initial proof of concept (PoC) phase has been launched with a limited number of partners to test the technical challenges as well as the governance structure of such a programme. After a year, a number of key-building blocks have been achieved, in particular:

⁹ <https://www.easa.europa.eu/easa-and-you/air-operations/information-on-conflict-zones>



- The partnership principles have been framed into a programme charter.
- The data protection rules have been agreed upon and captured into the rules and procedures document and in a data sharing and protection agreement template.
- The use cases for the PoC phase have been agreed upon and specified.

D4S is, in essence, a collaborative partnership programme that aims at inferring safety intelligence. This is done by organising a massive collection of safety data and, equally important, organising the analytical capacity amongst all European aviation safety system stakeholders. This will take the collaborative work with the industry at a scale never done before in Europe.

D4S will therefore directly respond to the GASP Objective 11A — 'Work with industry stakeholders to leverage best practices with safety information analysis.'

3.1.2 Operational safety

3.1.2.1 Address safety risks in CAT aeroplane operations and NCC business operations

During 2017, there were no fatal accidents involving European air operator certificate (AOC) holders performing CAT passenger/cargo. Likewise, no fatal accidents occurred in NCC business operations with aeroplanes having a maximum take-off weight above 5 700 kg. In this category, there were 15 non-fatal accidents; however, the number of non-fatal accidents was lower than the average of the previous 10-year period.

In 2017 the number of serious incidents in this category increased in comparison with the average of the previous 10-year period, with 99 serious incidents recorded in 2017 in comparison with the 10-year period average of 79,2.

This operational domain remains the greatest focus of the EASA safety activities. The CAGs and ABs will help EASA to learn more about the safety challenges faced by airlines and manufacturers.

The European SRM process identified the following as the most important risk areas for CAT aeroplane and NCC business operations:

- aircraft upset in flight (loss of control)

Aircraft upset or loss of control is the most common accident outcome for fatal accidents in CAT aeroplane operations. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or aircraft flight parameters, regardless of whether the flight crew realised the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections.

Key actions:

- Review and promote training provisions on recovery from upset scenarios (RMT.0196, RMT.0581 and SPT.012);
- MSs to address loss of control in flight by taking actions at national level and measuring their effectiveness (MST.028).

See Section **5.2.1**.



— runway excursions, runway incursions and collisions

Runway excursion covers materialised runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing. Runway excursions account for 81 high-risk occurrences recorded in the period 2013-2017 in CAT aeroplane and NCC business operations.

Runway incursion refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection. Their accident outcome, runway collisions, account for 28 high-risk occurrences recorded in the period 2013-2017. Despite the relatively low number, the risk of the reported occurrences was demonstrated to be very real.

Key actions:

- Require on-board technology to reduce runway excursions (RMT.0570);
- Improve aircraft performance in CAT operations (RMT.0296);
- Promote and implement the European Action Plan for the Prevention of Runway Incursions (EAPPRI) and Excursions (EAPPRE) – (RMT.0706);
- MSs to address runway safety by taking actions at national level and measuring their effectiveness (MST.028).

See Section 5.2.2.

3.1.2.2 Rotorcraft safety

The EASA Executive Committee reviewed European and worldwide rotorcraft safety data and decided to launch a strategic approach and to set an ambitious target to reduce the number of rotorcraft accidents and incidents.

As an initial step, EASA launched in mid-2018 an external task force, tasked to deliver a **Rotorcraft Safety Roadmap** focusing on safety and transversal issues that are affected by the different domains including training, operations, initial and continuing airworthiness, environment and innovation.

The focus of this roadmap is on traditional/conventional rotorcraft including General Aviation (GA) rotorcraft where the number of accidents is recognised to be greater. Drones, electrical vertical take-off and landing (VTOL) aircraft and urban air mobility vehicles are outside the scope of this activity.

The vision of the roadmap is to ‘achieve significant safety improvement for Rotorcraft with a growing and evolving aviation industry’. This roadmap will be the backbone of the rotorcraft-related actions in the future EPAS. In order to make the most impact, it will be necessary to focus the available resources on the most critical subjects. At the time of closure of EPAS, the roadmap has not been formally released; however, the main elements of the strategy were agreed upon and initial actions have started.

The following objectives have been defined in order to deliver the vision stated above:



— **Improve overall rotorcraft safety by 50 % within the next 10 years**

Most of the accidents can be attributed to operational causes and it is recognised that influencing behaviour in the wider community is a complex process where step changes are difficult to achieve in the short term. However, for accidents caused by technical failures, an ambitious target is set to reduce the number of accidents caused primarily by technical failures by one order of magnitude.

— **Make positive and visible changes to the rotorcraft safety trends within the next 5 years**

The aim of this objective is to drive the implementation of the quick-wins that are identified and to rapidly progress a number of safety improvements.

— **Develop performance-based and proportionate solutions that help maintain competitiveness, leadership and sustainability of European industry**

This objective also aims to support the development of new business models and encourage innovation.

The specific set of rotorcraft objectives align with the EASA Strategic Objectives (described in Appendix D), which have been used to derive the strategic priorities for EPAS. The details can be found in the EASA SPD (Chapter 5)¹⁰.

The following enablers were identified by the task force as ways to ‘incentivise’ safety and potentially positively impact all the different types of operations:

- Creating market incentives to push for safety/environmental protection;
- Gaining EU financial support for safety action implementation;
- Prioritising improvements in training and the availability of simulation;
- Achieving industry consensus on key solutions;
- Implementing continued aviation education (CAE);
- Establishing strategic safety partnerships, data and communication; and
- Reducing administrative burden and costs for operators.

The main elements of the roadmap have been presented in several fora, including the Rotorcraft Committee (R.COM). The feedback received has been integrated into the roadmap that will be formally delivered by the task force to EASA at the end of 2018. In 2019, the above subjects will be further investigated.

The new set of tasks for EPAS that have been identified include the following:

- **Helicopter training improvement initiative:** There is a wide consensus that better training is one key way to improve safety. EASA will promote a 15’ safety briefing during recurrent training and focus actions on instructors. EASA will additionally promote the development of simpler

¹⁰ SPD 2017-2020 is accessible here:

<http://www.easa.europa.eu/system/files/dfu/EASA%20MB%20Decision%2011-2016%20Annex%20SPD%202017-2020.pdf>



and less expensive simulators for light helicopters. Finally, EASA will develop a proposal (including a training need analysis) for an **innovative approach enabling the use of affordable training devices** and associated credit for crew licensing for rotorcraft GA types. Milestones include: *concept definition by end of 2018, implementation plan by June 2019. Decision to amend CS FSTD (RMT.0196) and Opinion (RMT.0678) for Aircrew by June 2020.*

- Assess whether the scope of RMT.0677 on modular **basic instrument rating** to simplify access to instrument flight rules (IFR) can be extended to private pilot licence (helicopter) (PPL(H)) and commercial pilot licence (helicopter) (CPL(H)).
- Work with original equipment manufacturers (OEMs) to set up a common design **safety benefit evaluation** in support of the safety rating scheme and engage with OEMs and NAAs to collect and analyse **utilisation data**.

Safety rating scheme: It is proposed to learn from the experience in other industries that have already put in place a safety rating classification such as the EuroNCAP for cars or SHARP for motorbike helmets. This mechanism could lead to safety enhancements both on the manufacturers and on the operators' side. This could be an effective way for manufacturers to identify improvement areas and focus on safety performance. In addition, it can be used as a valuable marketing tool that provides operators with detailed knowledge on the safety characteristics of rotorcraft. EASA will make an initial evaluation and establish a way forward.

Key actions:

- Improve the certification specifications and standards relating to the certification of rotorcraft hoists (RMT.0709);
- Improve specifications on the use of vibration health monitoring (VHM) systems to detect imminent failures of critical rotor and rotor drive components (RMT.0711);
- Improve mitigation of risks relating to restricted pilot vision (RMT.0127);
- Introduce requirements for rotorcraft terrain avoidance warning system (RMT.0708).

3.1.2.3 Address safety risks in GA in a proportionate and effective manner

In the last years, accidents involving recreational aeroplanes have led to an average of 92 fatalities per year in Europe (based on 2007-2016 figures, excluding fatal accidents involving microlight airplanes), which makes it one of the sectors of aviation with the highest yearly number of fatalities. Furthermore, in 2017, there were 34 accidents causing 62 fatalities in non-commercial operations with aeroplanes and 25 fatal accidents causing 27 fatalities in the domain of sailplane operations (the 2007-2016 average is 29 fatalities per year in Europe). These two areas present the highest numbers of fatal accidents in 2017. The GA roadmap is key to the EASA strategy in this domain.

Although it is difficult to precisely measure the evolution of safety performance in GA due to lack of consolidated exposure data (e.g. accumulated flight hours), it is reasonable to assume that more initiatives and efforts are needed to mitigate risks leading to these fatalities.

Therefore, EASA organised in 2016 a General Aviation Safety Workshop to share knowledge and agree on the safety actions that will contribute to the improvement of safety in this domain. A key element of discussion is the appropriate assessment of risks, taking into account the specificities of GA flying with different risk profile and minimal risk for uninvolved third parties. The following strategic safety



areas were identified during the workshop: preventing mid-air collisions (MACs), coping with weather, staying in control, and managing the flight.

Further to this workshop, actions were recorded in the EPAS 2017-2021 and several safety promotion and rulemaking activities performed including:

- Safety promotion task on airspace infringement (SPT.089), developed in cooperation with the Safety Promotion Network (SPN) of the MSs;
- [Sunny Swift comics](#), the first five issues dealing with fuel management (SPT.090), CO intoxication, airspace infringement and MAC (SPT.089), loss of control (SPT.090, SPT.089, SPT.086) and coping with weather (SPT.087);
- Creation of the 'Technology for Safety think tank' (T4S) (SPT.084);
- Basic instrument rating (NPA 2016-14), cooperation with EUROCONTROL to promote the results of RMT.0677 (SPT.088).

Moreover, to improve the dissemination of safety messages (MST.025), EASA introduced in 2018 the GA Community website and organised its Annual Safety Conference on 'Promoting Safety Together: a vision for the future of General Aviation'. Other dissemination actions include the GA roadmap roadshows and continued participation in AERO Friedrichshafen, the 'global show for General Aviation'.

EASA, in cooperation with its ABs, is launching the GA Roadmap 2.0. It will concentrate on making GA safer and cheaper thanks to innovation and technology.

Key actions:

- Improve the dissemination of safety promotion and training material by authorities, associations, flying clubs, insurance companies targeting flight instructors and/or pilots (SPT.092);
- Encourage the installation and use of modern technology (SPT.084);
- Address airspace infringement risks through an EU-wide promotion campaign (RES.021).

3.1.3 Safe integration of new technologies and concepts

Establishing and maintaining a high uniform level of civil aviation safety remains the highest objective. EASA will in the future allow for a more integrated approach to the introduction of new technologies and concepts. To continue to maintain the highest possible safety standards in the future to come, such integrated approach considering the total aviation system will be essential.

In the ATM domain, SESAR is the research programme for the modernisation of the European ATM systems to update them in the light of the expected traffic increase by 2035. The SESAR programme aims to improve the performance of the ATM systems so as to enable traffic increase in a safe and efficient manner.

3.1.3.1 Facilitate European emerging technologies and innovations

This strategic priority guides the introduction of new technologies, innovative solutions and operating concepts to support their safe integration into the aviation system.



Many of the technologies and innovations emerging in the aviation industry bear significant potential to further improve the level of safety, e.g. by improving the collection and analysis of operational data, better condition monitoring of aircraft for the purpose of preventive maintenance, improved accessibility and better quality of meteorological information, etc.

Digitalisation and automation are rapidly increasing in aviation systems. While this has resulted overall in significantly improved safety, the trend towards increasing automation requires a renewed safety focus on the interactions between humans and automation.

The next generation of automation will be artificial intelligence. This domain, no longer the province of science fiction, could well be the next ‘game-changer’ for aviation¹¹. In the near future, new EPAS actions will be required to maximise related safety benefits, while mitigating any threats induced by the implementation of these new technologies.

EASA is also very active in developing an Artificial Intelligence (AI) Roadmap to be released by mid-2019. This AI Roadmap aims at identifying the opportunities, challenges and impact of this emerging technology on the various domains under EASA’s mandate and to propose a corresponding action plan. It will allow EASA to be prepared in accompanying industrial strategic changes and developments in the coming years. The introduction of a ‘learning assurance’ concept to complement the existing ‘development assurance’ processes will also be assessed in due time.

In parallel, EASA is developing new tools such as innovation partnership contracts with industry stakeholders also with the objective of easing the introduction of new technologies and better preparing the certification of future programmes with significantly increased automation, ultimately aiming at full autonomy.

Research on new technological advances will play an important role to prepare for their safe integration into the aviation system. An objective of EASA’s research strategy¹² is the upstream support to industry’s, research centres’ and universities’ research activities by contributing a regulator’s views and advice to ensure that the regulatory framework is not an impediment to innovation. This assures safety, security and environmental protection of novel technologies and simultaneously assists to reduce ‘time-to-market’ of new products and new kinds of operation.

At the same time, new types of aircraft or propulsion systems are emerging and their novel features may not be addressed in existing certification specifications.

For example:

— Open rotor engine technology

The related activity will identify and recommend harmonised draft requirements and advisory material for CS-E, 14 CFR Part 33, CS-25 and 14 CFR Part 25 to address the novel features inherent in open rotor engine designs and their integration with the aircraft.

— Electric propulsion for aircraft

¹¹ See AVIATION SAFETY – Challenges and ways forward for a safe future, Research & Innovation Projects for Policy, EC – Directorate General for Research and Innovation, January 2018 <https://publications.europa.eu/en/publication-detail/-/publication/b4690ade-3169-11e8-b5fe-01aa75ed71a1/language-en/format-PDF/source-75248795>

¹² <https://www.easa.europa.eu/easa-and-you/safety-management/research>



The market potential is considered significant with related effects on wealth and job creation. Environmental benefits for Europe are also potentially significant both in terms of gaseous emissions and noise.

3.1.3.2 System integration — system safety

To cope with the ever-growing complexity of the aviation system, EASA's work will increasingly focus on managing interfaces and interdependencies between aviation system 'components' with due consideration of the total aviation system. This focus is expected to increase the efficiency in certification and oversight processes, as well as more generally in risk management.

For example, for RMT.0379 'All-weather operations', it is essential to consider the interactions among the different system components involved (aircraft, aerodromes, operational procedures, involved personnel, etc.). Therefore, EASA applied the systems-theoretic process analysis (STPA) methodology developed by the Massachusetts Institute of Technology. The adopted STPA methodology represents a hazard analysis technique based on systems thinking and a model of accident causation based on systems theory rather than reliability theory.

Engine/aircraft certification

In 2016 EASA, together with the FAA, initiated a dedicated Engine/Aircraft Certification Working Group (EACWG) to streamline the overall certification process by improving engine/aircraft interface certification and standard-setting practices. The EACWG aims at reducing unnecessary burden in the certification process and better address the interdependencies between aircraft and engine certification programmes of transport category aircraft with turbine engines. This work will also lead to better identifying and addressing gaps and overlaps when updating related CSs.

An effective and efficient certification process, combined with streamlined certification requirements and standards will have clear safety benefits.

The EACWG identified a total of 29 recommendations, in the following areas:

- conducting a certification programme;
- understanding and developing the regulatory requirements;
- understanding if the engine/airframe certification interface is working effectively;
- addressing specific rule and policy gaps.

A number of recommendations were made beyond the scope of the EACWG, such as reviewing the operating regulations, to determine whether discrepancies exist between certification and operational regulations.

The list of recommendations is included as Appendix D in the final report issued by the EACWG in June 2017¹³.

In September 2018 the Certification Management Team (CMT), following a request from EASA and the FAA, approved the creation of the Engine Aircraft Certification Tracking Board (EACTB). The EACTB will be tasked with tracking the implementation of the EACWG recommendations, as well as monitoring and reporting any new issue identified either during or outside projects; for instance,

¹³ https://www.easa.europa.eu/sites/default/files/dfu/EACWG_final_report_June_2017.pdf



associated with new technologies. CMT approved the EACTB request with follow on actions/comments. The EACTB will be framed under the Certification Authorities for Bilateral Agreements & Certification Procedures (CABA).

3.1.3.3 Ensure the safe operation of drones

The number of drones within the EU has multiplied over the last two years. Available data shows the increase of drones coming closer to manned aviation (both aeroplanes and helicopters), thereby confirming the need to mitigate the associated risk — 10 non-fatal accidents were included in the European Central Repository in 2017 and the number of high-risk incidents reported significantly increased over the last 5 years.

The introduction of new airspace users should not degrade the level of safety. Rules should ensure that all risks are identified and appropriately mitigated, taking into account the opportunity provided by new technologies or, when they are not mature enough, identifying appropriate operational limitations.

Furthermore, the lack of harmonised rules at EU level makes unmanned aircraft system (UAS) operations dependent on an individual authorisation by every MS, which is a burdensome administrative process that stifles business development and innovation. In order to remove restrictions on UAS operations at EU level, so that all companies can make best use of the UAS technologies to create jobs and growth while maintaining a high and uniform level of safety, EASA is engaged in developing the relevant regulatory material.

As technology advances, consistent requirements and expectations in an already crowded airspace will help manufacturers to design for all conditions and make it easier for operators to comply with requirements.

As the number of UAS operations increases, there is a need to establish unmanned traffic management (UTM) systems (named 'U-space'¹⁴ in Europe). There has been a huge development of U-space during the last year and it is expected that this will develop even faster in the years to come. The ATM MP will reflect the details about the integration of UAS in the EU airspace.

Key actions:

Highlights of EASA's recent work on drones:

- An opinion and draft AMC & GM were published in February 2018 and the draft implementing/delegated acts are being processed (RMT.0230).
- A first set of standard scenarios is planned to be adopted in 2019 to facilitate the obtainment of authorisations for well-defined operations.

For the fully-certified drone category, EASA opinions and decisions will be issued between Q2/2019 and Q2/2023. In the meantime: Certification of large drones could be done using Part 21 and Special Conditions.

¹⁴ As per definition in the SESAR Joint Undertaking U-space Blue print: 'U-space is a set of new services and specific procedures designed to support safe, efficient and secure access to airspace for large numbers of drones.'. The U-space blue print can be found in: <http://www.sesarju.eu/sites/default/files/documents/reports/U-space%20Blueprint%20brochure%20final.PDF>



An outlook on EASA's future work:

- Drafting the necessary standards to support the performance-based rule in cooperation with standardisation and industry;
- Developing the necessary actions to ensure a uniform implementation of rules in cooperation with MSs, including promoting the safe operation of drones to the general public (SPT.091);
- Developing the regulatory framework for the safe integration of drones in the airspace (RMT.0230).

EASA will continue to assess the need for action in order to ensure safe and harmonised development and deployment of U-space across the EU.

3.1.3.4 New operating concepts and business models

Address current and future safety risks arising from new operating concepts and emerging business models

Some new business models such as those responding to the increased demand for flying in the cities, 'urban air mobility' or those generated by the increased digitalisation in the aviation industry, the introduction of more autonomous vehicles and platforms, single-pilot operations and completely autonomous cargo aircraft, will challenge the way authorities regulate and oversee the aviation system.

Until now the air travel over urban areas has been limited to very special operations, such as police operations or helicopter emergency medical services (HEMS). New aviation partners are seeking new business models to provide more services to citizens, ranging from parcel delivery by air within the cities to flying air taxis. These new business models and operations need to be performed in a safe and secure manner to maintain the confidence that citizens have in the air transport system. EASA has a key role to play in this area.

Key actions:

- Support Competent Authorities in the practical implementation of cooperative oversight (FOT.007);
- Improve the understanding of operators' governance structures (MST.019).

3.1.3.5 Electric & hybrid aircraft

Innovation in any industry is a key factor influencing its competitiveness, growth and employment potential. With this strategic priority in mind, and looking at the increasing number of new aircraft manufacturers and suppliers working on aircraft using electric propulsion (and increasingly electric systems), it becomes apparent that there are very strong prospects as well as demand, from industry and governments, to have hybrid propulsion and eventually fully electric aircraft. Environmental benefits, in terms of emissions and noise, as well as social enhancements (e.g. mobility and accessibility) are also determining factors. Development efforts will cover also electrical systems, electrical urban taxis, electrical HEMS, etc.

To encourage the safe integration of new technological advancements in the wider electrical aviation sector overall, flexibility in the approach on all types of concepts, variations and designs types will be enhanced.



To allow for the projects to thrive, a number of complex issues need to be tackled from a regulatory perspective. In terms of rulemaking, until such time as enough experience will have been gained, Special Conditions/Derogations will be applied in a flexible and innovative way, as already allowed by the system and in line with Better Regulation principles. The use of performance-based and non-prescriptive regulations has been used for e.g. CS-23, CS-VLA and for the future rules for drones.

EASA launched at the end of 2018 a public consultation on its proposal for airworthiness standards which will enable the certification of small VTOL aircraft. This is to develop the first component of the regulatory framework to enable the safe operation of air taxi and electric VTOL (eVTOL) aircraft in Europe. By spring 2019, the first fully electric propulsion small aircraft type model is planned to be type-certificated. Other projects are on their way, including two application for eVTOL. Additionally, the first positive investigations, also for large transport aeroplanes, have been conducted.

Likewise, in electric and hybrid aviation, EASA aims to take care of future technology knowledge captivation, support of certification, networking, as well as all operations philosophy, internal training, derogations support, procedures, specifications, and finally rules. In this last instance, coordination and development of the necessary research initiatives and/or safety promotion as well as accommodating these in the best possible manner, will be considered in future EPAS editions.

Rulemaking actions are only foreseen for future EPAS editions, beyond 2019, once EASA will have collected practical technical experience with the type certification of these types of aircraft. This includes some already identified gaps for electric propulsion as certain future operational environments are currently not covered by existing rules and specifications, for e.g. use of urban areas, specifically designated areas at aerodromes, special landing pads, off airfields, etc. This approach would help to define in advance the necessary steps towards properly changing, updating and/or introducing regulations, specifications or procedures.

Equally, interaction has to be established between electric and hybrid aviation and the relevant EU bodies, MSs and foreign authorities, promoting and communicating on European and global harmonisation on electric and hybrid aviation regulations. Activities are also foreseen to assess the extent to which expected environmental benefits are realised and what kind of new challenges may arise, e.g. the increased noise level in urban areas.

3.1.3.6 Enable the implementation of new technologies developed by SESAR

EPAS also caters for the regulatory and implementation needs of the SESAR essential operational change and other new technological advancements (such as, but not limited to, U-space technological solutions, virtualisation and cloud-based architecture and remote tower operations). Global interoperability, civil-military cooperation and compatibility with other regions, such as NextGen, will form an integral part of EASA's work in impact assessment and future rulemaking or other related actions. Furthermore, EPAS provides a proactive and forward-looking view to the implementation of essential operational changes that support safety improvements required to safely manage the SESAR target operational concept.

In addition, EASA will consider additional implementation support actions that facilitate the achievement of operational improvements and new ATM operational concepts. These actions should approach the implementation needs of the enabling infrastructure in a comprehensive manner, thus facilitating the safe, secure and interoperable implementation of cost-effective solutions considered as necessary. These solutions could include GNSS, SATCOM, other satellite-based CNS solutions or



other technical solutions coming from the telecommunications field. It should avoid requiring specific technological solutions while specifying clear performance requirements to be met.

Key actions:

- Support the datalink operations (RMT.0524);
- Performance-based navigation implementation in the European ATM network (RMT.0639);
- Implementation of the regulatory needs of the SESAR common projects (RMT.0682).

3.1.3.7 Enable all-weather operations

The European industry should have the capability to take full advantage of the safety and economic benefits generated through new technologies and operational experience. This represents a widely recognised interoperability subject touching on a wide range of areas, including ADR minima, ADR equipment, and procedures both for CAT and GA.

Aircraft operations have always been influenced by the weather. Whilst modern aircraft design and the availability of weather observations and forecasts contribute to a predominantly very safe flying environment, there remain occasions where severe weather events have been identified as being a contributing factor in the causal chain of accidents and incidents. Such events remain of concern within the aviation community and corresponding safety recommendations (SRs) have been addressed to EASA by accident investigation authorities.

Since 2015, EASA has increased its focus on weather-related challenges and, as part of that work, has sought to identify whether the meteorological information available to pilots could be enhanced. Accordingly, EASA organised a first workshop dedicated to ‘Weather information provided to pilots’. Following the workshop and the acknowledged need to take further action, EASA integrated the ‘Weather Information to Pilots’ project within the ‘All Weather Operations’ (AWO) activities (RMT.0379). A project team put together in April 2016 — involving representatives from international organisations, associations and industry — was tasked with an assessment of the situation and this resulted in the ‘Weather Information to Pilots Strategy Paper’¹⁵ issued in January 2018. The EASA Strategy Paper focuses on the weather phenomena that introduce risk to aviation, describes the current mitigation measures, the deficiencies and how to overcome them. The scope of the paper is focusing on CAT aeroplanes. In the near future, similar work will be undertaken to address weather information to pilots in GA and rotorcraft operations.

The EASA Strategy Paper proposes nine recommendations to further improve weather information and awareness, as follows:

- **Recommendation #1: Education and training:** weather hazards, mitigation, and use of on-board weather radar; require specific education and training on weather hazards and associated mitigation means, including optimum use of on-board weather radars and new services. Related EPAS action: Consistent with RMT.0379, ‘miscellaneous items through improvement of existing rules’ (it is **proposed** to modify AMC1 FCL.725).
- **Recommendation #2: Improved weather briefing presentation:** promote improvements to the presentation of weather information in-flight briefing packages by promoting use of intuitive,

¹⁵ <https://www.easa.europa.eu/sites/default/files/dfu/EASA-Weather-Information-to-Pilot-Strategy-Paper.pdf>



interactive displays, appropriate use of standardised colour graphics and symbols, and intelligent filtering of information.

- **Recommendation #3: Promotion of in-flight weather information updates:** promote the use of the latest information available — what is available is as (if not more) valuable in the cockpit — to ensure up-to-date situational awareness. Encourage the development and introduction of in-flight weather information applications on electronic flight bags (EFBs). Related EPAS action: RMT.0601 (Opinion No 10/2017 — already published)
- **Recommendation #4: Pan-European high-resolution forecasts:** support the pan-European developments regarding the provision of high-resolution forecasts for aviation hazards (e.g. CAT, icing, surface winds, cumulonimbus (CB), winter weather). Related EPAS action: RMT.0379, see statement ‘... should be enabled to take full advantage of safety and economic benefits through new technologies and operational experience’.
- **Recommendation #5: Use of supplementary, ‘Tier 2’ weather sources for aviation purposes:** develop the necessary provisions to support the use of supplementary ‘Tier 2’ meteorological information by pilots.
- **Recommendation #6: Development and enhancement of aircraft sensors/solutions:** promote the development of intrinsic aircraft capabilities to facilitate the recognition and, if required, the avoidance of hazardous weather. (e.g. on-board sensors for turbulence, sand/dust/volcanic ash, ice crystals). Related EPAS action: RES.010.
- **Recommendation #7: Connectivity to support in-flight updates of meteorological information:** promote deployment of connectivity solutions (uplink and downlink) to support the distribution of meteorological information to pilots. Related EPAS action: RMT.0379, see statement ‘... should be enabled to take full advantage of safety and economic benefits through new technologies and operational experience’.
- **Recommendation #8: Provision of enhanced meteorological information:** promote provision of high-resolution observed and forecast meteorological information, particularly data with high spatial and temporal resolution such as imagery derived from satellite and ground weather radar sources. Related EPAS action: RMT.0379, statement ‘... should be enabled to take full advantage of safety and economic benefits through new technologies and operational experience’.
- **Recommendation #9: On-board weather radar, installation of latest generation equipment:** promote the installation of the latest generation of on-board weather radars, with emphasis on including capability for wind shear and turbulence detection. Related EPAS action: RMT.0379, ‘miscellaneous items’ through improvement of the existing rules.

The list of actions proposed to address these nine recommendations is included in Appendix A to the Strategy Paper. Where such actions cannot be implemented as part of existing EPAS actions, a PIA will be performed to determine the need for additional EPAS actions. These could then be considered for the 2020-2024 EPAS planning cycle.

Key action:

- Review and update the AWO rules in all aviation domains (RMT.0379).



3.1.4 Environment

Ensuring sustainability is a huge challenge for the aviation industry, MSs and EASA. Sustainable aviation is about combatting climate change, and reducing the health effects from aircraft noise and air pollution. It is also about ensuring that European industry stays competitive on a level playing field in a rapidly changing world. The introduction of novel technologies (including electric air taxis and drones, hybrid systems) require particular attention from an environmental perspective.

EPAS contains the status of the environmental standards related to sustainable aviation — see the EAER (easa.europa.eu/eaer) for a concise view of the status and actions of Europe as regards environment and sustainability. The below actions are aligned with the recommendations from the EAER.

Climate change and noise: Introduce the CAEP/11 recommendations

The aviation industry needs to minimise its impact on the environment as much as possible while providing safe air transport. In addition, it is key to have environmental requirements that are consistent with the rest of the world to ensure a level playing field.

Actions in this area will contribute to European policies on climate change, air quality and noise reduction. ICAO Committee on Aviation Environmental Protection (CAEP) is expected to adopt in February 2019 a new standard on non-volatile particulate matter (PM) emissions, and propose improvements to the existing noise and emissions standards. The agreed updates to the environmental standards will need to be implemented into European legislation in order to become effective.

The actions to implement ICAO standards in Europe will be adjusted and detailed once the outcome of the CAEP/11 process is known and communicated in ICAO State Letters, which are expected in 2019. Future actions will also need to address the new environmental challenges of new technologies, e.g. noise of drones and air taxis, recyclability of batteries and the requirements of the circular economy.

Key actions:

- Implement ICAO CAEP amendments (RMT.0513 and RMT.0514).
- Develop PM regulations and guidelines (RES.018);
- Obtain high-quality technical expert support on standardisation issues (RES.019).

In addition, EASA is also involved in the following activities:

- Environmental fraud prevention;
- Development of an ecoLabel/LifeCycle assessments concept;
- Novel technologies and LifeCycle Assessments
- Sustainable fuels project;
- REACH monitoring process together with European Chemical Agency under the Memorandum of Understanding.



3.2 Strategic enablers

3.2.1 Research

The European aviation industry has gone through a successful development in the past decades placing Europe at a leading position in the global competitive market. Significant elements of this success story are the European aviation research and innovation programmes of the EU as well as the MSs' and industry's research activities. Therefore, these initiatives are of high relevance to the setting-up of EPAS actions. They contribute to EASA's objectives for ensuring the highest level of aviation safety, security and environmental protection in Europe.

Recently developed technologies, notably in the areas of complex software, propulsion, new materials, connectivity, digitalisation, data science, autonomous vehicles, space operations, business models are planned for entry into service at an unprecedented pace in the aviation economic system.

Further evolutions may address emerging risks such as security, including cybersecurity, AI applications and systems or aviation impact on climate change.

Moreover, aviation growth is calling for solutions that are resilient to weather hazards, continuous traffic growth and increased complexity of traffic ranging from operation at low altitudes to commercial aircraft operations and operation in remote areas.

The European and national research & innovation programmes, including Clean Sky and SESAR, are developing new aviation concepts and solutions, which will need to be certified or approved prior to entering operation in Europe as well as in third countries. Furthermore, new entrants, in particular in the drone sector, bring new requirements to the European aeronautics arena, which also necessitate new European regulatory responses.

It is essential for Europe that EASA is in the position to support and assist the streamlining of the deployment of those new solutions. To meet these objectives, notably with regard to the safer integration of new technologies and concepts, and to measures improving environmental protection, EASA must be equipped with new tools, agile methods, test/demonstration standards and modular evolutionary approaches for product certification and operational approval processes. This requires a number of evolutions to the current regulatory framework in order to cope with these current and future expected developments.

Playing a pivotal role between innovation and the development of safety, security or environmental protection standards, EASA is positioned to federate the future aviation research and innovation network comprising MSs, the industry and the aviation research community. It can also support development of new instruments for European aviation research and innovation projects' prioritisation and coordination, in support to the EU ACARE Strategic Research and Innovation Agenda (SRIA)¹⁶.

EASA's Basic Regulation permits EASA to launch and finance research projects within its competence, which includes safety, environmental protection and security issues. Regularly, EASA experts and external stakeholders suggest or request research activities topics that are needed to tackle these issues. These topics are prioritised on a yearly basis and included in the 'Research Agenda', which

¹⁶ 2017 edition of ACARE SRIA: <http://www.acare4europe.org/sria>



groups the requests for a given period. The projects becoming part of EPAS are only the ones covered by a financing source and included in the internal yearly research plan.

The Research Agenda aims at supporting the development of coordinated research actions and their implementation as part of EU and national research programmes. It encompasses a series of innovation- and efficiency-related actions besides safety-focused research. Actions resulting from the extension of EASA's remit following the adoption the NBR might trigger the need for additional research activities. In the case of ground handling, detailed objectives and actions will be defined by a ground handling roadmap that will be subject to focused consultation.

As some of the prioritised research projects have a high likelihood of (but not yet confirmed) funding at the time of the publication of this document, their planning has been kept flexible on purpose, allowing for projects to be launched during the timeline of the Research Agenda mentioned above (between 2019 and 2021).

The list of research-related EPAS actions is included in Appendix H.

3.2.2 Safety promotion

From the beginning of 2019, EASA will launch a new safety promotion strategy that will take an increasingly proactive approach to the way EASA communicates with the European aviation community. This will position EASA as a safety promotion leader in Europe and worldwide having influence and a recognised brand. This will be achieved through EASA's 'Safety Together!' brand. Understanding that different aviation stakeholders have very different needs in terms of information and communication channels, the strategy will take a domain-based approach. It will be split into operational domains such as aircraft operations, aerodromes and ground handling, General Aviation, rotorcraft and drones.

When possible, safety promotion will be used as a light and effective alternative to rulemaking and oversight. It will also support a better understanding of EU civil aviation regulations and provide more information on safety intelligence and analysis results. The strategy will also provide continual information on a wide range of safety topics at domain level. A wide range of communication tools will be used to spread safety messages and this will see EASA becoming more active on social media and using new and novel ways to inform people about safety. Within EPAS, there is a number of specific SPTs and this is augmented by a number of new actions to promote important safety topics in each of the main operational domains.

3.2.3 International cooperation

One of the EC's 10 key priorities is that the EU becomes a stronger global actor. EASA supports the EU and cooperates with national, regional and international organisations alike in order to enhance global aviation safety, and supports the free movement of European products and services. Furthermore, ICAO acknowledges that aviation safety can be better managed at regional level and recognises the importance of Regional Safety Oversight Organisations (RSOOs) in this respect. This supports a stronger role of EASA in a broader European context.

In this perspective, the strategic priorities at an international level are the following:

- **Strive, through international cooperation, that citizens' interests for safety and environmental protection are being met at global level.** This can be achieved through:



- contribution to improving global safety and environmental protection;
 - support to the resolution of safety deficiencies through technical assistance; and
 - promotion of regional integration wherever effective.
- **Ensure a global level playing field for European industry.** This can be achieved through:
- promotion of fair and open competition and removal of barriers to market access;
 - enabling efficient oversight between international partners; and
 - promotion of EU aviation standards around the world.
- **Enable the European approach.** This can be achieved through:
- coordination of common positions at ICAO;
 - centralisation of international oversight actions and intelligence;
 - bringing together different European actors in technical assistance; and
 - promoting the recognition of the European system at ICAO level.

3.2.4 Digitalisation

Aviation moves into the digital era at an unprecedented pace. Almost all aviation sectors are affected by those developments. Aircraft manufacturers are moving from trend monitoring of key components to using increasingly connected digital systems, such as on-board sensors and digital engine twins. Digitalisation also affects aircraft operations by allowing certain operations to be carried out or controlled remotely. In certain extreme cases, such as drones, digitalisation can take the shape of full automation with minimal remote human intervention. Digitalisation is furthermore transforming the way training is performed and supports the move towards fully data-driven decision-making.

These developments are increasingly challenging traditional aviation regulations and calling for an evolution towards more performance-based, technology-neutral requirements, which will enable the novel business models that emerge from the digital transformation, increasing at the same time safety and efficiency.

EASA is engaged in defining its roadmap to digitalisation in order to determine the following:

- changes needed in the regulatory system to accompany and benefit from industry digitalisation;
- actions needed to keep abreast of digitalisation issues, in particular in relation to product certification and operations;
- key EASA digitalisation activities needed, both for external purposes (e.g. e-licence for pilots) or internal purposes (e.g. digitalisation of processes); and
- actions needed to implement EU's digital agenda and e-government action plan.

The roadmap will have due regard to digitalisation-induced cybersecurity issues and related EPAS actions.



Figure 3. Overview of the digital transformation strategy drivers

Once approved, the EASA digitalisation roadmap will feed into EASA's strategic priorities. The roadmap and the updated strategic priorities will be considered for next year's EPAS planning cycle.

3.2.5 Technical training

According to ICAO Annex 19, qualified technical personnel is a critical element (CE-4) of the State safety oversight system. Annex 19 stipulates that States shall establish minimum qualification requirements for the technical personnel performing safety-related functions and provide for appropriate initial and recurrent training to maintain and enhance their competence at the desired level.

Consequently, as in ICAO's GASP, EPAS considers technical training as a strategic key enabler for an effective State oversight system.

Aviation is a very dynamic sector with rapidly innovating technologies and business models. At the same time, it is confronted with evolving new risk scenarios in terms of both safety and security. These rapid changes are a challenge for the staff of aviation authorities, as well as for aviation organisations, to keep abreast of new developments and to update their knowledge and competencies to fulfil their responsibilities.

Furthermore, the NBR proposes a framework for pooling and sharing of technical resources between the MSs and EASA. The implementation of this new approach requires a stronger harmonisation of the description of job profiles, minimum qualifications, as well as of training and assessment standards of aviation personnel.

EASA will therefore continue to focus on the following key areas:

- Maintenance and further development of the competence of EASA staff based on training programmes specifying initial and recurrent training subjects
- Further harmonisation of training and assessment standards for aviation inspectors within the EASA system, together with the Common Training Initiative Group (CTIG). For this purpose, the CTIG will be integrated into the management structure of EASA's ABs
- Implementation support to aviation authorities and aviation organisations and support to universities and similar educational institutions through lectures
- Support of the international cooperation strategy through dedicated training services
- Continuous improvement of the European Central Question Bank (ECQB), used for knowledge examinations of commercial pilots; taking into account EPAS priorities, where relevant for the training of pilot competencies.



Through the CTIG and the NAA training focal points, EASA makes available its catalogue of technical training courses to all MSs. The catalogue includes a number of safety-management-related training courses, such as training on SSP, EPAS, safety data collection & analysis, as well as on SRM. Additional training needs to support the implementation of the SSP (MST.001) and SPAS (MST.028) will be discussed with the Safety Management TeB on an ongoing basis.

In line with the NBR priorities, EASA will roll out an implementation support programme that will entail targeted support to MSs in order to complement standardisation and rulemaking activities. Such targeted support activities will cover SSP and SPAS development and implementation.

3.2.6 Oversight

Having proper oversight capabilities is a key prerequisite for the SSP as well as EPAS actions' implementation. Authority requirements, introduced in the rules developed under the first and second extension of the EASA scope, define what MSs are expected to implement when performing oversight of the organisations under their responsibility. In particular, they introduced the concept of risk-based oversight with the objective of addressing safety issues with a consideration to efficiency. Likewise, the cooperative oversight approach is explored in terms of how CAs could work together, as well as how EASA could evaluate whether the existing safety regulatory system adequately addresses risks resulting from the increased complexity of the aviation industry, and the number of interfaces between organisations, their contracted services and regulators.

Section 4.2 'Safety performance, introduces two new EPAS indicators, namely: MSs' oversight capabilities based on the Standardisation rating, and the status of compliance with SMS requirements in aviation organisations, based on information provided by MSs on the number and type of related findings.

To support MSs, this EPAS edition includes four projects identifying focused attention topics (FOT). They include both actions for EASA, led by its Standardisation team within the Flight Standards Directorate, as well as oversight actions led by MSs.

In terms of oversight capabilities, the latest SAR (2017) identified the following areas of concern:

- The implementation of authority requirements remains a major challenge in the areas where they are applicable, calling for creative solutions that will help to solve the problems encountered. In that sense, EASA already undertook some initiatives¹⁷ aimed at providing support and is available for further assistance.
- It is also possible to note a polarisation of States in terms of level of maturity in the application of the rules: some States have difficulties in meeting the minimum standard, while others are constantly trying to improve the way they perform oversight and organise themselves accordingly. The presence of the former could undermine the integrity of the European aviation system and needs to be properly addressed. Further analysis of Standardisation inspection results shows that some CAs still show a reactive attitude and do not use inspection findings and safety information such as those that derived from occurrences, incidents, and accidents in order to adapt and improve their oversight system. Undertaking non-compliances (UNCs)

¹⁷ Such as concept development and testing, sharing of best practices and development of enforcement strategies.



demonstrate that the quality/management systems of organisations are not always compliant and/or effective.

On cooperative oversight, EASA proposes to extend the scope of support in action FOT.007 to CAs in the practical implementation on all sectors, e.g. by way of existing trial projects and by exchanging best practices and guidance, dedicated workshops, etc.

EASA will also continue to support CAs in the application of very large-scale demonstration (VLD) activities in support of essential operational changes that are intended to improve the European ATM system.



3.3 Better regulation

Better regulation: rules are evidence-based, where appropriate performance-based, proportionate, fit for purpose, simply written and contribute to the competitiveness of the industry

Legislation is not an end in itself. Modern, proportionate rules that are fit for purpose are essential in aviation safety to uphold high common standards and ensure the competitiveness of the European industry. The EC's Better Regulation Agenda aims at delivering tangible benefits for European citizens and at addressing the common challenges Europe faces. To meet this policy goal, EASA must ensure that its regulatory proposals deliver maximum safety benefits at minimum cost to citizens, businesses and workers without creating unnecessary regulatory burden for MSs and EASA itself. To that end, EASA must design regulatory proposals transparently, based on evidence, understandable by those who are affected and backed up by the views of stakeholders.

To be fully effective, better regulation must cover the entire regulatory cycle, i.e. the planning phase, design of a proposal, adoption, implementation, application, evaluation and revision. To ensure that the EU has the best regulation possible, EASA must examine each phase of new or existing projects with a view to ensuring that the objectives, tools and procedures adhere to better regulation principles.

Applying better regulation principles means for EASA that efforts must aim at:

- a transparent and streamlined regulatory process that is supported by an efficient stakeholder consultation;
- a plain and easily understandable language also for non-native English speakers;
- communication and IT platforms that give stakeholders easy access to consulted deliverables and regulatory material, including soft law;
- a regulatory approach that is performance-based where appropriate and respects the principles of subsidiarity and proportionality; and
- actors involved in the drafting of regulatory material that have been appropriately trained in drafting performance-based rules.

Regulating elements of aviation safety by describing the desired outcome is not new. This so-called performance-based approach is intended to make aviation safer, more efficient and flexible. This approach promotes the principles of subsidiarity and proportionality by prescribing safety objectives instead of prescribing how to achieve them.

The expected benefits of performance-based regulations (PBRs) are :

- **Resilience:** the increased complexity in operations and aviation activities, the dynamics of aviation business models, and fast and proliferating technological advancements require a regulatory framework capable of anticipating changes (technology-neutral regulations).
- **Flexibility:** by focusing on safety outcomes, PBRs provide flexibility and encourage innovation by not restricting a priori the means to control specific risks.
- **Safety management:** by providing a flexible implementation framework and focusing on safety outcomes, PBRs allow organisations and authorities to foster risk management capability and to better allocate resources against risks identified under their SMS and SSP.



The suitability of topics for a performance-based solution shall be assessed early on. Elements of aviation safety regulation that can be addressed cost efficiently in a performance-based manner shall be:

- identified as part of the rulemaking programming process, in particular in the context of PIAs;
- confirmed through impact assessment or ex post evaluation of rules;
- discussed and agreed with stakeholders on that basis; and
- formalised in EPAS.

Regulations should be as efficient and performance-based as possible, and as prescriptive as necessary to provide legal certainty. An early on assessment in the PIA shall assess at least the following to indicate which elements of a regulation can be performance-based:

- measurability;
- predictability of performance variance;
- need for flexibility;
- impact on innovation;
- impact on bilateral agreements;
- impact on level playing field;
- efficiency gains (through a performance-based solution); and
- need for interoperability.

To this end, EPAS identifies which actions have a particular focus on PBRs and contains an entire section dedicated to evaluation (see Section [7.2](#)), which will focus on introducing more performance-based elements following a thorough assessment.

Finally, EASA is fully engaged in developing simpler, lighter and better rules for GA. This will be achieved in line with the GA Roadmap¹⁸ created in partnership with the EC and stakeholders by addressing the recognised importance of GA and its contribution to the European economy and a safe European aviation system.

¹⁸ Available on EASA website: <https://www.easa.europa.eu/newsroom-and-events/news/easa-ga-roadmap>



3.4 New Basic Regulation

3.4.1 General

The NBR prepares the grounds for the future challenges ahead while maintaining aviation as a safe, secure and environmentally friendly form of transport for EU citizens. It entered into force on 11 September 2018.

The NBR Chapter II ‘Aviation safety management’ creates a solid legal foundation for EPAS and transposes ICAO Annex 19 SARPs for State safety management.

The NBR conforms with the EU Commission’s Aviation three key strategic priorities, namely: maintaining high EU safety and security standards, hence strengthening the EU’s role as a global actor; tapping into growth markets while promoting job creation; and tackling limits to growth in the air and on the ground.

The main NBR objectives and related provisions are included below:

Main objective	NBR provisions
Making better use of the EASA system’s limited resources with the following initiatives	<ul style="list-style-type: none"> • A pool of European aviation inspectors • New framework for transferring responsibilities • Oversight support mechanism • Additional privileges for qualified entities • Repository of information (including aero-medical) and Big Data • Updated framework for better working at international level
Having a flexible and performance-based system, by introducing the following principles:	<ul style="list-style-type: none"> • Risk- and performance-based elements reinforced • Additional flexibility for General Aviation (e.g. use of declarations) • Safety plan for Europe and national safety plans • Opt-in for Annex I aircraft manufacturers • Opt-in for ‘state aircraft’ • Opt-out for light sport aircraft
Integrating unmanned aircraft, by applying these conditions:	<ul style="list-style-type: none"> • 150 kg threshold removed from Annex I (all unmanned aircraft within scope) • Operation-centric framework • Use of market harmonisation legislation • Registration requirements • Protection and efficient use of radio-spectrum • Amendments to the accident investigation and occurrence reporting regulations
Closing previous gaps and inconsistencies, such as:	<ul style="list-style-type: none"> • Interdependencies with other domains, such as security, environmental and ATM legislation • Essential requirements and cooperation framework for cybersecurity • Proportionate safety requirements for ground handling (GH) • EU environmental protection requirements to the extent not covered by ICAO Annex 16



Allow for a better governance in EASA, with:	<ul style="list-style-type: none">• Alignment with the 'common approach' on EU decentralised agencies• New forms of EASA revenue (grants)• Making best use of EASA resources, by:<ul style="list-style-type: none">○ furthering the use of EASA expertise by the Commission (security, environment, research, SES implementation)○ allowing for demand-driven resources for certification (more flexibility in adjusting fee-financed staff according to workload)
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3.4.2 NBR roadmap

On 10 April 2018, the EASA MB requested EASA to present a roadmap outlining the priorities for the implementation of the NBR. The roadmap received the MB's support during the June 2018 MB meeting and has been used as an input to this EPAS edition. It identifies the areas of the NBR where work will be started in the next three years.

The roadmap identifies not only rulemaking activities, but also certification- and standardization-specific projects, involving policies' or procedures' drafting, initiatives with roadmaps, support to MSs, etc. All actions stemming from the roadmap are reflected in EPAS.

When it comes to rulemaking and policy setting, the following activities identified in the NBR were already included in the previous EPAS edition and will continue to be delivered:

- Development of a regulatory framework for drones
- Work on cybersecurity
- ADR/apron management services (AMS) (see Opinion No 02/2014)
- ATM/ANS (Article 44) Opinion covering interoperability issues:
 - RMT.0639 — PBN: IR expected in 2019 Q2
 - RMT.0679 — SPI: Report to be published (no Opinion)
 - RMT.0524 — DLS: Opinion due in 2020

As of 2022, EASA will start working on ATM/ANS systems and constituents and organisations involved in their design, production and maintenance (Articles 42, 43, 45 and 47), including where they contribute to the implementation of SESAR. This is an area where no safety evidence requires EASA to prioritise work on and thus starting in 2022 is proposed.

In order to better encapsulate and reflect in EPAS the new areas introduced by the NBR, the strategic priority 'Safe integration of new technologies and concepts' has been introduced (see Section 3.1.3).

A new Opinion to implement the **Airworthiness GA Roadmap** phase 2 has been added to the planning for publication in 2020. It will include priority items such as: extended use of declarations; non-installed equipment; considerations on amended scope of the list of aircraft excluded from the scope of the NBR (Articles 9, 10, 11, 12, 13, 18, and 19).

In the areas of ground handling and on new aspects of environmental protection (not covered by ICAO Annex 16), no specific rulemaking actions are required at this stage. The following activities will be undertaken:



- On **ground handling** (Article 33), during 2018 EASA will be engaged in a fact-finding phase, via safety assessment and dialogue with MSs and stakeholders. This will lead to the definition of the scope, objectives and performance indicators to draft a ground handling roadmap, to be implemented as of 2019. A new RMT is added in EPAS to address ground-handling-related rulemaking (RMT.0728).
- On **environmental protection** (Article 87), EASA will engage in developing a measurement methodology for novel technologies (supersonics, electric propulsion/urban mobility) as well as updating the EAER.

Moreover, the **NBR in Chapter II**, 'Aviation safety management' Article 7 requires States to establish and maintain an SSP in accordance with international SARPs (ICAO Annex 19) and with the European Aviation Safety Programme (EASP). NBR Article 8 requires States to complement their SSP with a SPAS. Such a plan shall include the risks and actions identified in EPAS that are relevant for the MSs concerned. A new EPAS action is included in this edition to account for this new requirement (see MST.028).

The development of new technologies, new business models and more generally speaking economic/social/societal changes, may have an impact on aviation safety. It is important for the Agency to have a clear vision on those changes that can potentially impact safety. Stakeholders and **Social Partners** should help to build this vision.

Article 89 of the NBR requires EASA to consult relevant stakeholders when addressing interdependencies between civil aviation and related socioeconomic factors. EASA is therefore enhancing the cooperation with EU social partners in aviation in order to reinforce its capacity in assessing potential social impacts of the EU aviation regulations and to address socio-economic risks to aviation safety. The resulting actions will be formalised in EPAS and will be subject to a 3-year reporting, as required by Article 89 of the NBR.

Point 2 of **NBR Article 140** stipulates that 'Not later than 12 September 2023 the implementing rules adopted on the basis of Regulations (EC) No 216/2008 and (EC) No 552/2004 shall be adapted to this Regulation'. Except for Part 21 (RMT.0727), EASA has not identified the need to change any IRs for the sole purpose of complying with the NBR deadline. Changes to rules will instead be driven by concrete safety, proportionality or level playing field improvements. In addition, the limited capacity of the EASA Committee will need to be taken into account when setting priorities.

Finally, even though a lot of work has already been initiated, the NBR roadmap also identifies the need to provide more implementation support to MSs, both on systemic issues, as well as in the implementation of specific tasks to implement the above provisions. A new programme will be initiated in 2019.



4 Performance

4.1 Key indicators in terms of EPAS actions

The safety driver is the one that contains most of the actions in the plan, followed by efficiency/proportionality

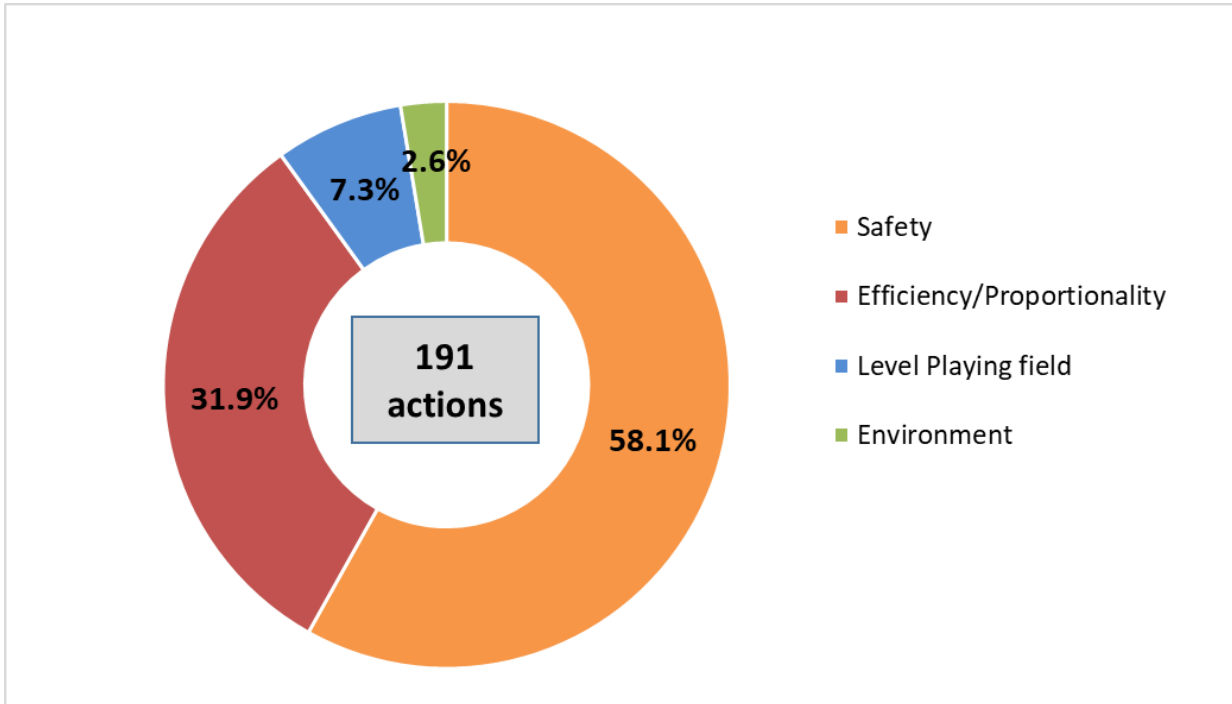


Figure 4. Share of actions by driver

Half of the actions in EPAS are strategic

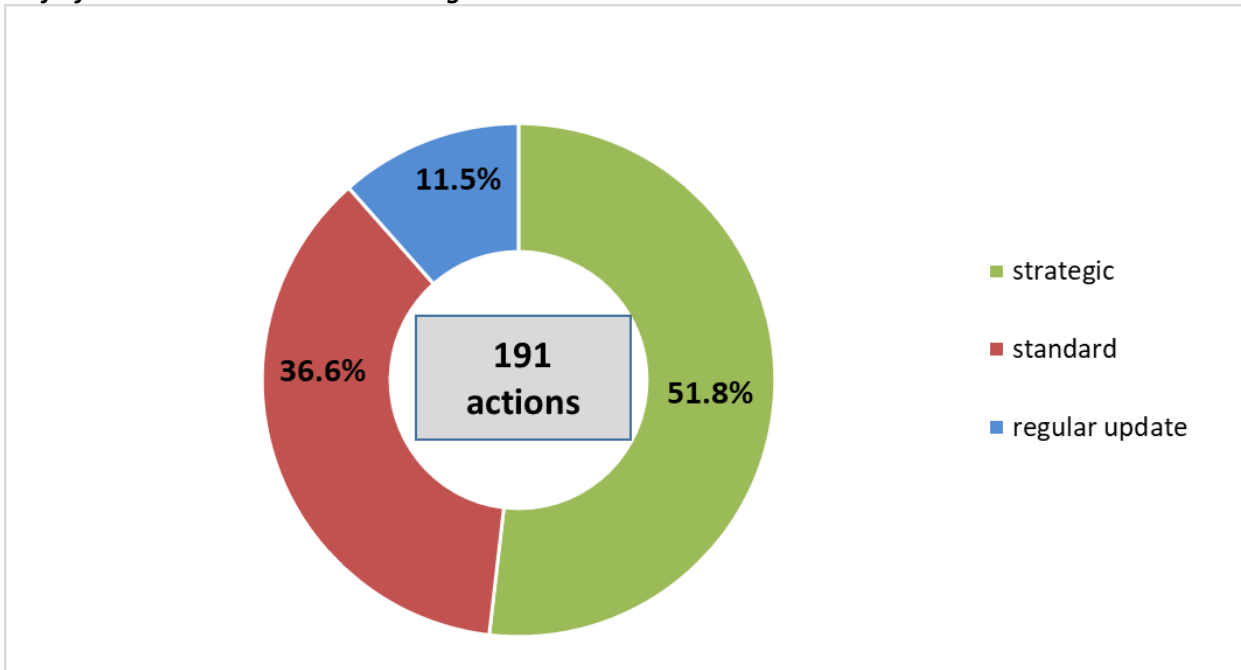


Figure 5. Share of actions by priority type



Most of the actions in EPAS are rulemaking projects

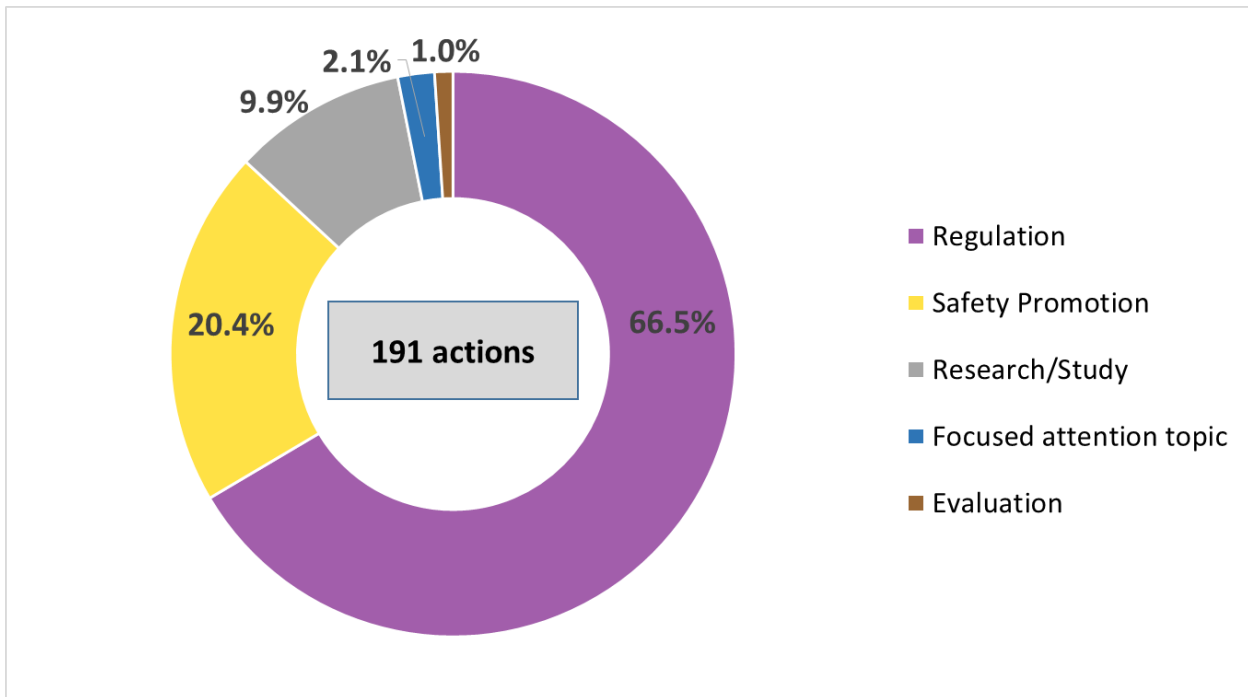


Figure 6. Share of actions per activity type

Average duration of rulemaking tasks and adoption process

The table below shows the average duration of rulemaking tasks for Opinions and Decisions published by EASA in 2018 (meaning from ToR publication to Opinion/Decision publication), as well as the average duration of the adoption process for Opinions adopted by the European Commission in 2018 (meaning from Opinion publication to the vote in the EASA Committee). Appendix A provides these indicators for all 2018 publications.

Average duration - Decisions published by EASA in 2018	Average duration - Opinions published by EASA in 2018	Average duration - Opinions adopted by EC in 2018
3,2 years	3,4 years	2,7 years

Rulemaking output

The rulemaking activity shows an overall decrease between 2015 and 2018. The volume of hard law deliverables planned for the next 5 years has been adjusted to the actual capacity of the regulatory system.

The graphs on the next pages show not only the total rulemaking output of EASA (Figure 7), but also separately the rulemaking activity leading either to Opinions (hard law and associated soft law, Figure 8) or to stand-alone Decisions¹⁹ (soft law, Figure 9), as the latter have little impact on the MS resources.

These graphs do not reflect Decisions (AMC and GM) that are waiting for the adoption of the related Opinions by the EC.

¹⁹ Decisions that are not linked to any Opinion



Rulemaking activity – EASA

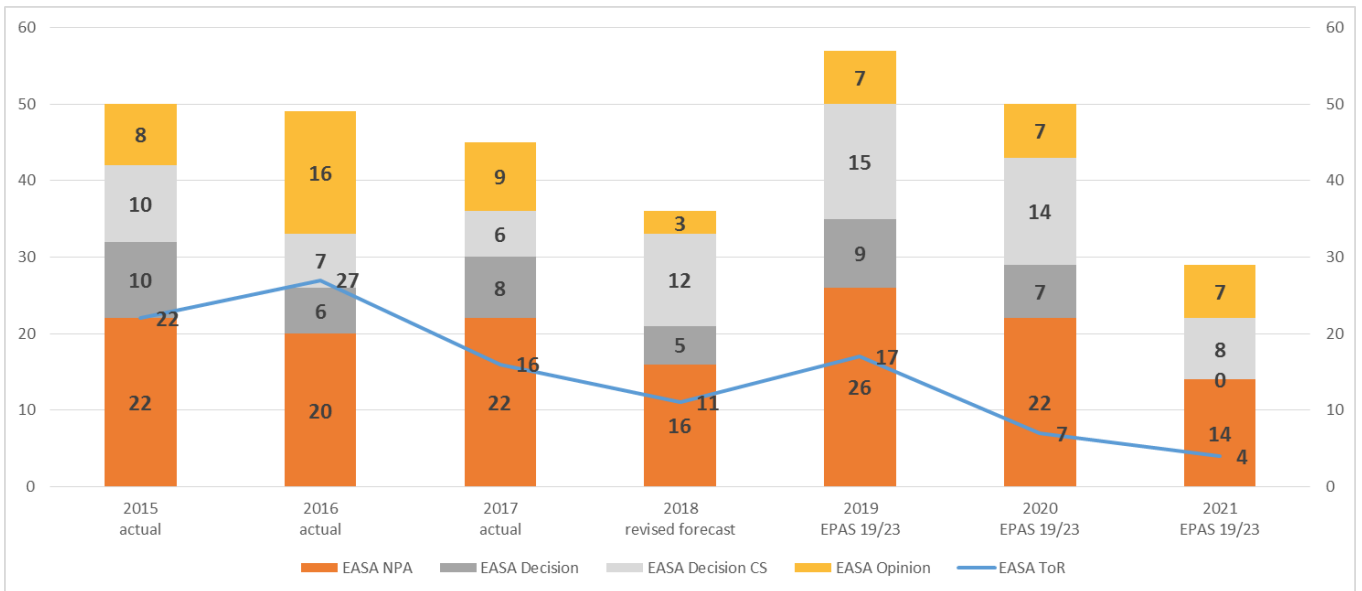


Figure 7. Rulemaking activity EASA 2015–2021 – total rulemaking output

EASA plans to publish 7 Opinions per year as of 2019. The number of Certification Specifications (CS) already increased in 2018 and will continue to increase in 2019. The updating of CS' to keep up with safety needs and new technologies provides adequate support to the manufacturing industry.

Rulemaking activity leading to Opinions (hard law and associated soft law)

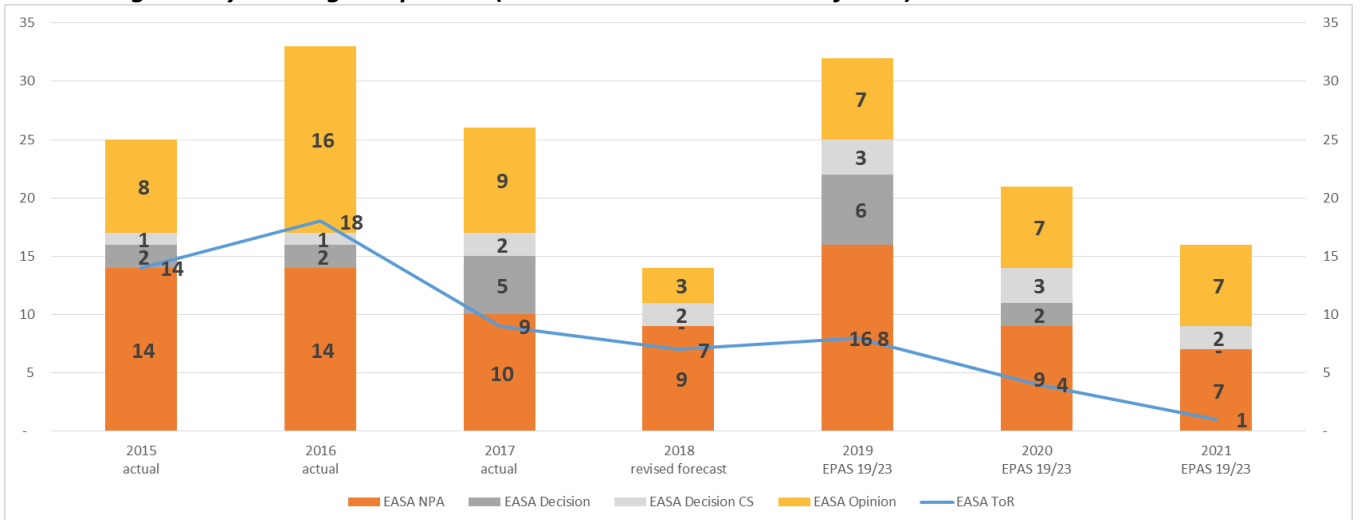


Figure 8. Rulemaking activity EASA 2015–2021 – Opinions and related soft law

The above graph shows the rulemaking output related to Opinions and related soft law, meaning any rulemaking task that contains at least one Opinion and related soft law. Generally, the development of an Opinion and the related soft law is done in parallel, as part of the same rulemaking project.



Rulemaking activity related to soft law

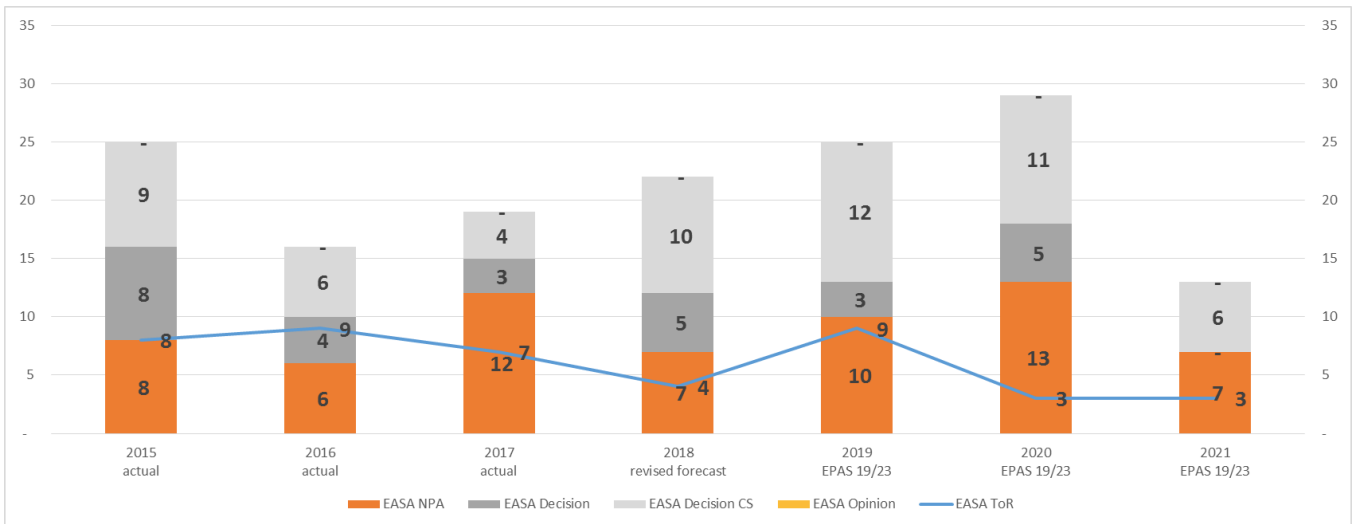


Figure 9. Rulemaking activity EASA 2015–2021 related to soft law

The above chart shows the outputs related to soft law, meaning those resulting from rulemaking tasks that only lead to ‘stand-alone’ Decisions. These tasks do not require the involvement of the Commission, nor the EASA Committee, and have less impact on MS resources.

Split between hard/soft law and soft law (compared to the 2018-2022 EPAS edition)

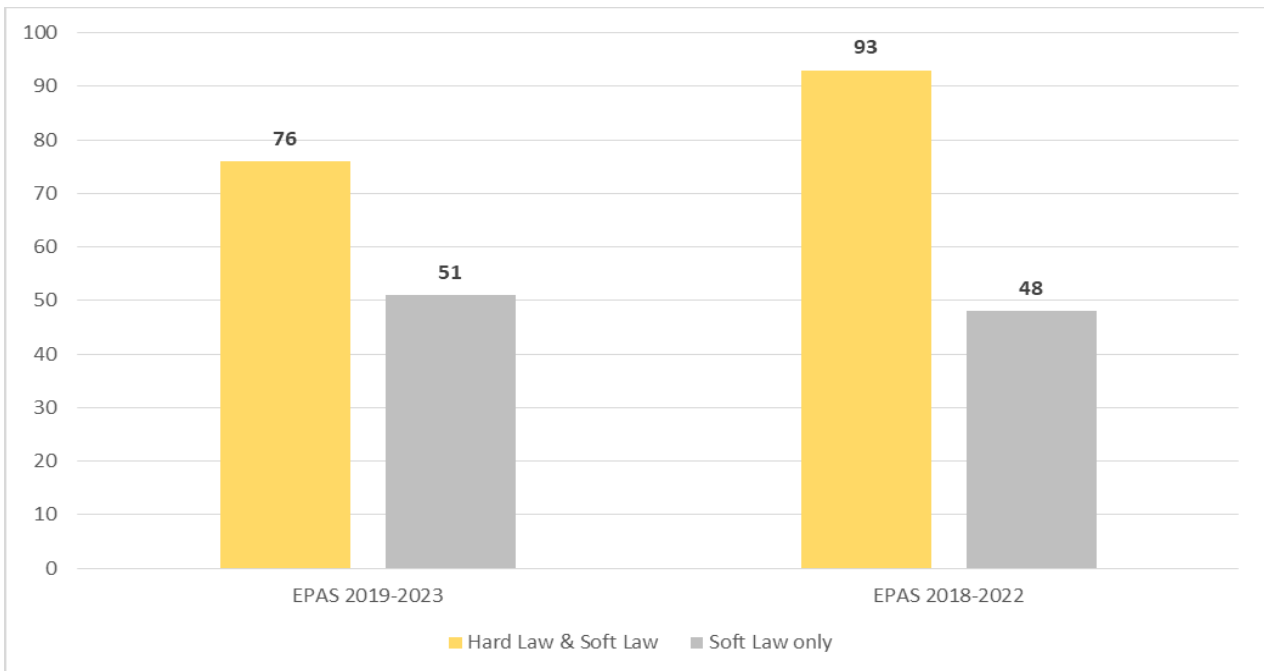


Figure 10. Split between hard/soft law and soft law

Following the review of priorities the output leading to Opinions has significantly reduced compared to the EPAS 2018-2022 edition

The above chart shows the impact of the de-prioritisation of a number of Opinions in the current EPAS edition. Appendix C contains the list of rulemaking tasks that are affected.



4.2 Safety performance

This section presents an initial outline for EPAS safety performance metrics. These shall reflect the EPAS strategic priorities in the area of safety and be based on the high-level safety objective set out in the NBR to ‘establish and maintain a high uniform level of civil aviation safety in the Union’. EPAS safety performance goals, indicators and targets should also consider the 2020-2022 GASP goals and targets as relevant in the EASA system.

Following a suggestion made by the MSs’ AB, it is proposed to adopt an ‘aspirational goal’ overarching the different EPAS indicators, as an alternative to the GASP aspirational goal of ‘zero fatalities in commercial operations by 2030 and beyond’, as follows:

‘achieve constant safety improvement with a growing aviation industry’

This goal is deemed ‘aspirational’ as it represents an ambition of achieving an ever safer aviation system. It is intended to address all operational domains.

EPAS SPIs shall serve to monitor the impact of EPAS actions on the overall level of safety performance. New safety issues are identified and monitored via the European SRM process .

In accordance with Article 6 of the NBR, EPAS shall specify the level of safety performance in the Union, which the MSs, the Commission and EASA shall jointly aim to achieve. The level of safety performance shall be determined on the basis of the EPAS SPIs and where relevant, associated safety performance targets, as well as considering the safety-related indicators and targets defined in the ATM Performance Scheme.

Principles for establishing EPAS SPIs and targets

SPIs and targets shall monitor both safety **outcomes** (such as accidents, incidents and injuries) and the enablers, in terms of **systems and processes**²⁰ required to maintain effective safety management at authority and organisation levels.

Setting safety performance targets as part of EPAS is considered more relevant for process-based indicators, to drive positive system ‘behaviours’. For safety-outcome-related metrics, which are derived from occurrence data, it is proposed to not consider setting safety performance targets, but to define ‘baseline performance’ and monitor the system against this baseline performance (proposed baseline indicators are included in Table 3).

Outcome-based indicators shall consider as main inputs:

- number of fatal accidents;
- number of fatalities; and
- number of non-fatal accidents and serious incidents.

This is aligned with the high-level ICAO safety metrics, thereby facilitating comparison of European performance with that of other regions or with global averages. The number of fatal accidents and fatalities provide the highest level of safety outcome monitoring, while the non-fatal accidents and serious incidents combined provide monitoring of higher-risk events. These can subsequently be reviewed to identify key risk areas that inform EASA’s safety priorities. Looking to the future, when the European Risk Classification Scheme (ERCS) has been implemented across the MSs, an additional indicator that monitors high-risk occurrences may be considered. This could be in addition to or instead of monitoring non-fatal accidents and serious incidents. The EASA Safety Risk Portfolios (currently published in the ASR) include incident data sourced from the European Central Repository for accident and incident reports in aviation (ECR) under Regulation (EU) No 376/2014. As

²⁰ The efficiency of systems and processes established and implemented by EASA would continue to be monitored through the EASA SPD related indicators.



the implementation of Regulation (EU) No 376/2014 improves, we expect to be able to integrate more incident data into the monitoring framework.

Monitoring systems and processes

It is proposed that related SPIs be defined and monitored in three areas:

1. MSS' oversight capabilities

This is related to 2020-2022 GASP goal 2 and EPAS strategic enabler 'Oversight'.

Monitoring will be based on the EASA Standardisation rating, as an alternative to the ICAO USOAP Effective Implementation (EI) indicator. The Standardisation rating is used for the prioritisation of Standardisation inspections. It aims to emulate the expert's confidence in the CA's ability to discharge its safety oversight capabilities. The Standardisation rating considers elements related to size, nature and complexity of the State authorities and functions, the number and type of open Standardisation findings, as well as the State's reactivity in relation to findings closure, once the final report has been sent.

2. MSS' progress with SSP implementation

This is related to GASP goal 3 and the EPAS strategic priority 'Systemic safety'.

Related indicators will mainly be based on data available through ICAO iSTARS. Feedback provided by MSS will also be considered. EASA will in addition collect relevant documentation from States (SSP and SPAS). In the future, this monitoring area will consider results from the EASA Standardisation of NBR Articles 6 and 7.

The objective is aligned with the latest 2020-2022 GASP draft requiring States to achieve an effective SSP, as appropriate to their aviation system complexity, by 2025.

3. Effective implementation of SMS in aviation organisations

This would partially address 2020-2022 GASP goal 5. It addresses the EPAS strategic priority 'Systemic safety' and the requirements in the NBR.

Monitoring the implementation of SMS in industry should focus on compliance with relevant requirements and effectiveness of SMS key processes. To develop a common set of indicators and targets on effective implementation of SMS, an agreed methodology for assessing SMS, as well as a method to score and aggregate related assessment results would first need to be developed and implemented. Such an assessment and scoring methodology is currently only available in the ATM/ANS domain, as part of the ATM Performance Scheme. It should also be considered that SMS requirements are not yet applicable in the initial and continuing airworthiness domains. Moreover, while the EASA Management System assessment tool is promoted through EPAS action MST.026, EASA has not yet received sufficient feedback on the use of the tool.

For the above reasons, no detailed EPAS indicators and targets are proposed on SMS effectiveness (for domains other than ATM/ANS, since here this indicator is monitored in the context of the European ANS Performance Review). However, it is proposed to monitor the following:

- (a) the extent to which the EASA Management System assessment tool (or similar) is being used by MSS, and
- (b) the status of compliance with SMS requirements.

Point (a) could be monitored on the basis of feedback received through EASA Standardisation. For point (b), EASA's monitoring could be based on oversight data provided by CAs, concerning the number and



type (level 1/level 2) of findings on the organisation’s management system (e.g. findings raised within the scope of Part-ORO Subpart GEN Section 2 ‘Management system’). To collect this data, EASA will develop a dedicated survey, to be completed on an annual basis. The details of such annual reporting will be discussed with the MSs and the EC.

Safety performance in the above three areas will be discussed at the regular Safety Management TeB meetings. In the future, the EASA ASR will include related performance information.

Outcome-based indicators

Monitoring safety outcomes addresses 2020-2022 GASP goal 1 and EPAS strategic priority ‘Operational safety’:

Indicators related to key risk areas are identified through the European SRM process and described in the EASA Safety Risk Portfolios. EASA, in cooperation with the European NoAs, has developed a safety performance framework that identifies different tiers of SPIs.

- **Tier 1** transversally monitors all the domains and the overview of the performance in each domain. Tier 1 considers the number of fatal accidents and fatalities in the previous year compared with the average of the preceding decade. In addition to this, for Commercial Air Transport aeroplanes, detailed statistical indicators have been developed to identify the accident and serious incident rates over a four-year period. These will be updated periodically to monitor performance against the 2011-2014 baseline.
- **Tier 2** covers the priority key risk areas at domain level. Tier 2 provides the number (and where available the rate) of fatal accidents and the ERCS risk level for each domain in the ASR, divided by key risk areas.

These ‘operational’ safety indicators will continue to be monitored through the European SRM process. Likewise, reporting on those will continue to be done through the EASA ASR.

The tables below provide an overview of the figures associated with the current Tier 1 indicators that are proposed to be included in EPAS.

Table 1. Tier 1 indicators —cross-domain comparison of EASA MSs’ aircraft fatal accidents and fatalities, 2007-2017

Aircraft domain	Fatal accidents 2017	Fatal accidents 2007-2016 mean	Fatalities 2017	Annual fatalities 2007-2016 mean	Annual fatalities 2007-2016 median
Aeroplanes					
CAT airlines	0	0.9	0	66.4	4.0
NCC business	0	0.5	0	0.6	0.0
SPO	3	7.3	4	18.1	16.5
NCO	34	50.1	62	92.2	91.0
Rotorcraft					
Offshore	0	0.4	0	3.6	0.0
Onshore	1	1.7	6	5.4	4.0
SPO	3	4.0	4	7.5	6.0
NCO	3	5.6	7	13.2	12.5
Balloons					
	0	1.2	0	2.1	1
Gliders					



Aircraft domain	Fatal accidents 2017	Fatal accidents 2007-2016 mean	Fatalities 2017	Annual fatalities 2007-2016 mean	Annual fatalities 2007-2016 median
	25	25.4	27	29.5	29.5

Table 2. Tier 1 indicators — cross-domain comparison of EASA MSs' infrastructure contribution to fatal accidents and fatalities, 2007-2017

Infrastructure	Fatal accidents 2017	Fatal accidents 2007-2016 — mean	Fatalities 2017	Annual fatalities 2007-2016 — mean	Annual fatalities 2007-2016 — median
ADR & GH	0	0.7	0	1.7	0.5
ATM/ANS	1	0.5	6	1.6	0

In Tables 1 and 2, both the mean (average) and the median number of fatalities are shown for the period 2007-2016. This is because for some aircraft domains the median number provides a better representation of the number of fatalities per year. This is typically related to the number of passengers on board aircraft involved in fatal accidents. Sailplanes usually only have one person on board and the number of fatal accidents and both the mean and median number of fatalities are very similar. By contrast, commercial air transport (CAT) airline fatal accidents may involve one or several hundred fatalities; therefore, the annual number of fatalities varies and the mean and median figures are quite different.

Table 3. Tier 1 Indicators for CAT aeroplanes, baseline figures 2011-2014

Proposed SPI	Per 10 000 movements	Per 10 000 flight hours
EASA-MS accident rate		
Accident rate over a 4-year period	0.044	0.023
Accident rate in 2011	0.044	0.024
Accident rate in 2012	0.048	0.026
Accident rate in 2013	0.034	0.018
Accident rate in 2014	0.051	0.026
EASA-MS fatal accident rate		
Fatal accident rate over a 4-year period	0.001	0.0004
Accident rate in 2011	0.001	0.001
Accident rate in 2012	0.000	0.000
Accident rate in 2013	0.000	0.000
Accident rate in 2014	0.002	0.001
Accident rate by size of AOC holder when allocated to movement band		
Band A: Less than 7 100 movements	0.17	-
Band B: 7,100 — 35 099 movements	0.18	-
Band C: 35,100 — 101 999 movements	0.06	-
Band D: 102 000 — 199 999 movements	0.04	-
Band E: More than 199 999 movements	0.03	-
Accident rate by size of AOC holder when allocated to flight hour band		



Proposed SPI	Per 10 000 movements	Per 10 000 flight hours
Band A: Less than 14 000 flight hours	-	0.18
Band B: 14,000 — 55 999 flight hours	-	0.09
Band C: 56 000 — 155 999 flight hours	-	0.04
Band D: 156 000 — 399 999 flight hours	-	0.02
Band E: More than 399 999 flight hours	-	0.02
Accident rate by type of aviation activity (CAT)		
Passenger transport (4-year period)	0.04	0.02
Cargo transport (4-year period)	0.13	0.05



Table 4. List of proposed serious incident SPIs

Proposed SPI	Per 10 000 movements	Per 10 000 flight hours
EASA-MS serious incident rate		
Serious incident rate over a 4-year period	0.125	0.067
Serious incident rate in 2011	0.155	0.085
Serious incident rate in 2012	0.131	0.071
Serious incident rate in 2013	0.112	0.059
Serious incident rate in 2014	0.090	0.047
Serious incident rate by size of AOC holder when allocated to movement band		
Band A: Less than 7 100 movements	0.43	-
Band B: 7 100-35 099 movements	0.22	-
Band C: 35 100-101 999 movements	0.19	-
Band D: 102 000-99 999 movements	0.13	-
Band E: More than 199 999 movements	0.12	-
Serious incident rate by size of AOC holder when allocated to flight hour band		
Band A: Less than 14 000 flight hours	-	0.32
Band B: 14 000-55 999 flight hours	-	0.13
Band C: 56 000-155 999 flight hours	-	0.10
Band D: 156 000-399 999 flight hours	-	0.08
Band E: More than 399 999 flight hours	-	0.06
Serious incident rate by type of aviation activity (CAT)		
Passenger transport (4 year period)	0.13	0.07
Cargo transport (4 year period)	0.32	0.13

Tier 2+ monitoring of safety issues takes place within the CAGs and annually during the revision of the safety risk portfolios.

4.3 Environmental performance

The efficiency of actions included in EPAS in relation to environmental protection will continue to be monitored as part of the EAER²¹.

The report is the result of a close collaboration between the EC, EASA, the European Environment Agency (EEA) and Eurocontrol. This EAER provides a valuable source of objective and accurate information on the environmental performance of the aviation sector, and sets the scene for Europe's ambition to make the sector more sustainable. It also includes performance metrics pertaining to the SES ATM Performance Scheme as relevant to environmental protection.

Following its initial issue in 2016, EASA will be responsible to update the EAER every 3 years, in line with the growing role that EASA plays in the field of environment.

²¹ <https://www.easa.europa.eu/eaer/downloads>



Volume II



5 Safety

The actions in this chapter are driven principally by the need to maintain or increase the current level of safety in the aviation sector.

5.1 Systemic enablers

This area addresses system-wide problems that affect aviation as a whole. In most scenarios, these problems become evident by triggering factors and play a significant role in the final outcome of a safety event. They often relate to deficiencies in organisational processes and procedures.

5.1.1 Safety management

Issue/rationale

Safety management is a strategic priority. Despite the fact that last years have clearly brought continued improvements in safety across every operational domain, recent accidents underline the complex nature of aviation safety and the significance of addressing human factor aspects. Authorities and aviation organisations should anticipate more and more new threats and associated challenges by developing SRM principles. These principles will be strengthened through SMS implementation supported by ICAO Annex 19 and Regulation (EU) No 376/2014 (reporting reinforcement).

What we want to achieve

Regulatory framework requiring safety management is in place across all domains of aviation, with proportionate requirements in the area of General Aviation.

Improve the level of safety through effective implementation of safety management within authorities and organisations.

How we monitor improvement

Organisations and authorities are able to demonstrate compliance and effective implementation. For ATM/ANS, this will be monitored as part of the ATM Performance Scheme. For the other domains (air operations, aircrew and aerodromes), it is proposed to start with collecting data on the status of compliance with organisation and authority requirements as relevant to Safety Management (see Section 4.2).



How we want to achieve it: actions

Rulemaking

RMT.0251 Embodiment of safety management system (SMS) requirements into Commission Regulations (EU) Nos 1321/2014²² and 748/2012²³

With reference to ICAO Annex 19, the objective is to set up a framework for safety management in the initial and continuing airworthiness domains.

This RMT is processed in two phases:

1. Changes to Part-M linked to OPS (CAMOs) - Opinion No 06/2016 issued in May 2016
2. Changes to Part-145 and Part 21

Owner

Affected stakeholders

EASA FS.2

CAMOs, AMOs (Part-145), POA holders, DOA holders, ETSOA holders and CAs

PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
				MDM.055	2013-19	06/2016	2019 Q3	2019 Q3
A-	ST	-	1	19/7/2011	10/10/2013	11/5/2016		
			2		2019 Q1	2020 Q1	2021 Q3	2021 Q3

RMT.0262 Embodiment of level of involvement (LOI) requirements into Part 21

Introduction in Part 21 of a risk-based approach for the determination of the LOI of EASA in product certification. This entails introduction of:

- systematic risk management (hazard identification, risk assessment and mitigation);
- performance-based oversight allowing to focus on areas of greater risk;
- safety awareness and promotion among all staff involved; and
- improved effectiveness and efficiency of Part 21 IRs achieved by their streamlining and improved consistency.

In May 2016, EASA issued Opinion No 07/2016 proposing the amendments to Part 21. Furthermore, at the end of 2017 EASA issued the NPA consulting the draft AMC & GM relevant for the application of the proposed amendments. A further NPA, consulting some additional draft AMC & GM will be published upon adoption of the IR. Both NPAs will result in a final decision adopting the AMC & GM to the amended Part 21.

Owner

Affected stakeholders

EASA CT.7

DAHs²⁴

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST		MDM.060	2015-03	07/2016	2019 Q2	2019 Q2
			27/8/2013	2/3/2015	23/5/2016		
				2017-20			
				14/12/2017	n/a	n/a	n/a
				2019 Q1	n/a	n/a	2019 Q2

²² Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1).

²³ Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1).

²⁴ Depending on the case, the design approval holder (DAH) will be the holder of a type-certificate, a restricted type-certificate, a supplemental type-certificate, a European Technical Standard Order (ETSO) authorisation, a major repair design approval, a major change design approval or any other relevant approval or authorisation for products, parts and appliances deemed to have been issued under Commission Regulation (EU) No 748/2012.



RMT.0469 Assessment of changes to functional systems by service providers in ATM/ANS and the oversight of these changes by CAs

Development of the necessary AMC & GM for the service providers and the CAs.

Owner Affected stakeholders

EASA FS.4.1 ANSPs, CAs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
			RMT.0469	2014-13	03/2014	1/3/2017	8/3/2017
B-	ST	-	and RMT.0470	24/6/2014	16/12/2014		
			19/6/2012	2017-10	n/a	n/a	2019 Q4
				28/6/2017			

RMT.0681 Alignment of implementing rules and AMC & GM with Regulation (EU) No 376/2014

Alignment of IRs and AMC & GM with Regulation (EU) No 376/2014.

This task is de-prioritised in accordance with criteria described in Chapter 3.

EASA explores different options in order to include the resulting regulatory changes as part of existing RMTs. To provide feedback to stakeholders on comments made on the NPA, it is planned to publish the full CRD and to extract some of the GM generated with RMT.0681 and issue it as Safety Promotion material.

Owner Affected stakeholders
EASA FS.5 Air operators, pilots, MOs, ATOs, manufacturers²⁵, CAMOs, ADR operators, ATM/ANS providers and ATCO TOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0681	2016-19			
			30/9/2015	19/12/2016	tbd	tbd	tbd

RMT.0706 Update of authority and organisation requirements

Address relevant elements of ICAO Annex 19 considering the latest revision status of the document and ensure appropriate horizontal harmonisation of the requirements across different domains taking on board lessons learned.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner Affected stakeholders
EASA FS CAs, NSAs, air operators, pilots, MOs, ATOs, POA holders, CAMOs, ADR operators, ATM/ANS providers, and ATCO TOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A2	ST	-	tbd	tbd	tbd	tbd	tbd

²⁵ The term 'manufacturer' includes, depending on the case: production approval holder (POAH) and production organisation manufacturing without POA.



Safety Promotion

MST.001 Member States to give priority to the work on SSPs

In the implementation and maintenance of the SSP, Member States shall in particular:

- ensure effective implementation of the authority requirements and address deficiencies in oversight capabilities, as a prerequisite for effective SSP implementation,
- ensure effective coordination between State authorities having a role in safety management,
- ensure that inspectors have the right competencies to support the evolution towards risk- and performance-based oversight,
- ensure that policies and procedures are in place for risk- and performance-based oversight, including a description of how an SMS is accepted and regularly monitored,
- establish policies and procedures for safety data collection, analysis, exchange and protection, in accordance with Regulation (EU) No 376/2014,
- establish a process to determine SPIs at State level addressing outcomes and processes,
- ensure that an approved SSP document is made available and shared with other Member States and EASA,
- ensure that the SSP is regularly reviewed and that the SSP effectiveness is regularly assessed.

Owner	Activity sector	Deliverable	Date
MS	All	SSP document made available	2019
		SSP effectively implemented	2025

MST.002 Promotion of SMS

Encourage implementation of safety promotion material developed by the Safety Management International Collaboration Group (SMICG) and other relevant sources.

Owner	Activity sector	Deliverable	Date
MS	All, HF	Best practice	Continuous

MST.003 Member States should maintain a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes

States should maintain a regular dialogue with their operators on FDM programmes, with the objectives of:

- promoting the operational safety benefits of FDM and the exchange of experience between subject matter experts,
- encouraging operators to make use of good-practice documents produced by EOFDM and similar safety initiatives.

The document titled 'Guidance for National Aviation Authorities on setting up a national flight data monitoring forum' (produced by EAFDM) is offering guidance for this purpose

Owner	Activity sector	Deliverable	Date
MS	CAT	Report on activities performed to promote FDM	Continuous



MST.026

SMS assessment

Without prejudice to any obligations stemming from the SES ATM Performance Scheme, MSs should make use of the EASA management system assessment tool²⁶ to support risk- and performance-based oversight. MSs should provide feedback to EASA on how the tool is used, for the purpose of standardisation and continual improvement of the assessment tool.

MSs should regularly inform EASA about the status of compliance with SMS requirements and SMS performance of their industry.

Owner	Activity sector	Deliverable	Date
MS	Air Operations, Aircrew, Medical, Aerodromes	Feedback on the use of the tool. Feedback on the status of SMS compliance and performance	Continuous with annual reporting

MST.028

Member States to establish and maintain a State Plan for Aviation Safety

Member States shall ensure that a SPAS is maintained and regularly reviewed.

Member States shall identify in SPAS the main safety risks affecting their national civil aviation safety system and shall set out the necessary actions to mitigate those risks.

In doing so, Member States shall consider the pan-European safety risk areas identified in EPAS for the various aviation domains as part of their SRM process and, when necessary, identify suitable mitigation actions within their SPAS. In addition to the actions, SPAS shall also consider how to measure their effectiveness. MSs shall justify why action is not taken for a certain risk area identified in EPAS.

The pan-European safety risk areas in the current EPAS edition are as follows:

- For CAT by aeroplane: aircraft upset in flight, runway safety, airborne conflict, ground safety, terrain collision, and aircraft environment
- For rotorcraft operations: helicopter upset in flight and terrain and obstacle conflict
- For General Aviation: staying in control, coping with weather, preventing mid-air collisions and managing the flight

SPAS shall:

- describe how the plan is developed and endorsed, including collaboration with different entities within the State, with industry and other stakeholders (unless this is described in the SSP document),
- include safety objectives, goals, indicators and targets (unless these are included in the SSP document),
- reflect the EPAS actions as applicable to the State,
- identify the main safety risks at national level in addition to the ones identified in EPAS.

NB: This MST action now includes MST actions 004, 005, 006, 007, 010, 014, 016 and 018 from EPAS 2018-2022.

MST.007 corresponds to SAF11 (Prevention of RWY Excursions) in the ATM MP's (Level 3 Ed 2018).

Owner	Activity sector	Deliverable	Date
MS	ALL	SPAS established	2020

²⁶ <https://www.easa.europa.eu/document-library/general-publications/management-system-assessment-tool>



SPT.057	SMS international cooperation Promote the common understanding of safety management and human factor principles and requirements in different countries, share lessons learned and encourage progress and harmonisation, through active participation in the SMICG.
Owner	Activity sector Deliverable Date
EASA FS.2	All Guidance/training material/best practice Continuous
SPT.076	FDM precursors of main operational safety risks EASA should, in partnership with the industry, complete the good practice documentation which supports the inclusion of main operational safety risks such as runway excursion (RE), loss of control in-flight (LOC-I), controlled flight into terrain (CFIT) and MAC into operators' FDM programmes..
Owner	Activity sector Deliverable Date
EASA SM.1 + EOFDM	CAT Good-practice document 2019
SPT.077	Good practices for the integration of operator's FDM data with other safety data sources EASA should, in partnership with the industry, establish good practices that help an operator in integrating its FDM data with other safety data sources.
Owner	Activity sector Deliverable Date
EASA SM.1 + EOFDM	CAT Good-practice document 2019

5.1.2 Human factors and competence of personnel

Issue/rationale

Human factors and the impact on human performance, as well as competence of personnel are a key strategic enabler. As new technologies and/or operating concepts emerge on the market and the complexity of the system continues increasing, it is of key importance to have the right competencies and adapt training methods to cope with new challenges. It is equally important for aviation personnel to take advantage of the opportunities presented by new technologies to enhance safety.

The safety actions identified currently — related to aviation personnel — are aimed at introducing competency-based training in all licences and ratings, updating fatigue risk management (FRM) requirements and facilitating the availability of appropriate personnel in CAs. These actions will contribute to mitigating safety issues in all domains, such as: personal readiness, flight crew perception or crew resource management (CRM) and communication, which play a role in improving safety across all aviation domains.

What we want to achieve

Ensure continuous improvement of all aviation personnel competence.

How we monitor improvement

Measurable improvement in aviation personnel competence at all levels (flight crews, ATCOs and CAs).

How we want to achieve it: actions



Rulemaking

RMT.0106 Certification specifications and guidance material for maintenance certifying staff type rating training

The main objective is to improve the level of safety by requiring the applicant for a type certificate (TC) or restricted TC for an aircraft to identify the minimum syllabus of maintenance certifying staff type rating training, including the determination of type rating.

This minimum syllabus, together with the requirements contained in Appendix III to Annex III (Part-66) to Commission Regulation (EU) No 1321/2014, will form the basis for the development and approval of Part-66 type rating training courses.

Owner

EASA FS.1

Affected stakeholders

DAHs, maintenance personnel, approved maintenance training organisations (Part-147), and CAs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0106 28/7/2014	2018-11 18/9/2018	n/a	n/a	2019 Q4

RMT.0188 Update of EASA FCL implementing rules

A complete first review of Part-FCL addressing a number of issues to be clarified or amended as identified by industry and MS. It also establishes a flight examiner manual (FEM) and a first draft of the learning objectives (LOs). Some of these corrections and clarifications also pertain to alleviations for the GA community. See Opinion No 05/2017.

Owner

EASA FS.3

Affected stakeholders

Flight examiners, instructors, pilots, ATOs and DTOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	FCL.002 2107/2011	2014-29 17/12/2014	05/2017 29/6/2017	2019 Q3	2019 Q3

RMT.0194 Modernise the European pilot training system and improve the supply of competent flight instructors.

The task aims, whilst making use of performance-based rulemaking criteria, to:

1. modernise and simplify the European pilot training system;
2. consider the recommendations from the ex post evaluation of Part-FCL commenced in 2018 under EVT.6;
3. consider the concept paper on instructors and examiners developed under the former RMT.0596;
4. introduce/transpose the latest ICAO Annex 1 and associated ICAO documents on the competency-based training and assessment (CBTA) concept for the appropriate licences and ratings; and
5. extend the principles of threat and error management (TEM) to all licences and ratings, as applicable.

EASA may divide the task in 2 or more phases to give priority to improving the regulatory framework to facilitate an adequate supply of instructors.

This task now incorporates the content of RMT.0596.

Owner

EASA FS.3

Affected stakeholders

Pilots, flight instructors, flight examiners, ATOs, DTOs, air operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2019 Q3	2021 Q3	2023 Q1	2025 Q1	2025 Q1



RMT.0196 Improve flight simulation training devices (FSTDs) fidelity

An ICAO harmonisation issue, as the main purpose is to include in the European provisions elements from ICAO Doc 9625 for the use of FSTDs in flight training. The task will also address three SRs and aims at including results and findings from the loss of control avoidance and recovery training (LOCART) and RMT.0581 working group results. Harmonisation with the FAA should be considered.

Subtask 1:

The main objective of Work Package 1 (WP 1) is to increase the fidelity of the provisions to support the approach-to-stall training, as well as of the new upset prevention and recovery training (UPRT) requirements as proposed by Opinion No 06/2017 (RMT.0581).

Subtask 2:

The main objective for Work Package (WP2) is to review the technical requirements for training devices to reflect their actual capability and technology advancement.

Subtask 3:

The main objective for Work Package (WP3) is to address any relevant and appropriate emerging issues relevant to the CS-FSTDs including the feasibility for developing CS-FSTD requirements for power-lift/tilt rotor aircraft.

Owner			Affected stakeholders					
EASA FS.3			Air operators, ATOs, DTOs, pilots, instructors, and flight examiners					
PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	1	RMT.0196 15/7/2016	2017-13 25/7/2017	n/a	n/a	3/5/2018
			2		2019 Q1	n/a	n/a	2020 Q2
			3		2021 Q2	n/a	n/a	2022 Q4

RMT.0486 Align with ICAO SARPs on ATCO fatigue management provisions

Align with ICAO SARPs on the subject provisions.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders					
EASA FS.4.2			ANSPs and ATCOs					
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision	
B-	ST	-						

RMT.0544 Review Part-147

Amend Part-147 in line with the conclusions of the evaluation report issued following EVT.002²⁷.

Owner			Affected stakeholders					
EASA FS.1			AMTOs and CAs					
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision	
n/a	ST	-	2019 Q1	2020 Q3	2021 Q3	2023 Q3	2023 Q3	

²⁷ https://www.easa.europa.eu/sites/default/files/dfu/18D50946_Evaluation%20Report%20Part-66_147%20to%20AB%29.pdf



RMT.0589 Rescue and firefighting services (RFFS) at aerodromes

The objective of this RMT is to ensure a high and uniform level of safety by establishing minimum medical standards for rescue and firefighting personnel required to act in aviation emergencies. It will also ensure that the level of protection for rescue and firefighting at ADRs serving all-cargo or mail flights is proportionate to this type of traffic and their particular requirements. Finally, it will as well ensure a clearer implementation of the remission factor in general.

The RMT will lead to changes at AMC & GM level only. It has been split in two sub-tasks. :

(1) 1st sub-task: Remission factor, cargo flights, etc. The first sub-task is completed. Decision 2016/009/R published on 23/5/2016.

(2) 2nd sub-task: RFFS personnel physical and medical fitness standards

Owner

EASA FS.4.3

Affected stakeholders

CAs, ADR operators

PIA	Proc	3rdC	SubT.	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	1	RMT.0589 10/4/2014	2015-09 9/7/2015	n/a	n/a	2016/009/R 23/05/2016
			2		2018 Q4	n/a	n/a	2019 Q4

RMT.0595 Technical review and regular update of learning objectives and syllabi for commercial licences (IR)

Technical review of theoretical knowledge syllabi, learning objectives, and examination procedures for the air transport pilot licence (ATPL), MPL, commercial pilot licence (CPL), and instrument rating (IR).

Owner

EASA FS.3/ECQB
Team

Affected stakeholders

CAs, ATOs, student pilots and ECQB

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0595 11/3/2015	2016-03 9/6/2016	n/a	n/a	8/2/2018
				2021 Q1	n/a	n/a	2022 Q1

RMT.0599 Update of ORO.FC (evidence-based training)

A complete review of the provisions contained in ORO.FC. In a first phase, it will include the introduction of evidence-based training (EBT) and competency-based training and assessment (CBTA) in the field of recurrent training and other training-related implementation issues.

The second phase will include the extension of EBT to other parts of the operator's training (e.g. conversion course, type rating) allowing a single philosophy of training to the operator, and a third phase that will extend EBT to other aircrafts types (e.g. helicopters, business jets) allowing a single philosophy of training across the industry. Also, it will include other implementation issues on the training-related rules brought to the attention of EASA.

Owner

EASA FS.3

Affected stakeholders

Pilots, flight instructors, flight examiners, ATOs and air operators

PIA	Proc	3rdC	SubT.	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	1	RMT.0599 5/2/2016	2018-07 27/7/2018	2019 Q2	2021 Q2	2021 Q2
			2		2021 Q3	2022 Q3	2024 Q3	2024 Q3
			3		2024 Q3	2025 Q3	2027 Q3	2027 Q3



RMT.0700 Aircrew medical fitness — Implementation of the recommendations made by the EASA-led Germanwings Task Force on the accident of the Germanwings Flight 9525

Preventive measures stemming from the Task Force:

- (1) carry out a psychological assessment of the flight crew before commencing line flying;
- (2) enable, facilitate and ensure access to a flight crew support programme; and
- (3) perform systematic drug and alcohol (D&A) testing of flight and cabin crew upon employment.

In August 2016, EASA issued Opinion No 09/2016 updating Part-MED.

In December 2016, EASA issued Opinion No 14/2016 addressing the safety issues identified by the EASA-led Germanwings Task Force on the accident of the Germanwings Flight 9525.

*The AB consultation replaced the NPA.

NOTE: Commission Regulation (EU) 2018/1042 will apply as from 14 August 2020.

Owner			Affected stakeholders				
EASA FS.2 / FS.3			Pilots, AMEs, AeMCs, CAs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	DP	-	RMT.0700 20/4/2016	n/a*	09/2016 11/8/2016 14/2016 9/12/2016	R(EU) 2018/1042 23/7/2018	2018 Q4 n/a

Research

RES.006 Effectiveness of flight time limitations (FTL)

The objective is to develop and demonstrate the due process for the assessment of the effectiveness of FTL and FRM provisions as set in Article 9a of Regulation (EU) No 965/2012²⁸. Particular emphasis will be put on the establishment and qualification of the appropriate metrics with a view to ascertaining the necessity for their update towards improving flight safety by better mitigating the possibly associated risks.

The Agency shall conduct a continuous review of the effectiveness of the provisions concerning flight and duty time limitations and rest requirements contained in Annexes II and III. No later than 18 February 2019 the Agency shall produce a first report on the results of this review.

Such review shall involve scientific expertise and shall be based on operational data gathered, with the assistance of MS, on a long-term basis after the date of application of this Regulation.

Owner	Activity sector	Deliverable	Date
EC (H2020)	CAT, HF	Report	2019 Q4

²⁸ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).



5.1.3 Aircraft tracking, rescue operations and accident investigation

Issue/rationale

Safety investigation authorities have frequently raised the issue of lack of data to support investigations of light aircraft accidents. This is also related to the fact that light aircraft are not required to carry a flight recorder. As regards large aircraft, the advent of new technologies, as well as findings during safety investigations highlight the need to update the installation specifications for flight recorders.

The safety actions in this area are aimed at introducing normal tracking of large aircraft, improving the availability and quality of data recorded by flight recorders, assessing the need for in-flight recording for light aircraft and the need to introduce data link recording for in-service large aircraft.

What we want to achieve

Increase safety by facilitating the recovery of information by safety investigation authorities and thus helping to avoid future accidents.

How we monitor improvement

Number of investigated accidents or serious incidents in which flight data was not recovered.

How we want to achieve it: actions

Rulemaking

RMT.0249 Recorders installation and maintenance thereof — certification aspects

The general objective of this RMT is to improve the availability and quality of data recorded by flight recorders in order to better support safety investigation authorities in the investigation of accidents and incidents. More specifically, this RMT is aimed at modernising and enhancing the specifications for flight recorder installation on board large aeroplanes and large rotorcraft.

Phase 1 of the RMT resulted in the publication of NPA 2018-03. Following the public consultation of said NPA, EASA will develop an opinion and a decision amending CS-25 and CS-29. Topics addressed in phase 1 include flight data recorder (FDR)/cockpit voice recorder (CVR) power supply, means to automatically stop the recording after an accident, combination recorders, etc.

In phase 2 of this RMT, EASA will prepare a second NPA (planned for Q3/2019), which will lead to a decision amending CS-25 and CS-29. Topics addressed in phase 2 will include data link recording, serviceability of flight recorders, quality of recording of CVR, performance specifications for flight recorders and deployable recorders.

Both phases will affect CS 25 and CS 29, but phase 1 will also include an opinion with a proposal to amend Part-CAT.

Owner

EASA CT.7

Affected stakeholders

Operators (of aircraft required to be equipped with flight recorders), POA holders and DOA holders

PIA	Proc	3rdC	SubT.	ToR	NPA	Opinion	Commission IR	Decision
			1	RMT.0249 (MDM.051) 18/9/2014	2018-03 27/3/2018	2019 Q1	2021 Q1	2021 Q1
B-	ST	-	2		2019 Q3	n/a	n/a	2020 Q3



RMT.0271 In-flight recording for light aircraft

Assess the need for in-flight recording and make proportionate suggestions for categories of aircraft and types of operation covered by the air operations rules for which there is no flight recorder carriage requirement.

Owner			Affected stakeholders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	25/7/2014	2017-03 3/4/2017	2019 Q1	2021 Q3	2021 Q3

RMT.0294 Data link recording retrofit for aircraft used in CAT

Assess the need to introduce data link recording for in-service aircraft in line with ICAO Annex 6 Parts I and III.

Owner			Affected stakeholders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2020 Q1	2021 Q1	2022 Q1	2023 Q1	2023 Q1



RMT.0400

Amendment of requirements for flight recorders and underwater locating devices

All IRs were adopted with Commission Regulation (EU) 2015/2338; however, the AMC & GM for CAT.GEN.MPA.205 (Aircraft tracking — aeroplanes) and CAT.GEN.MPA.210 (Location of an aircraft in distress) in the rules for air operations have not yet been issued. In addition, it has been identified that amendments to certification specifications may be necessary to facilitate the implementation of CAT.GEN.MPA.210.

SubT 1: ED Decision 2015/021/R: this Decision modified some of the AMC and GM related to FDR and CVR serviceability (refer to CAT.GEN.MPA.195(b)). It also updated the performance specifications for two of the FDR parameters (refer to CAT.IDE.A.190), and it clarified the scope of the performance specifications applicable to the CVR (refer to CAT.IDE.A.185 and CAT.IDE.H.185)

SubT 2: ED Decision 2015/030/R: this Decision completed the AMC and GM related to the serviceability of the CVR (refer to ORO.MLR.100 and CAT.GEN.MPA.195(b)), the preservation of the CVR recording after an accident or a serious incident (refer to CAT.GEN.MPA.195(a)), the performance and installation of the long-range underwater locating device (see CAT.IDE.A.285(f)). It also clarified the applicability of the data link recording requirements (refer to CAT.IDE.A.195 and CAT.IDE.H.195)

SubT 3: ED Decision 2016/012/R: this Decision updated the AMC and GM related to the protection of the CVR in normal operation (see CAT.GEN.MPA.195(f)). It also introduced operational requirements for FDRs installed on aeroplanes and helicopters first issued with an individual CofA on or after 1 January 2023 (see CAT.IDE.A.190 and CAT.IDE.H.190). Finally, this Decision clarified the time intervals between two inspections of the FDR and CVR recordings (refer to CAT.GEN.MPA.195(b))

SubT 4: ED Decision 2017/023/R: this Decision provided AMC and GM for the implementing rule on aircraft tracking (CAT.GEN.MPA.205)

SubT 5: This Decision will provide the Certification Specifications, AMC and GM for the implementing rule on location of an aircraft in distress (CAT.GEN.MPA.210). The scope of this Decision encompasses air operations, initial airworthiness and air traffic management.

Owner			Affected stakeholders					
EASA FS.2+CT.4			Aircraft operators and POA holders					
PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	1	OPS.090 26/9/2012	2013-26 20/12/2013	01/2014 06/05/2014	R(EU) 2015/2338 11/12/2015	2015/021/R 12/10/2015
			2	n/a	n/a	n/a	n/a	2015/030/R 17/12/2015
			3	n/a	n/a	n/a	n/a	2016/012/R 12/9/2016
			4	n/a	n/a	n/a	n/a	2017/023/R 14/12/2017
			5		2019 Q1	n/a	n/a	2019/Q4

Research
RES.013

Quick recovery of flight data recordings

Assess means to recover flight recorder data quickly after an accident for the purpose of faster corrective actions, their limitations as well as the related challenges for standardisation and deployment.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Report	2020



5.1.4 Impact of security on safety

Issue/rationale

The safety actions in this area are aimed at mitigating the security-related safety risks.

The safety actions in this area also include the mitigation of the risks posed by flying over zones where an armed conflict exists.

Managing the impact of security on safety is a strategic priority.

What we want to achieve

Increase safety by managing the impact of security on safety and mitigating related safety risks.

How we monitor improvement

Continuous assessment and mitigation of security threats

How we want to achieve it: actions

Rulemaking

RMT.0648 Aircraft cybersecurity

The specific objective of this task is to mitigate the safety effects stemming from cybersecurity risks due to acts of unlawful interference with the aircraft on-board electronic networks and systems. To achieve this objective, it is proposed to introduce in CS-25 new cybersecurity provisions taking into account the existing special condition and the recommendations of the ASISP ARAC group. The need to include similar provisions in CS-29, CS-27, CS-23, CS-E, CS-ETSO and CS-P will also be considered.

Owner

EASA CT.7

Affected stakeholders

Applicants for TC/STC for large aeroplanes or large rotorcraft

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	✓	RMT.0648 17/5/2016	2019 Q1	n/a	n/a	2019 Q3

RMT.0720 Cybersecurity risks

The specific objective of this task is to create a regulatory system which efficiently contributes to the protection of the aviation system from cyberattacks and their consequences. To achieve this objective, it is proposed to introduce a regulation covering all the aviation domains (design, production, maintenance, operations, aircrew, ATM/ANS, ADR), which include high-level, performance-based requirements, and which is supported by AMC & GM and industry standards.

Owner

EASA FS.4

Affected stakeholders

POA holders, AOC holders, AMOs (Part-145), CAMOs, ATOs, ATCOs, ATM/ANS providers, ADR operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	✓	2018 Q4	2019 Q2	2020 Q2	2022 Q4	2022 Q4



Safety Promotion

SPT.071 Strategy for cybersecurity in aviation

Citizens travelling by air are more and more exposed to cybersecurity threats. 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 will be developed jointly by the EC and EASA in close coordination with the European Strategic Coordination Platform (ESCP), which is composed of representatives from the EC, relevant European Agencies and organisations, MSs and industry associations as well as other worldwide regulatory partners and military organisations.

This strategy will include, among others, actions in the following areas:

- Information sharing
- Research and studies
- Event investigation and response
- Knowledge and competence building
- International cooperation and harmonisation
- Regulatory activities and development of industry standards

This strategy for cybersecurity in aviation, together with the wider cybersecurity strategy being implemented in the EU for the protection of EU citizens against cybercrime, will pave the way for a secure and safe air transport system.

Owner	Activity sector	Deliverable	Date
EASA, EC, MS	ALL	Strategy Paper	2019

SPT.078 Disseminate information on conflict zones

In the aftermath of the B777 MH17 accident, an EU high-level task force is working to define further actions to be taken at European level in order to provide common information on risks arising from conflict zones.

Owner	Activity sector	Deliverable	Date
EASA SM.1	ALL	Information to MSs	Continuous

SPT.100 Safety promotion on disruptive passengers

Develop safety promotion material to support operators with the reduction of the risks associated with disruptive/unruly passengers.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Safety Promotion material	2019

Research

RES.012 Cybersecurity: common aeronautical vulnerabilities database

Develop a vulnerabilities database in order to collect, maintain and disseminate information about discovered vulnerabilities targeting major transport information systems. The project would include the identification of the type of information that this database would contain, how this database could be populated and how we can take advantage of the database in order to obtain an accurate landscape of cybersecurity risks. It should also include a 'prototype phase' with some initial population.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	ALL	Database	2021



5.1.5 Oversight and standardisation

The safety actions in this area are aimed at addressing issues emerging from standardisation activities, with focus on the safety oversight responsibilities of the MSs. The conclusions of the EASA 2017 SAR are also taken into account.

Issue/rationale

Authority requirements, introduced in the rules developed under the first and second extension of the EASA scope, define what MSs are expected to implement when performing oversight of the organisations under their responsibility. In particular, they introduced the concept of risk-based oversight with the objective of addressing safety issues with a consideration to efficiency.

This section includes actions focusing on supporting the implementation of these authority requirements by updating inspector qualifications, enabling the implementation of risk-based oversight, supporting and fostering the implementation of cooperative oversight through the sharing of best practices and guidance, dedicated workshops, etc.

The increased complexity of the aviation industry and the number of interfaces between organisations call for improved cooperation between them, their contracted services and regulators. To facilitate the implementation of cooperative oversight, EASA worked with the CAs of four MSs on a trial project and published the outcome in February 2017²⁹. However, standardisation activities show that cooperative oversight is not yet implemented at a satisfactory level and that CAs, with the exception of a few cases, have not sufficiently invested to address these elements.

What we want to achieve

A robust oversight system across Europe, where each CA is able to properly discharge its oversight responsibilities, with particular care to the exchange of information and cooperation with other CAs, to the implementation of management systems in all organisations, as well as to ensuring the availability of adequate personnel in CAs.

How we monitor improvement

Significant increase in the number of EASA MSs implementing risk-based oversight as well as increase in the number of EASA MSs making use of the cooperative oversight provisions for organisations/persons certified by the CA of another MS.

Section 4.2 proposes to monitor MSs' oversight capabilities and the status of compliance with SMS requirements in aviation organisations respectively.

How we want to achieve it: actions

EASA has identified the following areas for focused attention, where a joint effort from the MSs and EASA could bring the expected improvements.

²⁹ Cooperative Oversight Trial June 2015-May2016; cf. <https://www.easa.europa.eu/document-library/general-publications/cooperative-oversight-trial>



Rulemaking

RMT.0516 Update of the rules on air operations (Air OPS Regulation — all Annexes & related AMC & GM)

- Improve the authority and organisational requirements of the Air OPS Regulation taking into account identified implementation issues;
- Better identify inspector qualifications;
- Take into account new business models, as appropriate;
- Take into account the development of any lessons learned from the implementation of SMS;
- Ensure compliance with the ICAO Standards And Recommended Practices (SARPs);
- Address identified safety issues such as pax seating and briefing;
- GA Road Map issues.

Owner		Affected stakeholders					
EASA FS.2		All operators and CAs					
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0516 & RMT.0517 16/9/2013	2015-05 27/11/2015	04/2017 29/6/2017	2019 Q2	2019 Q2

Focused attention topics

FOT.003 Unavailability of adequate personnel in competent authorities

MSs to ensure that adequate personnel is available to discharge their safety oversight responsibilities; EASA Standardisation to monitor the availability of staff in CAs.

Owner	Activity sector	Deliverable	Date
EASA FS and MS	ALL	SAR	Annually

FOT.007 Cooperative oversight in all sectors

EASA will ensure that the EASA standardisation inspections monitor whether the applicable authority requirements are adhered to in all sectors. The objective is to ensure that each organisation's activities are duly assessed, known to the relevant authorities and that those activities are adequately overseen, either with or without an agreed transfer of oversight tasks.

In parallel, EASA will continue to support CAs in the practical implementation of cooperative oversight, e.g. benefiting from the outcome of the trial projects conducted between UK, NO, FR, CZ, as well as with exchanges of best practices and guidance.

Owner	Activity sector	Deliverable	Date
EASA FS, MS	ALL	Feedback from standardisation	2019

FOT.008 Organisations management system in all sectors

EASA will ensure that the EASA standardisation inspections pay due attention to the ability of CAs to assess and oversee the organisations' management system in all sectors.

This will focus in particular on safety culture, the governance structure of the organisation, the interaction between the risk identification/assessment process and the organisation's monitoring process, the use of inspection findings and safety information such as occurrences, incidents, and accidents. This should lead CAs to adapt and improve their oversight system.

Owner	Activity sector	Deliverable	Date
EASA FS, MS	ALL	Feedback from standardisation	2019



5.2 CAT by aeroplane

During 2017 there were no fatal accidents involving European AOC holders performing CAT passenger/cargo operations with aeroplanes having a maximum take-off weight above 5 700 kg (hereafter referred to as ‘CAT aeroplane operations’). In this category, there were 15 non-fatal accidents; however, the number of non-fatal accidents was lower than the average of the previous 10-year period.

In 2017 the number of serious incidents in this category increased in comparison to the average of the previous 10-year period, with 99 serious incidents recorded in 2017 in comparison to the 10-year period average of 79,2.

This operational domain remains the greatest focus of the EASA safety activities. The CAGs and ABs will help EASA to learn more about the safety challenges faced by airlines and manufacturers.

5.2.1 Aircraft upset in flight (LOC-I)

Issue/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.

Aircraft upset or loss of control is the most common accident outcome for fatal accidents in CAT aeroplane operations. It includes uncontrolled collisions with terrain, but also occurrences where the aircraft deviated from the intended flight path or aircraft flight parameters, regardless of whether the flight crew realised the deviation and whether it was possible to recover or not. It also includes the triggering of stall warning and envelope protections.

What we want to achieve

Increase safety by continuously assessing and improving risk controls to mitigate the risk of loss of control.

How we monitor improvement

Continuous monitoring of safety issues identified in the CAT Safety Risk Portfolio for CAT airline and NCC business aeroplane operations (ref: ASR 2018, Section 2.1).

How we want to achieve it: actions

Rulemaking

RMT.0397 Unintended or inappropriate rudder usage — rudder reversals

- To propose an amendment of CS-25 to protect the aeroplane against the risk of unintended or inappropriate rudder usage. This may be achieved either by taking actions to mitigate erroneous rudder inputs from pilots to ensure safe flight, or by proposing actions that will ensure pilots will not make the erroneous rudder input.
- To determine if retroactive specifications are suitable for already certified large aeroplanes. In case of a positive answer, to propose Part-26/CS-26 standards, eventually including applicability criteria. Those standards may differ from the ones proposed for CS-25 amendment.

Owner

EASA CT.7

Affected stakeholders

DAHs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMR.0397 30/5/2017	2017-18 27/11/2017	n/a	n/a	2018 Q4



RMT.0581 Loss of control prevention and recovery training

Review of the provisions for initial and recurrent training in order to address UPRT. The review will also address the implementation of the ICAO documents and several SRs. Other aspects to be covered are manual aircraft handling of approach to stall and stall recovery (including at high altitude), the training of aircraft configuration laws, the recurrent training on flight mechanics, and training scenarios (including the effect of surprise). This RMT is split into multiple deliverables. See the related ToR on the EASA website.

Note: Recurrent and conversion training provisions related to UPRT were already published in May 2015. They have been applicable as of May 2016.

Owner			Affected stakeholders				
EASA FS.3			Pilots, instructors, flight examiners, ATOs, and Air Operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0581 and RMT.0582	2015-13	n/a	n/a	4/5/2015
			20/8/2013	1/9/2015	06/2017		
					29/6/2017	2019 Q2	2019 Q2

Safety Promotion

SPT.012 Promote the new European provisions on pilot training

The objective is to complement the new regulatory package on UPRT and EBT with relevant safety promotion material.

Owner	Activity sector	Deliverable	Date
EASA FS.3	ALL, HF	Safety Promotion	2019

Research

RES.010 Ice crystal detection

Ice crystal icing phenomenon is still posing a severe threat to high-altitude flying, in particular to new engine designs. Pilots have little or no means to detect and/or avoid it, especially at night. A research is proposed in order to better detect the presence of ice crystal icing and to develop an equipment suitable to detect such a phenomenon.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	CAT	Report	2022

RES.017 Icing hazard linked to supercooled large droplet (SLD)

Characterisation of phenomena (SLD icing) and analysis of impact/mitigation for safety in order to develop relevant airworthiness standards and means of compliance.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	CAT	Report	2022



5.2.2 Runway safety

Issue/rationale

This section deals with runway excursions, runway incursions and runway collisions, and is of a strategic priority.

Runway excursion covers materialised runway excursions, both at high and low speed, and occurrences where the flight crew had difficulties maintaining the directional control of the aircraft or of the braking action during landing, where the landing occurred long, fast, off-centred or hard, or where the aircraft had technical problems with the landing gear (not locked, not extended or collapsed) during landing. Runway excursions account for 81 high-risk occurrences recorded in the period 2013-2017 in CAT aeroplane and NCC (business) operations.

Runway incursion refers to the incorrect presence of an aircraft, vehicle or person on an active runway or in its areas of protection. Their accident outcome, runway collisions, account for 28 high-risk occurrences recorded in the period 2013-2017. Despite the relatively low number, the risk of the reported occurrences was demonstrated to be very real.

What we want to achieve

Increase safety by continuously assessing and improving risk controls to mitigate the risk of REs and RIs.

How we monitor improvement

Continuous monitoring of safety issues identified in the ADR and ground handling and the ATM/ANS Safety Risk Portfolios (see ASR 2018 Sections 6.2 and 7.2 respectively).

How we want to achieve it: actions

Rulemaking

RMT.0296 Review of aeroplane performance requirements for operations

- Develop regulatory material to provide improved clarity, technical accuracy, flexibility or a combination of these benefits for the EU operational requirements on aeroplane performance in air operations with the aim of reducing the number of accidents and serious incidents where aeroplane performance is a causal factor; and
- Contribute to the harmonisation of the FAA and EU operational requirements on aeroplane performance in CAT operations.

Owner

EASA FS.2

Affected stakeholders

Aeroplane Operators, POA holders, CAs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0296 (OPS.008(A))	2016-11 30/9/2016	2019 Q1	2021 Q1	2021 Q1

RMT.0570 Reduction of runway excursions

The objective of this task is to increase the level of safety by reducing the number of REs through mandating existing technologies on aeroplane that allow to measure remaining runway left and thus support pilot-decision-making.

Due to the nature of the comments received on NPA 2013-09, EASA has decided to publish a new NPA on the reduction of REs. The proposal of the new NPA puts more emphasis on safety objectives against the risk of REs, while providing more flexibility in terms of design solutions. The means to achieve these objectives will be provided in a technical standard developed jointly by industry and CAs with the support of an international standardisation body (EUROCAE).



Owner

EASA CT.7

Affected stakeholders

Air Operators, POA holders, applicants for TC/STC

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0570 9/10/2012	2013-09 10/5/2013 2018-12 15/10/2018	n/a 2019 Q3	n/a 2021 Q2	n/a 2021 Q2



RMT.0703 Runway safety

EAPPRI and EAPPRE contain several recommendations to CAs, ADR operators and EASA in order to mitigate the risks.

In the ADR domain, EASA had included in Regulation (EU) No 139/2014³⁰ and in the relevant AMC & GM and CS many of these recommendations; however, there are some of them that have not been addressed.

This RMT now includes RMT.0704 ‘Runway surface condition assessment and reporting’.

Owner			Affected stakeholders				
EASA FS.4.3			ADR operators, AOC holders, GA, ANSPs and CAs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A1 to 2.5	ST	-	RMT.0703 14/9/2017	2018 Q4	2019 Q2	2020 Q2	2020 Q2

RMT.0722 Provision of aeronautical data by the ADR operator

Revision and update of Regulation (EU) No 139/2014 and of the related AMC and GM in order to include the provisions of Chapter 2 of ICAO Annex 14 and the provisions of ICAO Annex 15 in regard to the provision of aeronautical data by the ADR operator.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.4.3			ADR operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A2	ST	-					

Safety Promotion

MST.029 Implementation of SESAR runway safety solutions

MSs 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 nets³¹.

These SESAR solutions designed to improve runway safety should be implemented as far as it is feasible.

See SESAR Solutions Catalogue:

[https://www.sesarju.eu/sites/default/files/solutions/SESAR Solutions Catalogue Ed2 2017.pdf](https://www.sesarju.eu/sites/default/files/solutions/SESAR_Solutions_Catalogue_Ed2_2017.pdf)

This EPAS action is aligned with the ATM MP’s (Level 3 Ed 2018) action ATC02.9 Enhanced STCA in TMAs .

Owner	Activity sector	Deliverable	Date
ADR operators/ANSPs/MS	CAT/GA, HF	SPAS	2020

5.2.3 Airborne conflict (Mid-air collisions)

Issue/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. Although there have been no CAT aeroplane airborne collision accidents in recent years within the EASA MSs, this key risk area has been raised by a number of MSs 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

³⁰ Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 44, 14.2.2014, p. 1)

³¹ See link <https://www.atmmasterplan.eu/exec/operational-changes>



one specific safety issue that is a main priority in this key risk area. The risk scoring of accidents and serious incidents warrants the inclusion of airborne conflict as a key risk area in this domain.

What we want to achieve

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

How we monitor improvement

Increase safety by continuously monitoring safety issues identified in the CAT Safety Risk Portfolio for CAT Airline and NCC business aeroplane operations (see ASR 2018, Section 2.1).

How we want to achieve it: actions

Rulemaking

RMT.0376 Anti-collision systems on aircraft other than aeroplanes in excess of 5 700 kg or 19 pax

Set up the framework for reducing the risk of MACs. This task will include a thorough impact assessment aimed at evaluating the cost-benefit of anti-collision systems carriage.

This task is rescheduled in accordance with the criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.4.2			AOC holders, GA				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	2019 Q1	2021 Q3	2022 Q3	2024 Q3	2024 Q3

Safety Promotion

MST.024 Loss of separation between civil and military aircraft

Several EU MSs have reported an increase in losses of separation involving civil and military aircraft and more particularly an increase in non-cooperative military traffic over the high seas. Taking into account this situation, and the possible hazard to civil aviation safety, the EC mandated EASA to perform a technical analysis of the reported occurrences. The technical analysis issued a number of recommendations for the MS:

- endorse and fully apply Circular 330;
- closely coordinate to develop, harmonise and publish operational requirements and instructions for state aircraft to ensure that 'due regard' for civil aircraft is always maintained;
- develop and harmonise civil/military coordination procedures for ATM at EU level;
- report relevant occurrences to EASA; and
- facilitate/make primary surveillance radar data available in military units to civil ATC units. The objective of this action is to ensure that MSs follow up on the recommendations and provide feedback on the implementation.

EASA will have a supporting role and provide feedback on the occurrences reported.

Owner	Activity sector	Deliverable	Date
MS, EASA FS.4	CAT	Report	2020



MST.030

Implementation of SESAR solutions aiming to reduce the risk of mid-air collision en-route and TMA

MS should evaluate together with ANSPs delegated to provide services in their airspace the needs for implementing SESAR solutions such as those related to enhanced Short Term Conflict Alerts (STCA)/enhanced safety nets³². These SESAR solutions designed to improve safety should be implemented as far as it is feasible.

See SESAR Solutions Catalogue:

https://www.sesarju.eu/sites/default/files/solutions/SESAR_Solutions_Catalogue_Ed2_2017.pdf

Owner	Activity sector	Deliverable	Date
ANSPs/MS	CAT/GA, HF	SPAS established	2020

5.2.4 Design, production and maintenance improvements

Issue/rationale

Design, production and maintenance improvements may limit the probability and/or severity of technical failures. Many fatal accidents involve some sort of technical failure, in many cases not properly managed during flight, thus making it a precursor of other types of accident. This does not necessarily mean that the technical failure was the direct cause of the accident, but that a system component failure was identified in the sequence of events in a number of serious incidents and accidents in CAT aeroplanes over the past years. Also, the handling of technical failures ranks 7th in the list of safety issues identified in the CAT Airline and NCC Business aeroplane operations Safety Risk Portfolio (based on the aggregated ERCS score of those occurrences where this safety issue was present). Handling of technical failures in this context means the ineffective handling of a non-catastrophic technical failure by the flight crew. This could be an engine failure, an avionics system failure or some other recoverable technical failure. The cause of the accident is usually the result of a combination of circumstances and events that can only be understood after reading the investigation report. Specific analysis work is ongoing to identify the systemic safety issues that may be present in the domains of design, production and maintenance. Non-accident data will be used for the analysis.

What we want to achieve

Increase safety by continuously assessing and improving risk controls related to design, production and maintenance.

How we monitor improvement

Continuous monitoring of safety issues identified in the CAT Safety Risk Portfolio for CAT Airline and NCC Business aeroplane operations (see ASR 2018, Section 2.1).

How we want to achieve it: actions

³² More details about the related research projects can be found in https://www.atmmasterplan.eu/data/sesar_solutions



Rulemaking

RMT.0049 Specific risk and standardised criteria for conducting aeroplane-level safety assessments of critical systems
To define a standardised criterion for conducting aeroplane-level safety assessment of specific risks that encompasses all critical aeroplane systems on large aeroplanes (i.e. in particular update AMC to CS 25.1309), based on the results of the Aviation Rulemaking Advisory Committee (ARAC) Airplane-level Safety Analysis Working Group (ASAWG).

In addition, to amend AMC 25.1309 taking into account the latest updates of industry documents, such as ED79A/ARP4754A.

To update CS 25.671 on safety assessment of flight control systems, based on the results of the ARAC Flight Controls Harmonisation Working Group (FCHWG).

For both objectives, harmonisation with the FAA, the TCCA and Agência Nacional de Aviação Civil (ANAC) will be ensured as much as possible.

Owner
EASA CT.7

Affected stakeholders
DAHs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	25.029 (RMT.0049) Issue 2 18/3/2013	2014-02 27/1/2014	n/a	n/a	2019 Q2

RMT.0276 Technical records

Clarification of criteria for preventing incomplete records. Incomplete records may lead to a wrong assessment of the airworthiness status of the product with a consequent safety risk, development of back-to-birth concept, components traceability, and use of radio frequency identification devices (RFIDs).

Owner
EASA FS.1

Affected stakeholders
Air operators, CAMOs and AMOs (Part-145 and Part-M Subpart-F)

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0276 28/11/2011	2014-04 7/2/2014	13/2016 17/11/2016	2019 Q3	2019 Q3

RMT.0069 Seat crashworthiness improvement on large aeroplanes — Dynamic testing 16g

The objective is to improve the protection of occupants on board large aeroplanes operated for commercial air transportation of passengers, when they are involved in a survivable impact accident.

This improvement would be reached by introducing on large aeroplanes used for CAT that were type certified without the JAR-25 change 13 standard improvements, passenger and cabin crew seats meeting the improved standard for dynamic testing and occupant protection, already used for type certification of new large aeroplanes.

Owner
EASA CT.7

Affected stakeholders
CAT operators and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	26.002 Issue 1 17/9/2010	2013-20 10/10/2013	02/2016 20/5/2016	2019 Q2	2019 Q1



RMT.0217 CAMOs' and Part-145 organisations' responsibilities

Establishment of the principles to mitigate the risks linked to a faulty assessment and coordination of the responsibilities of CAMOs and Part-145 organisations, especially in complex, multi-tier and subcontracted maintenance.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.1			Air operators and CAMOs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0217 12/3/2013	2014-27 2/12/2014			

RMT.0097 Functions of B1 and B2 support staff and responsibilities

Introduce principles for increased robustness of the maintenance certification process eliminating potential 'safety gaps' by clarifying the roles and responsibilities of certifying staff, support staff and 'sign-off' staff, both in line and base maintenance.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.1			Part-145 MOs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0097 2/11/2011	2014-11 13/5/2014			

RMT.0225 Development of an ageing aircraft structure plan

Develop the technical elements for an ageing aircraft structure plan:

- Review and update the supplemental structural inspection programme (SSIP) for effectiveness;
- Review existing corrosion prevention programmes and develop a baseline corrosion prevention/control programme to maintain corrosion to an acceptable level;
- Review all structurally-related service actions/bulletins and determine which require mandatory terminating action or enforcement of special repetitive inspections;
- Develop guidelines to assess the damage tolerance of existing structural repairs, which may have been designed without using damage tolerance criteria. Damage tolerance methodology needs to be applied to future repairs; and
- Evaluate individual aeroplanes design regarding the susceptibility to widespread fatigue damage (WFD) and develop a programme for corrective action.

The rulemaking framework for such issues is complex as it is necessary to address the following items:

- Amendment to CS to improve the standards for ageing aircraft issues. This will address the case of future TC and future amendments to TC/future STC in accordance with the changed product rule; and
- Requirements on existing DAHs to review their existing designs to demonstrate compliance with the amended CS. Requirements on operators to introduce modifications in individual aircraft and maintenance programmes resulting from the design review.

Owner			Affected stakeholders				
EASA CT.7			DAHs and Air Operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	✓	RMT.0225 (MDM.028) 8/5/2007	2013-07 23/4/2013	12/2016 10/10/2016	2020 Q1	2020 Q1



RMT.0393 Maintenance check flights (MCFs)

Establish operational requirements and crew competence criteria for the performance of MCFs to reduce the probability of incidents and accidents of this type of flights. This will apply not only for AOC holders, but also for any operator performing these flights.

Owner			Affected stakeholders				
EASA FS.1			Operators, CAMOs, and AMOs (Part-145 and Part-M Subpart-F)				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	MDM.097 (a) & (b) 4/4/2011	2012-08 30/7/2012	01/2017 8/3/2017	2019 Q3	2019 Q3

RMT.0453 Ditching parameters without engine power

Amend CS-25 to require that ditching parameters can be attained by pilots without the use of exceptional skills, including without engine power.

This task is de-prioritised in accordance with the NBR roadmap.

Owner			Affected stakeholders				
EASA CT.7			DAHs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2021 Q1	2022 Q2	n/a	n/a	2023 Q1

RMT.0521 Airworthiness review process

Performance of a full review of the airworthiness review process to introduce an improved framework to mitigate the risks linked to a faulty airworthiness review with potential safety consequences where the actual airworthiness status of the aircraft is below the standard.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.1			Air operators, CAMOs and CAs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0521/2 7/5/2013	2015-17 5/11/2015			

RMT.0586 Tyre pressure monitoring system

- The specific objective is to propose a regulatory change to ensure that large aeroplanes tyres inflation pressures remains within the pressure specifications defined by the aircraft manufacturer.
- The rulemaking proposal should consider better enforcing the operator’s responsibility to ensure regular tyre pressure checks, and also the aircraft manufacturer’s obligation to define the tyre pressure check procedures and intervals in the instructions for continued airworthiness (ICA); as different practices exist in terms of content and presentation of the information in the aircraft maintenance manual (AMM), it could be proposed to better standardise this ICA item among manufacturers and aircraft.
- Since a tyre pressure check legal obligation would not always guarantee that the tyres are correctly inflated (e.g. air leakage in the tyre/wheel assembly, maintenance error or negligence, failure/inaccuracy of the inflation equipment, operator not correctly performing the regular checks, etc.), the rulemaking proposal should also include the installation of a tyre pressure monitoring system which will alert the pilots when a tyre pressure is abnormal or out of tolerance.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA CT.7			Aeroplane Operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0586 30/5/2017				



RMT.0588 Aircraft continuing airworthiness monitoring — Review of key risk elements

Considering the implementation experience (including Standardisation feedback), the objective is to review the current principles specified in AMC3 M.B.303(b) ‘Aircraft continuing airworthiness monitoring’, and the related GM1 M.B.303(b) and Appendix III to GM1 M.B.303(b). In particular, to assess:

- if the requirements adequately address the processing of key risk elements (KREs) requiring annual reviews to ensure that all regulatory references remain up to date; and
- the appropriateness of each KRE, determine the need for additional KREs, review the adequacy and pertinence of typical inspection items included.

Owner			Affected stakeholders				
EASA FS.1			CAs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2020 Q1	2021 Q1	n/a	n/a	2022 Q1

RMT.0671 Engine bird ingestion

A US ARAC group has been tasked to work on several improvements to the bird ingestion requirements.

Owner			Affected stakeholders				
EASA CT.7			Manufacturers				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	✓	RMT.0671 30/5/2017	2017-16 2/10/2017	n/a	n/a	2018 Q4

RMT.0686 HP rotor integrity and loss-of-load (due to shaft failure)

The task will review and amend CS-E 840 and CS-E 850 to address certification issues for new designs. There will be a US industry-led group which will be formed, to discuss the pre-rulemaking on this issue. European industry has raised this item and they would support EASA rulemaking on this issue preferring EASA to take the lead.

This task is de-prioritised in accordance with the NBR roadmap.

Owner			Affected stakeholders				
EASA CT.7			DAHs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	✓	2021 Q1	2022 Q1	n/a	n/a	2023 Q1

Safety Promotion

SPT.104 Develop new safety promotion material on high-profile maintenance safety issues

Develop new safety promotion material on high-profile safety issues in the maintenance domain. Such high-profile safety issues are to be determined from important risks identified from the SRM process, accidents/serious incidents and inputs from EASA stakeholders.

Owner	Activity sector	Deliverable	Date
EASA SM.1	ALL	Leaflets, videos, web-pages and/or applications	Continuous



Research

RES.014

Air data enhanced fault detection & diagnosis

Develop new fault detection & diagnosis (FDD) and fault tolerant control (FTC) methods of the following types:

- Model-based analytical redundancy (e.g. virtual sensors),
- Data-based (i.e. model free-methods), or
- a combination of both types.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	CAT	Report	2022

5.2.5 Ground safety

Issue/rationale

This risk area includes all ground handling and apron management-related issues (aircraft loading, de-icing, refuelling, ground damage, etc.) as well as collision of the aircraft with other aircraft, obstacles or vehicles while the aircraft is moving on the ground, either under its own power or being towed. It does not include collisions on the runway. While it was not the accident outcome for any fatal accidents in the past years, the risk score warrants its inclusion as a key risk area in this domain.

What we want to achieve

Increase safety by continuously assessing and improving risk controls to mitigate the risks in the area of ground safety.

How we monitor improvement

Continuous monitoring of safety issues identified in the CAT Safety Risk Portfolio for CAT Airline and NCC Business aeroplane operations (ref: ASR 2018 Section 2.1)

How we want to achieve it: actions

Rulemaking

RMT.0116

Real weight and balance of an aircraft

The objective of this task is to propose an amendment of CS for large aeroplanes (CS-25) to require the aeroplane being equipped with a weight and centre of gravity measuring system. Based on safety and cost-effectiveness consideration, the following might be proposed:

- A retroactive requirement for such system to be installed on already type-certified large aeroplanes (using a Part-26/CS-26 rule).
- CS-23 amendment for commuters aeroplanes.

The rulemaking should consider the minimum operational performance specification (MOPS) which will be produced by the European Organisation for Civil Aviation Equipment (EUROCAE) WG-88.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner

EASA CT.7

Affected stakeholders

DAHs and large and commuter aeroplane operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-					



RMT.0118 Analysis of on-ground wings contamination effect on take-off performance degradation

The objective of this task is to propose:

- an amendment of CS-23 and CS-25 to require applicants performing an assessment of the effect of aircraft aerodynamic surfaces on-ground contamination on take-off performance and on aircraft manoeuvrability and controllability; and
- a retroactive rule Part-26/CS-26 applicable to large aeroplane TC holders; this rule would require a similar analysis and means of protection as the ones proposed for amending CS-23 and CS-25. The retroactive rule may be limited in terms of applicability to a category of aircraft which would be the most vulnerable.

EASA will publish its NPA on this RMT in Q1/2020. Following the NPA's public consultation, EASA will publish a decision issuing CS-23 and CS-25, as well as an opinion proposing amendments to Part-26. Upon adoption of the Part-26 amendment, EASA will issue the related CS-26.

Owner			Affected stakeholders				
EASA CT.7			POA holders, Air operators, DOA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A	ST	-	RMT.0118 21/3/2017	2020 Q1	n/a 2021 Q1	n/a 2023 Q1	2021 Q1 2023 Q1

RMT.0728 Development of requirements for ground handling

Develop IR/AMC & GM to ensure compliance with the essential requirements contained in Annex VII to the NBR. This will consider operational requirements, organisational requirements and authority requirements, as deemed necessary. Detailed objectives and actions will be defined by a GH Roadmap that will be subject to a focused consultation in Q1/2019.

Owner			Affected stakeholders				
EASA FS.2			CAs, ground handling service providers, aerodrome operators, air operators and ground handling staff				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
-	Art 16	-	2019 Q2		2021		

Safety Promotion

SPT.102 Develop new safety promotion material on high-profile aerodrome and ground handling safety issues

Develop new safety promotion material on high-profile safety issues for aerodromes and ground handling. Such high-profile safety issues are to be determined from important risks identified from the SRM process, accidents/serious incidents, inputs from EASA stakeholders and ground handling safety topics that have been defined by the ground handling roadmap, including ground handling safety topics stemming from the NBR.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Leaflets, videos, web-pages and/or applications	Continuous

5.2.6 Terrain collision

Issue/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 those 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, etc.

What we want to achieve

Increase safety by continuously assessing and improving risk controls to mitigate the risk of CFIT.

How we monitor improvement



Continuous monitoring of safety issues identified in the CAT Safety Risk Portfolio for CAT Airline and NCC Business aeroplane operations (ref: ASR 2018, Section 2.1).

How we want to achieve it: actions

Following completion of the actions included under this section in EPAS 2018-2022, no further actions are included in this EPAS edition. The section is maintained as a placeholder for future actions.

5.2.7 Aircraft environment

Issue/rationale

Uncontrolled fire on-board an aircraft, especially when in flight, represents one of the most severe hazards in aviation. Post-crash fire is also addressed in this section.

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.

While there were no fatal accidents involving EASA MS operators in the last years involving fires, there have been occurrences in other parts of the world that make it an area of concern within EPAS.

What we want to achieve

Increase safety by continuously assessing and improving risk controls to mitigate the risk of fire, smoke and fumes.

How we monitor improvement

Continuous monitoring of safety issues identified in the CAT Safety Risk Portfolio for CAT Airline and NCC Business aeroplane operations (ref: ASR 2018 Section 2.3).

How we want to achieve it: actions

Rulemaking

RMT.0070 Additional airworthiness specifications for operations: fire hazard in Class D cargo compartments

The objective of this RMT is to improve the protection of occupants on-board large aeroplanes operated in CAT, by removing the risk of uncontrollable fire in Class D compartments.

Owner			Affected stakeholders				
EASA CT.7			Air operators and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0070 17/9/2010	2019 Q1	2019 Q3	2021 Q2	2021 Q2

RMT.0071 Additional airworthiness specifications for operations: thermal/acoustic insulation material

The general objective of this RMT is to reduce the safety risks due to flame penetration and propagation in the fuselage by introducing retroactive specifications based on CS 25.856(a) and (b), applicable to already type-certified large aeroplanes.

Owner			Affected stakeholders				
EASA CT.7			Air operators and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0071 18/9/2014	2015-15 1/10/2015	04/2016 23/5/2016	2019 Q2	2019 Q2



Research

RES.003

Research study on cabin and cockpit air quality

Investigation of the quality level of the air inside the cabin and cockpit of large transport aeroplanes and its health implication. The work aims at demonstrating, on the basis of a sound scientific process, whether potential health implications may result from the quality of the air on board commercially operated large transport aeroplanes.

Owner	Activity sector	Deliverable	Date
EC (H2020)	CAT	Study report	2019

RES.004

Transport of lithium batteries by air

Assess mitigating measures for the transport of lithium metal and lithium ion batteries as cargo on board an aircraft and develop a risk assessment tool and guidance for operators.

This would include, at least:

- Review of the state of the art and identification of potential risks
- Identification and assessment of packaging solutions/standards
- Identification and assessment of additional measures that may mitigate the risks of thermal runaway and propagation of the fire
- Characterisation and evaluation of firefighting measures and suppression systems
- Development of a risk assessment method to enable operators to establish and evaluate safe conditions for air transport
- Conclusions, recommendations and provision of technical assistance to the contracting authority.

This must take into consideration the specific operational conditions of air transport (vibrations, changes of temperature, pressure, etc.) that might impact the stability of lithium battery.

Owner	Activity sector	Deliverable	Date
EASA FS.2	CAT	Report	2019

RES.016

Fire risks with large portable electronic devices (PEDs) in checked luggage

Characterise fire risk (propagation, detection, suppression) for large PEDs transported in aircraft cargo compartment (checked luggage).

Owner	Activity sector	Deliverable	Date
EASA CT.7	CAT	Report	2019

5.2.8 Miscellaneous

Issue/rationale

This section gathers the actions too broad to be classified in only one category because they impact multiple aviation domains while involving different types of actions. The need for having such a category was driven by the constant development of EPAS towards new safety areas.

What we want to achieve

To increase safety with a combination of actions that addresses more than one issue.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions



Safety Promotion

SPT.101 **Develop new safety promotion material on high-profile commercial flight operations safety issues**
Develop new safety promotion material on high-profile safety issues for commercial flight operations. Such high-profile safety issues are to be determined from important risks identified from the SRM process, accidents/serious incidents and inputs from EASA stakeholders.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Leaflets, videos, web-pages and/or applications	Continuous

SPT.103 **Develop new safety promotion material on high-profile ATM safety issues**
Develop new safety promotion material on high-profile safety issues for ATM. Such high-profile safety issues are to be determined from important risks identified from the SRM process, accidents/serious incidents and inputs from EASA stakeholders.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Leaflets, videos, web-pages and/or applications	Continuous

5.3 Rotorcraft operations

Issue/rationale

This area includes four types of operations:

- offshore operations (part of CAT);
- other CAT operations by holders of an EASA MS AOC;
- specialised operations (Part SPO)/aerial work operations; and
- non-commercial operations (certified helicopters registered in an EASA MS or for which an EASA MS is State of Operator).

In the CAT offshore helicopter domain, there were no accidents (either fatal or non-fatal) in 2017. Instead, there were 2 serious incidents, which is above the 10-year average for serious incidents. Prior to 2017, there were 2 fatal accidents (one in 2013 and another one in 2016).

In other CAT helicopter operations, there were 1 fatal accident, 4 non-fatal accidents and 6 serious incidents in 2017, leading to 6 fatalities and 3 serious injuries. The fatal accident involved a collision with mountains during HEMS operations.

In Part SPO/aerial work operations, there were 3 fatal accidents, 12 non-fatal accidents and 5 serious incidents in 2017, leading to 4 fatalities and 5 serious injuries. The number of serious incidents was considerably higher than the average of the preceding 10-year period.

In non-commercial operations, there were 3 fatal accidents, 22 non-fatal accidents and 8 serious incidents in 2017, leading to 7 fatalities and 11 serious injuries. The number of fatal accidents decreased in 2017 compared to 2016 and the 10-year average. There were also fewer non-fatal accidents and serious incidents in 2017 compared to 2016 and to the 10-year average.

The EU SRM process has identified opportunities to improve risk controls in the following areas so that accident numbers will not increase. Through the Offshore Helicopter CAG, there has been specific work in this area of helicopter operations that has identified both some additional work to existing actions as well as a small number of specific actions within this domain.



These are identified within each action. The strategic priorities for helicopter operations are:

- helicopter upset in flight (loss of control)

This is key risk area with the highest priority in offshore and CAT helicopter operations. Loss of control for offshore helicopter operations generally falls into two scenarios, technical failure that renders the aircraft uncontrollable or human factors. In addition, it is the second most common accident outcome for aerial work operations. The following actions contribute to mitigating risks in this area: RMT.0127, RMT.0709 and RMT.0711.

- terrain and obstacle conflict

This is the second priority key risk area for offshore helicopter operations, although equipment is now fitted to helicopters in this domain that will significantly mitigate the risk of this outcome. Obstacle collisions is the second most common accident outcome in the CAT helicopters domain. This highlights the challenges of HEMS operations and their limited selection and planning for landing sites. Terrain and obstacle conflict is the most common outcome for aerial work operations. The following action contributes to mitigating risks in this area: RMT.0708.

In addition, from an airspace perspective, it is important to ensure that the airspace and routes design facilitate safe operations of helicopters which typically fly at low levels. Within SESAR 1, there have been solutions aiming to improve safety and efficiency of helicopter operations such as those supporting the establishment of low-level IFR routes³³.

What we want to achieve

Increase safety by continuously assessing and improving risk controls in the above areas.

How we monitor improvement

Continuous monitoring of safety issues identified in the specific safety risk portfolios established for offshore helicopter operations, for other CAT helicopter operations, for specialised helicopter operations and for non-commercial helicopter operations (ref: ASR 2018, Sections 3.1.2, 3.2.2, 3.3.2 and 3.4.2 respectively).

How we want to achieve it: actions

Rulemaking

RMT.0120 Helicopter ditching and water impact occupant survivability

This task aims at enhancing post-ditching and water impact standards for rotorcraft that could significantly enhance occupant escape and survivability. It will, in part, consider the recommendations arising from early work performed by the Joint Aviation Authorities (JAA) Water Impact, Ditching Design and Crashworthiness Working Group (WIDDCWG) and the Helicopter Offshore Safety and Survival Working Group (HOSSWG). EASA plans to issue CS-27/29 in 2018. In a second phase, EASA will consider whether the safety issue also necessitates amendment of Part-26/CS-26.

Owner			Affected stakeholders				
EASA CT.7			DAHs and helicopter operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0120 24/10/2012	2016-01 23/3/2016 2020 Q1	n/a 2021 Q1	n/a 2023 Q3	2018/007/R 25/06/2018 2023 Q3

³³ See SESAR solution # 113 from the SESAR Solution Catalogue:
https://www.sesarju.eu/sites/default/files/solutions/SESAR_Solutions_Catalogue.pdf



RMT.0127 Pilot compartment view

This proposal addresses a safety issue related to rotorcraft windshield misting and subsequent restriction of pilot vision. The existing rules are unclear as to what is required and how compliance can be demonstrated. The specific objective is to mitigate the risks linked to restricted pilot vision, particularly during critical phases of flight (take-off, landing, low hover), by requiring a means to remove or prevent the misting of internal portions of transparencies in rotorcraft, thus ensuring safe operations in all likely flight and operating conditions. In addition, the RMT's scope is proposed to be extended to address the rules governing pilot vision in snow conditions, which are unclear, particularly in relation to piston-engine rotorcraft.

Owner EASA CT.7
Affected stakeholders DOA holders, POA holders and helicopter operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2019 Q3	2020 Q1	n/a	n/a	2020 Q4

RMT.0708 Controlled flight into terrain prevention with helicopter terrain avoidance warning systems (HTAWS)

Mandating HTAWS is expected to prevent between 8.5 and 11.5 CFIT accidents with fatalities or severe injuries within 10 years (medium safety improvement). This RMT will consider mandating the installation of HTAWS on board the helicopter for certain operations. The RMT should only mandate HTAWS to be retrofitted to the current fleet if HTAWS standards are improved. An appropriate impact assessment for retrofit will need to be further developed. Based on the preliminary cost-effectiveness analysis, HTAWS for the following operations are not to be considered: NCO, SPO, and CAT with small helicopters in visual flight rules (VFR) operations (night and day). For offshore helicopter operations, this also includes the involvement of the EASA Certification Directorate working with stakeholders on the evaluation of updated HTAWS standards.

Owner EASA FS.2
Affected stakeholders Helicopter operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B0.5 to 1.5	ST	-	2019 Q1	2019 Q4	2021 Q2	2023 Q2	2023 Q2

RMT.0709 Prevention of catastrophic accidents due to rotorcraft hoist issues

Improvements in the certification specifications and standards relating to the certification of rotorcraft hoists is expected to significantly reduce the risk of catastrophic accidents due to rotorcraft hoists. The current certification specifications relating to the certification of rotorcraft hoists are not being appropriately applied. In addition, some failure modes are not consistently taken into consideration and this is reflected in service experience. A high number of safety occurrences have been reported that are attributed to rotorcraft hoists. The ETSO that is being developed is hoped to address some existing design shortfalls. Retrospective application of any additional certification specifications may be considered. Moreover, cargo hook aspects will also be considered along with the safety affects to people on the ground during non-human external cargo operations.

Owner EASA CT.7
Affected stakeholders DOA holders, POA holders and helicopter operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B1.5	ST	-	2019 Q3	2020 Q2	n/a	n/a	2021 Q1



RMT.0710 Improvement in the survivability of rotorcraft occupants in the event of a crash

The likelihood of survival of rotorcraft occupants in the event of a crash would significantly be improved through the retroactive application of the current improvements in fuel tank crash resistance and occupant safety for rotorcraft that were certified before the new certification specifications for type designs entered into force in the 1980s and 1990s. SRs have been raised by accident investigation boards on fuel tanks and occupant safety for helicopters certified before the upgrade of the rules for emergency landing conditions and fuel system crash resistance, for new type designs in the 1980s and 1990s. In November 2015, a new task was assigned by the FAA for the ARAC to provide recommendations regarding occupant protection rulemaking in normal and transport category rotorcraft for older certification basis type designs. EASA participates to the Working Group and should consider the application of the outcome of this activity for application to the existing European fleet.

Owner
EASA CT.7

Affected stakeholders
DOA and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B2	ST	-	2019 Q3	2020 Q3	2021 Q3	2023 Q3	2023 Q3

RMT.0711 Reduction in accidents caused by failures of critical rotor and rotor drive components through improved vibration health monitoring systems

The use of VHM systems to detect imminent failures of critical rotor and rotor drive components have been shown to greatly improve the level of safety of rotorcraft particularly for offshore operations. However, there is a need to improve the current certification specifications to reflect the evolution of modern VHM systems in order to gain the associated benefits from these systems.

Improved certification specifications would drive and enable improvements in the fidelity of VHM systems and also foster the modernisation of these systems which would provide additional safety benefits when compared to the existing legacy systems.

Owner
EASA CT.7

Affected stakeholders
DOA and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B1.5	ST	-	2019 Q2	2020 Q1	n/a	n/a	2020 Q3

RMT.0713 Reduction in human-factor-caused rotorcraft accidents that are attributed to the rotorcraft design

It is widely recognised that human factors contribute either directly or indirectly to a majority of aircraft accidents and incidents and that the design of the flight deck and systems can strongly influence the crew performance and the potential for crew errors.

Currently, the certification specifications for rotorcraft do not contain any specific requirements for a human factor assessment to be carried out. Large transport aircraft have benefited from human factor assessments of the design of the flight deck and associated systems. New generation helicopters are characterised by having a high level of integration of cockpit equipment, displays and controls. It is also likely that the future rotorcraft projects, embodying fly-by-wire technology flying controls, will pose new and additional challenges from a human factors perspective.

The development of certification specifications for human factors in the design of rotorcraft cockpits would mitigate the probability of human factors and pilot workload issues that could lead to an accident.

Owner
EASA CT.7

Affected stakeholders
DOA holders and HF

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B2	ST	-	31/8/2018	2019 Q2	n/a	n/a	2019 Q4



RMT.0724 Rotorcraft flight crew operating manuals (FCOMs)

The objective of this RMT is to improve the operating information provided to rotorcraft flight crew in the aircrew manuals. This could be achieved by standardising the structure and approach used to present operational information in rotorcraft manuals, thereby improving the clarity of this information. This RMT will consider the current approach utilised in CS-25 AMC, and other initiatives such as the activity undertaken by Heli Offshore.

Owner **Affected stakeholders**

CT.7

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A3	ST	-	2019 Q3	2020 Q2	n/a	n/a	2021 Q1

RMT.0325 HEMS performance and public interest sites

To properly address the issues stemming from non-implementation or deviation from JAR-OPS 3 performance and public interest sites (PIS) provisions, in particular performance in high mountains considering review of HEMS flights at night safety level following a UK Safety Directive.

Owner **Affected stakeholders**

EASA FS.2 Helicopter CAT, HEMS operators and MOs (Part-145)

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0325 26/3/2014	2018-04 18/6/2018	2021 Q3	2023 Q3	2023 Q3

RMT.0725 Rotorcraft chip detection system

CS-27 and CS-29 require the installation of chip detectors to detect particles of ferromagnetic material that are released by elements of the rotor drive system as a result of damage or wear. Chip detectors provide a warning to the crew when particles of a sufficient size (or accumulation of particles) are detected and allow the crew to check the correct operation of the relevant drive system components. However, there is no explicit provision in the CS, nor detailed AMC, for consistently demonstrating that the chip detectors perform their intended function (i.e. particles are collected at a sufficient rate to provide the intended means of detection).

The task will also consider proportionate retrospective application of applicable CS-27 and CS-29 to existing fleets and types that are not compliant with the latest provisions.

Owner **Affected stakeholders**

DOA and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A2.5	ST	-	2020 Q1	2021 Q1	n/a 2022 Q1	n/a 2024 Q1	2022 Q1 2024 Q1

RMT.0726 Rotorcraft occupant safety in event of a bird strike

Since the 1980s there have been an increasing number of accidents involving rotorcraft bird strikes where the rotorcraft was not certified in accordance with the latest bird strike protection provisions. This has resulted in a number of occurrences where rotorcraft bird impacts have had an adverse effect on safety. The objective of this RMT is to improve rotorcraft occupant safety in the event of a bird strike. This will be achieved by considering the development of new CS-27 provisions for bird strike and also considering proportionate retrospective application of applicable CS-27 and CS-29 to existing fleets and types that are not compliant with the latest provisions.

Owner **Affected stakeholders**

CT.7 DOA and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A1.5	ST	-	2020 Q1	2021 Q1	n/a 2022 Q1	n/a 2024 Q1	2022 Q1 2024 Q1



Research

RES.008

Rotorcraft main gearbox (MGB) design to guarantee integrity of critical parts and system architecture to prevent separation of the main rotor following any MGB failure.

1. Enhancement for new design features of helicopter MGB and attachment, to prohibit at any time separation of the mast and main rotor from the helicopter, allowing in case of any major failure of the main gear box components, the helicopter to autorotate.
2. Study to understand threats to rotor drive system critical component integrity and methods to design and substantiate flaw-tolerant critical component designs.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	HE	Report	2020

RES.009

Ditching in water or a survivable water impact (SWI) for rotary wing aircrafts (helicopter, tilt Rotor, compound rotorcraft)

Sufficient real flotation time (2-3 minutes) before any capsizing or side floating movement to provide opportunities for the occupants to escape a rotary wing aircraft, taking into consideration sea state 6 conditions (irregular waves), in case of ditching in water or in the event of a SWI.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	HE	Report	2020

RES.011

Helicopter, tilt rotor and hybrid aircraft gearbox health monitoring — in-situ failure detection

New technologies for in-situ detection of tilt rotor, helicopter and hybrid aircraft gearbox failures.

Owner	Activity sector	Deliverable	Date
EASA SM.1	HE	Report	2022

RES.020

Identify helicopter technologies with safety benefits

Revise and update the study performed by the NLR-Netherlands Aerospace Centre for EHEST on the safety benefits of technologies to assess and when relevant include new technologies addressing safety threats such as laser pointing, drones, bird strike, wire strike, etc.

Owner	Activity Sector	Deliverable	Date
EASA SM.1	HE	Report	2021

Safety Promotion

MST.015

Helicopter safety events

CAs, in partnership with industry representatives, 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.

Owner	Activity sector	Deliverable	Date
MS	HE	Workshop	Continuous



MST.031 Implementation of SESAR solutions aiming to facilitate safe IFR operations

MSs together with their ANSPs and their flight procedures 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 designed to improve safety should be implemented as far as it is feasible.

See SESAR Solutions Catalogue:

https://www.sesarju.eu/sites/default/files/solutions/SESAR_Solutions_Catalogue_Ed2_2017.pdf

This EPAS action is aligned with the ATM MP's (Level 3 Ed 2018) action NAV12 Low level IFR Routes for Rotorcraft.

Owner	Activity sector	Deliverable	Date
ANSPs/flight procedures designers/MS	HE	IFR routes/report	2025

SPT.082 Support the development and implementation of FCOM for offshore helicopter operations

To provide support to manufacturers, if needed, in the development of FCOMs for different helicopter types and support/encourage operators in their implementation.

Owner	Activity sector	Deliverable	Date
Offshore Helicopter CAG	HE	Report	2019

SPT.092 Improve dissemination of existing safety promotion material by developing mobile applications & e-platforms

Reaching target audience is one of the main challenges of safety promotion. This task aims at improving dissemination of existing safety promotion material by developing mobile applications & e-platforms. This will increase user-friendliness of existing paper format safety promotion material and will facilitate translations and future revisions.

Owner	Activity sector	Deliverable	Date
ESPN-R	HE	Mobile applications and/or e-platforms	2019

SPT.093 Develop new safety promotion material on high-profile helicopter issues

In cooperation with the IHST, develop new safety promotion material (leaflets, videos, applications, etc.) on subjects such as performance-based navigation, point in space, low level IFR, bird strike, operational and passenger pressure management, aimed at non-pilot owners of private helicopters.

Owner	Activity sector	Deliverable	Date
ESPN-R	HE	Leaflets, videos, web-pages and/or applications	2021

SPT.094 Helicopter safety and risk management

Review existing helicopter safety & risk management material to check consistency and update (when applicable) material to new rules, standards and international good practice coming for example from IHST and SM-ICG.

Owner	Activity sector	Deliverable	Date
ESPN-R	HE	Revised helicopter safety & risk management manuals and/or toolkits	2021



SPT.095 Promote helicopter technologies with safety benefits

Following the RES identifying promising helicopter technologies (update of the study performed by the NLR for EHEST), promote the helicopter technologies having high safety benefits.

Owner	Activity sector	Deliverable	Date
ESPN-R	HE	Web-page, flyer and/or report	2021

SPT.096 Organise an annual safety workshop

The European Safety Promotion Network Rotorcraft (ESPN-R) to organise a safety forum, in cooperation with the trade shows. This high-profile event promotes safe helicopter operations and fosters interactions within the community. The event theme changes every year.

Owner	Activity sector	Deliverable	Date
ESPN-R	HE	Safety Workshop	Continuous

SPT.098 European safety promotion task on rotorcraft

Develop and implement a safety promotion task on the most important areas of rotorcraft as directed through the Rotorcraft Committee and EASA Rotorcraft Strategy.

Owner	Activity sector	Deliverable	Date
EASA SM.1	HE	Safety Promotion material	Continuous

SPT.099 Helicopter hoist safety promotion

Develop safety promotion material for helicopter hoists

Owner	Activity sector	Deliverable	Date
EASA SM.1	HE	Safety Promotion material	2019

5.4 General aviation: Non-commercial operations

This section covers General Aviation (GA) non-commercial operations involving aeroplanes of mass groups below 5 700 kg registered in an EASA MS. 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 to an average of nearly 80 fatalities per year in Europe (excluding fatal accidents involving microlight airplanes), which makes it one of the sectors of aviation with the highest yearly number of fatalities. Furthermore, in 2017, there were 34 accidents causing 62 fatalities in non-commercial operations with aeroplanes and 25 fatal accidents causing 27 fatalities in the domain of sailplane operations. These two areas present the highest numbers of fatal accidents in 2017. The GA roadmap is key to the EASA strategy in this domain.

Although it is difficult to measure precisely the evolution of safety performance in GA due to lack of consolidated exposure data (e.g. accumulated flight hours), it is reasonable to assume that step changes in the existing safety level are not being achieved at European level, despite all initiatives and efforts.

5.4.1 Systemic enablers

Issue/rationale

This section addresses system-wide or transversal issues that affect GA as a whole and are common to several safety risk areas. In combination with triggering factors, transversal factors can play a significant role in incidents and accidents. Conversely, they also offer opportunities for improving safety across risk domains.



What we want to achieve

Reduce the number of fatalities in GA through the implementation of systemic enablers.

How we monitor improvement

Increase safety by continuously monitoring of safety issues identified in the GA fixed wing NCO Safety Risk Portfolio and the sailplane Safety Risk Portfolio (ref: ASR 2018, Section 5.1.2).

How we want to achieve it: actions

Safety Promotion

MST.025

Improve the dissemination of safety messages

Improve the dissemination of safety promotion and training material by authorities, associations, flying clubs, insurance companies targeting flight instructors and/or pilots through means such as safety workshops and safety days/evenings.

Owner	Activity sector	Deliverable	Date
Safety Promotion Network (SPN)	GA	Safety workshops and safety days/evenings	Continuous

MST.027

Develop just culture in GA

CAs should include provisions for just culture in GA in their SSPs to encourage occurrence reporting and foster positive safety behaviours.

Owner	Activity sector	Deliverable	Date
MS	GA	Just culture included in SSP	Continuous

SPT.083

Flight instruction

Develop safety promotional material aimed at making more effective use of and maximising the safety benefits of biennial class rating revalidation check flights with examiners and refresher training with flight instructors, including differences between aircraft types.

Owner	Activity sector	Deliverable	Date
GA Roadmap	GA	Safety Promotion material	2019

SPT.084

Promoting safety by improving technology

Encourage the installation and use of modern technology (e.g. weather information, moving maps, envelope protection, tablet applications, avoidance systems, angle of attack indicators, etc.). This task is linked to rulemaking activities in Section 7.5 'GA efficiency' that allow for the affordable and timely installation of such systems.

Owner	Activity sector	Deliverable	Date
GA Roadmap & SPN	GA	Safety Promotion material / Dissemination	2019



5.4.2 Staying in control

Issue/rationale

This section addresses subjects such as flying skills, pilot awareness and the management of upset or stall at take-off, in flight, or during approach and landing, flight preparation, aborting take-off and going around. Staying in control prevents loss of control accidents. Loss of control usually occurs because the aeroplane enters a flight regime outside its normal envelope, thereby introducing an element of surprise for the flight crew involved. Loss of control accidents are both frequent and severe.

With 409 higher-risk occurrences recorded in the period 2015 to 2017, aircraft upset, including loss of control, is the most significant key risk area for EASA MS non-commercial operations with aeroplanes of mass groups below 5 700 kg with an EASA State of Registry.

What we want to achieve

Increase safety by reducing the risk of loss of control accidents.

How we monitor improvement

Continuous monitoring of safety issues identified in the GA-related safety risk portfolios (ref: ASR 2018).

Following completion of the actions included under this section in EPAS 2018-2022, no further actions are included in this EPAS edition. The section is maintained as a placeholder for future actions.

5.4.3 Coping with weather

Issue/rationale

This section addresses subjects such as entering IMC, icing conditions, carburettor icing, and poor weather conditions. Weather is an important contributing factor to GA accidents, often related to pilots underestimating the risks of changing weather conditions prior to take-off and during the flight, as weather deteriorates. Dealing with poor weather may increase pilot workload and affect situational awareness and aircraft handling. Decision-making can also be impaired, as a plan continuation bias may lead pilots to press on to the planned destination despite threatening weather conditions. In the future, the EASA work on weather information to pilots, currently focusing on CAT, will be extended to also include recommendations and possible actions for GA³⁴.

What we want to achieve

Increase safety by reducing the number of weather-related accidents.

How we monitor improvement

Continuous monitoring of safety issues identified in the GA-related portfolios (ref: ASR 2018).

How we want to achieve it: actions

³⁴ <https://www.easa.europa.eu/sites/default/files/dfu/EASA-Weather-Information-to-Pilot-Strategy-Paper.pdf>



Safety Promotion

SPT.087 Weather awareness for pilots

Produce safety promotion material (video) addressing subjects such as weather awareness, flight preparation, management and debrief, the use of flight information services (FIS), the benefits of using modern technology including cockpit weather information systems (including GPS integrated, mobile/4G connected apps, etc.), communication with air traffic control (ATC), inadvertent entry into IMC, TEM, and HF.

Owner	Activity sector	Deliverable	Date
GA Roadmap	GA	Video/media product	2019

SPT.088 Launch a safety promotion task promoting instrument flying for GA pilots

Promote the results of RMT.0677 on the easier access of GA pilots to IFR flying in order to ensure that the safety and efficiency benefits materialise across Europe.

Owner	Activity sector	Deliverable	Date
GA Roadmap	GA	Safety Promotion material	2019

5.4.4 Preventing mid-air collisions

Issue/rationale

This section addresses subjects such as airspace complexity, airspace infringement and use of technology. Statistics show that MAC risks affect both novice and experienced pilots and can occur in all phases of flight and at all altitudes. However, the vast majority of them occur in daylight and in excellent meteorological conditions. A collision is more likely where aircraft are concentrated, especially close to aerodromes. Airspace infringements by GA aircraft into controlled airspace is an important related safety risk.

What we want to achieve

Increase safety by reducing the risk of MACs and airspace infringements in GA.

How we monitor improvement

Continuous monitoring of safety issues identified in the GA-related portfolios (ref: ASR 2018)

How we want to achieve it: actions

Focused Attention Topics

FOT.010 Service provision to GA flights

Raise the quality of support provided to GA flights by ANSPs through focused oversight.

Owner	Activity sector	Deliverable	Date
MS and GA.COM/ TeB	GA	Audit report	Continuous



Research

RES.021 SESAR 2020 research projects aiming to prevent mid-air collision risks

The following research activities are being addressed under the SESAR 2020 programme:

- Enhanced rotorcraft and general aviation operations around airports (TMA) (PJ.01-06);
- Enhanced airborne collision avoidance for GA (PJ. 11-A4)³⁵.

Owner	Activity Sector	Deliverable	Date
SESAR	GA	Report	2022

5.4.5 Managing the flight

Issue/rationale

This section addresses subjects such as navigation, fuel management, terrain and obstacle awareness, and forced landings. Most accidents are the result of the pilot's actions, including decisions made while preparing the flight, or due to changing circumstances during the flight. Pilot decisions, including their ability to prioritise workload, affect safety of the aircraft and survival of its occupants.

What we want to achieve

Reduce the number of fatalities and serious injuries in GA.

How we monitor improvement

Continuous monitoring of safety issues identified in the GA-related portfolios (ref: ASR 2018)

Following completion of the actions included under this section in EPAS 2018-2022, no further actions are included in this EPAS edition. The section is maintained as a placeholder for future actions.

5.5 Safe integration of new technologies and concepts

This section addresses the safe integration of new technologies and innovative solutions into the aviation system.

While many of the technologies and innovations emerging in the aviation industry bear significant potential to further improve the level of safety, EPAS gives due consideration to the safety issues derived from new technologies, new operational concepts or novel business models.

In the ATM domain, SESAR covers the development of new technologies for a better management of Europe's airspace as well as their contribution to the achievement of the SES goals and safety targets.

5.5.1 Civil drones (unmanned aircraft systems)

Issue/rationale

Most of the EU MSs have adopted national regulations to *ensure safe operations* of UASs with MTOM below 150 kg. There are currently no harmonised rules at EU level, and UAS operations still depend on an individual authorisation from every MS, which is a burdensome administrative process that stifles business development and innovation. The NBR extends the scope of the EU competence to regulate UAS below the MTOM of 150 kg, also to allow free circulation of UASs throughout the EU.

³⁵ More details about the related research projects can be found in https://www.atmmasterplan.eu/data/sesar_solutions



While this task has multiple drivers due to its very nature, there are also very strong efficiency and level playing field aspects.

In order to ensure safe UAS operations, it is extremely important to manage the safe integration of UASs in the airspace. SJU has worked with the support of EASA and all relevant stakeholders on the development of what is named U-space³⁶. U-space is a set of new services and specific procedures designed to support the safe, efficient and secure access to airspace for large numbers of drones. In 2017, SJU prepared the U-space Blue Print³⁷ describing the vision for U-space. In addition, the European Roadmap for safe integration of drones in all airspace classes³⁸ was also prepared by SJU with EASA support and adopted by the EC.

What we want to achieve

To create a level playing field in all EU MSs, using an operation-centric concept, which is proportionate and risk-and performance-based, so that all companies can make best use of UAS technologies to create jobs and growth. At the same time, to enable the safe integration of drones in the European airspace while maintaining a high and uniform level of safety.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

³⁶ U-space is the European name for Unmanned Traffic Management (UTM)

³⁷ <https://www.sesarju.eu/u-space-blueprint>

³⁸ <https://www.sesarju.eu/sites/default/files/documents/reports/European%20ATM%20Master%20Plan%20Drone%20roadmap.pdf>



Rulemaking

RMT.0230 Introduction of a regulatory framework for the operation of drones

Development of IRs for UAS, implementing Articles 55 to 57 and Annex IX to Regulation (EU) No 2018/1139.

There are three categories of UAS defined:

- Open category: low-risk operation not requiring authorisation or declaration before flight
- Specific operation category: medium-risk operation requiring authorisation or declaration before flight
- Certified category: high-risk operation requiring certification process

In order to implement an innovative new set of rules for the three categories, the following seven subtasks were identified:

- 1 Open and specific category with development of new, dedicated implementing rules
- 2 Certified category with amendments to FCL, OPS, TCO, ACAS, CAT, ARO, ORO, ARA, ORA, MED, AW, SERA, ADR
- 3 Specific category with new AMC standard scenario
- 4 Certified category with amendments to CS-ETSO and CS-36
- 5 Certified category with development of a new CS-UAS
- 6 Development of adequate rules to enable U-space implementation
- 7 Certified category with amendments to ATM/ANS, ATCO, SERA, ACAS and CS-ACNS

For the maintenance of the Regulation and the AMC developed under subtasks one and three, two new RMTs have been created. Please refer to the section on Regular Updates (RMT.0729 and RMT.0730).

Owner	Affected stakeholders							
EASA CT.7	Member States, UAS operators (individuals and organisations), UAS manufacturers, manned aviation community, model aircraft community, ANSPs, ADRs, all airspace users							
PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	1	22/12/2016	4/5/2017	6/2/2018	2019 Q1	2019 Q2
	ST		2		2019 Q2	2020 Q4	2022 Q2	2022 Q2
	Art.15		3		2019 Q2*	n/a	n/a	2019 Q2
	ST		4		2019 Q3	n/a	n/a	2020 Q2
	Art.15		5		2019 Q2*	n/a	n/a	2019 Q3
	ST		6		tbd			tbd
	ST		7		2022 Q1	2023 Q1	2024 Q3	2024 Q4

*Instead of the NPA, Article 15 will apply

Safety Promotion

SPT.091 European safety promotion on civil drones

Coordinate European activities to promote safe operation of drones to the general public.

Owner	Activity sector	Deliverable	Date
SPN	General public	Safety Promotion material	2019



Research

RES.015

Vulnerability of manned aircraft to drone strike

Assess the potential MAC threat posed by drones to manned aircraft and validate its results by means of a complete set of activities including modelling and impact tests.

Owner	Activity Sector	Deliverable	Date
EASA SM.2	CAT	Report	2019

RES.022

SESAR 2020 research projects aiming to safely integrate drones in the airspace

The following research activities are being addressed under the SESAR 2020 programme: surface operations by RPAS (PJ.03a-09); IFR RPAS Integration (PJ. 10-05) and airborne detect and avoid systems supporting integrated RPAS operations (PJ.13-01-01)³⁹.

Owner	Activity Sector	Deliverable	Date
SESAR	RPAS	Report	2022

RES.023

SESAR exploratory projects on U-space⁴⁰

SESAR JU has launched U-space exploratory research as steps towards realising the European Commission's U-space vision for ensuring safe and secure access to airspace for drones.

Owner	Activity Sector	Deliverable	Date
SESAR	RPAS/drones	Research reports	2020

5.5.2 New business models

Issue/rationale

This section addresses risks related to new and emerging business models arising from the increased complexity of the aviation industry, the number of interfaces between organisations, their contracted services and regulators. Some new business models are emerging: the increased demand for flying in the cities, urban air mobility; the increased digitalisation in aviation systems, the introduction of more autonomous vehicles, platforms starting for single pilot operations and completely autonomous cargo aircraft. These will challenge the way authorities regulate and oversee the aviation system. CAs should work better together and EASA should evaluate whether the existing safety regulatory system adequately addresses current and future safety risks arising from new and emerging business models. Upon the request of MSs, EASA tasked a working group of CAs to assess airlines' emerging 'new' business models and to identify related safety risks posed to the aviation system.

The same approach could be applied to monitor the development of urban air mobility should the MSs request EASA to do so. So far no actions have been foreseen in this EPAS update.

Managing current and future safety risks arising from new and emerging business models is a strategic priority.

What we want to achieve

Increase safety by continuously assessing and mitigating risks posed by new and emerging business models.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

³⁹ More details about the related research projects can be found in https://www.atmmasterplan.eu/data/sesar_solutions

⁴⁰ <https://www.sesarju.eu/news/sesar-launches-u-space>



How we want to achieve it: actions

Safety Promotion

MST.019 Better understanding of operators' governance structure

CAs to have a thorough understanding of operators' governance structure. This should in particular apply in the area of group operations.

Aspects to be considered include:

- extensive use of outsourcing,
- the influence of financial stakeholders, and
- controlling management personnel, where such personnel are located outside the scope of approval.

Note: The Agency will support this MST by providing guidance on how to effectively oversee group operations.

Owner	Activity sector	Deliverable	Date
MS	CAT/HE	Research/guidance material	2019

5.5.3 New products, systems, technologies and operations

Issue/rationale

This section addresses the introduction of new designs, technologies or types of operation for which regulatory updates are needed, and highlights some of the most relevant trends that will influence aviation in the years to come.

What we want to achieve

Manage the safe introduction of new products, systems, technologies and operations and continuously assess and mitigate safety risks related to new designs, technologies or types of operation.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0266

Powered lift (tilt rotor) applicable requirements (pilot licensing with synthetic training devices, air operations and maintenance)

To develop IRs for powered lift pilot licensing and operations.

This task is put on hold until further notice.

Owner	Affected stakeholders
EASA FS.5	Pilots, ATOs, CAs

RMT.0414

Operations and equipment for high-performance aircraft (HPA)

Review of IRs/AMC & GM in relation to the operation of HPA.

This task is put on hold until further notice.

Owner	Affected stakeholders
EASA FS.2	HPA operators



Safety Promotion

MST.020 Loss of radar detection

On 5 and 10 June 2014, there were several occurrences of radar losses from ATC displays in central Europe. These events resulted in reduced capacity in some of the affected ATC sectors, in introduction of flow measures and in delays. As this type of events may also have a serious impact on safety, EASA was mandated by the EC to perform a technical investigation and put forward recommendations.

The technical investigation concluded that the source of the interference was a system or installation which over-interrogated the transponders on board aircraft not only at rates beyond their requirements but also beyond design limits.

MSs are encouraged to implement the recommendations of the technical report and to consider implementation of other mitigation techniques against loss of detection of aircraft as a result of secondary surveillance radar (SSR) over-interrogation.

Owner	Activity sector	Deliverable	Date
MS	ALL	Report	2020

5.5.4 SESAR deployment

Issue/rationale

Implement the regulatory needs of the SESAR pilot common projects.

What we want to achieve

The rationale behind the following actions is to cater for the regulatory needs of the SESAR common projects and other new technological advancements (e.g. such as, but not limited to U-space deployment, virtualisation and cloud-based architecture and remote tower operations) by enabling the implementation of new working methods and technologies developed by SESAR. Interoperability, civil-military cooperation and compatibility, and NextGen international compatibility (e.g. such as but not limited to ICAO GANP/ASBUS and NextGen) will form an integral part of EASA's work in impact assessment and future rulemaking. In addition, there is a need to initiate a consolidated and coordinated implementation support action that should look holistically to the implementation needs of the necessary enabling infrastructure to facilitate the achievement of the needed operational improvements and new ATM operational concepts.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions



Rulemaking

RMT.0524 Data link services

The analysis of the technical issues observed during the deployment of Regulation (EC) No 29/2009 resulted in various recommendations. This RMT will consider these regulatory recommendations to support the data link operations, including regulatory needs to support the ELSA Model D multi-frequency implementation, the identification and development of an 'end-to-end certification/validation' framework and the clarification of the notion of 'best in class' performance and the related avionics improvements. Furthermore, to improve the predictability of the aircraft trajectory leading to less tactical interventions and improved deconfliction, this RMT will address elements of the 'Pilot Common Project' (PCP) air traffic management (ATM) functionality 6 requirements ('Initial Trajectory Information Sharing'); in particular, the regulatory support for the implementation of the 'Extended Projected Profile' (EPP).

Owner			Affected stakeholders				
EASA FS.4.2			CAs, ANSPs, ADR operators, Air operators, manufacturers and ATCOs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0524 29/1/2018	2019 Q2	2020 Q2	2022 Q2	2022 Q2

RMT.0624 Remote aerodrome ATS

The development and introduction of new technologies enables provision of ADR ATS (aerodrome control service (ATC) or aerodrome flight information service (AFIS)) from geographically independent locations/facilities where direct visual observation is not available.

Phase 1 of this RMT resulted in the publication of 'Guidance Material on the implementation of the remote tower concept for single mode of operation' (ED Decision 2015/014/R) and 'Requirements on Air Traffic Controller licensing regarding remote tower operations' (ED Decision 2015/015/R amending Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) 2015/340).

Phase 2 of this RMT, which is ongoing, is extending the scope to cover also more complex modes of operations and to provide enhanced and extended generic guidance and requirements (hence not limited to any specific operational context/mode) for CAs, ANSPs and ADR operators, encompassing all possible types of operational modes/contexts, such as single and multiple mode of operation, contingency solutions and the use of new technical enablers which have traditionally not been available for ADR ATS. The general objective of the RMT is to ensure that ADR ATS provided from a remote tower meet the applicable EU and ICAO requirements and to ensure at least the same level of safety as when provided from a conventional tower.'

This EPAS task is aligned with the ATM MP's (Level 3 Ed 2018) action AOP14 (only single operation) (Remote TWR).

Owner			Affected stakeholders				
EASA FS.4.2			CAs, ANSPs and aerodrome operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0624 9/12/2014	2015-04 23/3/2015 2017-21 20/12/2017	n/a n/a	n/a n/a	3/7/2015 2019 Q1



Rulemaking

RMT.0639 Performance-based navigation implementation in the European ATM network

PBN implementation that supports the improved performance of the EATMN, the uniform use of PBN specifications and functionalities. The optimal and safe use of airspace and the improved safe access to ADRs through the improved airspace design, arrival/departure routes and approach procedures would be ensured based on a common application of navigation specifications and functionalities.

These regulatory measures define the ICAO PBN specifications and functionalities that are to be used in the EU airspace and the dates by which they are to be applied in accordance with the SES objectives and the PCP implementation.

Owner

EASA FS.4.2

Affected stakeholders

MSs, CAs, ANSPs and Air Operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0639 25/6/2014	2015-01 19/1/2015	10/2016 28/7/2016	2019 Q2	2019 Q2

RMT.0679 Revision of surveillance performance and interoperability (SPI)

The current SPI Regulation (Regulation (EU) No 1207/2011⁴¹) details the requirements for the carriage and operation of airborne surveillance equipment by both civil and State registered aircraft, and the dates by which qualifying aircraft must be equipped.

Note: Based on the Cost-Benefit Analysis results, EASA decided not to propose significant changes to the present SPI Regulation. Therefore, EASA will not publish an NPA but prepare a report to the European Commission. However, there is a proposal to change the Regulation.

In addition, the Agency may decide to provide some GM on items already identified by the rulemaking group. Therefore, the date for the ED Decision is also kept.

Owner

EASA FS.4.2

Affected stakeholders

MS, CAs, ANSPs, aircraft operators and Air Traffic Controllers.

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0679 18/3/2016	n/a	n/a	n/a	2019 Q2

⁴¹ Commission Implementing Regulation (EU) No 1207/2011 of 22 November 2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 305, 23.11.2011, p. 35).



RMT.0682 Implementation of the regulatory needs of the SESAR common projects

The general objective of the task is the development of the implementing measures as required to enable the timely deployment of the ATM functionalities and other operational changes stemming from SESAR and the European ATM MP by addressing those issues which are not covered by existing RMTs.

The initial purpose of this task is to address the implementation needs, among others and when known, of the following:

- Extended arrival management (AMAN) in high-density terminal manoeuvring areas (TMAs);
- Airport integration and throughput;
- Flexible airspace management and free route;
- Network collaborative management;
- Initial system-wide information management (SWIM);
- Development of the requirements for the use of GBAS augmented GNSS to support CAT I/II/III operations;
- Other new essential operational changes (e.g. user-driven prioritisation process (UDPP), trajectory-based tools, sector-based operations, etc.)

Owner			Affected stakeholders				
EASA FS.4.2			MSs, CAs, ANSPs, Air Operators, ADR operators, POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	2019 Q3	2020 Q3	2021 Q3	2023 Q3	2023 Q3

5.5.5 All-weather operations (AWOs)

Issue/rationale

AWOs are currently addressed by regulations in the following aviation domains: airworthiness, air operations, aircrew, aerodromes, air traffic management (ATM)/air navigation services (ANS) as well as in the standardised European rules of the air (SERA). The existing rules in these domains have a number of deficiencies that need to be addressed. Work on AWOs will allow to sufficiently address technological advancements, align with the ICAO SARPs (e.g. ICAO Annex 6 amendments introducing lower category (CAT) II and CAT III minima and the concept of operational credits, in particular for operations with vision systems), increase consistency of rules across different domains, carry out cross-domain risk assessments, ensure that better weather information is provided to pilots, as well as harmonise with the FAA and other regulators.

What we want to achieve

The European industry should be enabled to take full advantage of safety and economic benefits generated through new technologies and operational experience.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions



Rulemaking

RMT.0379 All-weather operations

Review and update the AWO rules in all aviation domains, as regards:

- possibility of applying safety performance principle in redrafting of current rules with the aim of allowing a better integration of new and future technologies supporting AWOs, as e.g. enhanced flight vision systems (EFVSs), synthetic vision systems (SVSs), synthetic vision guidance systems (SVGs), combined vision systems (CVSs), head-up displays (HUDs);
- conventional low-visibility operations (LVOs), such as instrument landing system (ILS)-based CAT II and CAT III approach operations or low-visibility take-offs (LVTOs);
- other than AWO, such as CAT I operations using ILS, GLS or SBAS, or approach operations to higher minima using area navigation (RNAV)(GNSS), non-directional beacons (NDBs) or very high frequency (VHF) omnidirectional ranges (VORs);
- miscellaneous items, such as the improvement of existing rules text and the transposition of the new ICAO approach classification;
- harmonisation with bilateral partners (e.g. FAA) to the extent possible;
- introduction of operations with operational credits such as newly introduced SA CAT I⁴² not being yet part of the ICAO regulatory system.

Recommendations and consequent follow up actions to the Weather Information to Pilots Strategy Paper, itself an outcome of RMT.0379 are now being taken forward as a stand-alone project.

Phase 2 (subtask 2) will address AWOs for helicopters.

Owner				Affected stakeholders				
EASA FS.2				POA holders, Air operators, ATOs, ADR operators and ATM/ANS				
PIA	Proc	3rdC	SubT.	ToR	NPA	Opinion	Commission IR	Decision
A-	AP	-	1	RMT.0379	2018-06			
				9/12/2015	13/7/2018	2020 Q2	2022 Q2	2022 Q2
			2		2019 Q2	2020 Q2	2022 Q2	2022 Q2

⁴² Special authorisation CAT I represents a type of LVOs operations with operational credits with the following provisions:

- the decision height (DH) of an SA CAT I operation should not be lower than the highest of the minimum DH specified in the AFM (if stated), the applicable obstacle clearance height (OCH) for the category of aeroplane, the DH to which the flight crew is qualified to operate; or 150 ft; and
- the lowest RVR minima to be used are specified vs approach lighting system and are typically between 400 and 700 (m).



6 Environment

Environmental protection and sustainability are key challenges for the aviation industry, MSs and EASA. Sustainable aviation is about combatting climate change, and reducing the health effects from aircraft noise and air pollution. It is also about ensuring that European industry stays competitive on a level playing field in a rapidly changing world. Environmental standards are key to achieving this.

EASA is helping tackle the challenge of ensuring a cleaner, quieter and more sustainable future for the aviation system, including supporting the introduction of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

The information below reports on the status of environmental standards. For the full picture, including stakeholder actions and market-based measures, see the EAER (www.easa.europa.eu/eaer), which provides a concise view of the status and actions of Europe as regards environment and sustainability.

As European standards are developed by reference to ICAO standards, the below actions are directly aligned with the ICAO process. ICAO's CAEP is expected to adopt in February 2019 a new standard on non-volatile PM emissions, and propose improvements to the existing noise and emission standards. The agreed updates to the environmental standards will need to be implemented into European legislation in order to become effective.

The actions to implement ICAO standards in Europe will be adjusted and detailed once the outcome of the CAEP/11 process is known and communicated in ICAO State Letters, which are expected in 2019. Future actions will also need to address the new environmental challenges of new technologies, e.g. noise of drones and air taxis, recyclability of batteries and the requirements of the circular economy.

6.1 Climate change and air quality

Issue/rationale

In order to achieve the European objectives on climate change and air quality, the Basic Regulation (in particular Article 9) and the relevant CSs need to be adapted in line with the latest ICAO SARPs.

What we want to achieve

- To align Article 9 of the Basic Regulation with the ICAO CAEP/11 SARPs in order to achieve European objectives on climate change and air quality;
- To align CS-34/CS-36 with the ICAO CAEP/11 recommendations; and
- To balance the environmental needs with safety and with cost-efficient rules for progressive phase-out of halon.

How we monitor improvement

European Aviation Environmental Report

How we want to achieve it: actions



Rulemaking

RMT.0514 Implementation of the CAEP amendments

Align Article 9 of the Basic Regulation with the ICAO CAEP recommendations.
Align CS-34 with the ICAO CAEP recommendations

NB: The below timelines are related to the implementation of CAEP 10. The implementation of CAEP 11 will start in 2019 under this same RMT.

Owner			Affected stakeholders				
EASA CT.5			Design organisations and manufacturers				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0513 & RMT.0514 13/6/2016	2017-01 17/1/2017 2019 Q3	09/2017 07/11/2017 2020 Q4	2018 Q4 2022 Q1	2018 Q4 2022 Q1

RMT.0560 Halon — Update of Part-26 to comply with ICAO standards

Balance the environmental needs with safety and with cost-efficient rules for progressive phase-out of halon

Owner			Affected stakeholders				
EASA CT.7			AOC holders (large aircraft), AMOs (Part-145) and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0560 18/9/2013	2014-26 18/11/2014	08/2016 2/8/2016	2019 Q2	2019 Q2

Research

RES.018 Development of particulate matter (PM) regulations and guidelines

Acquire high-quality PM data, analysis, modelling and expert support for regulatory action.

Owner	Activity sector	Deliverable	Date
EASA SM.1	ALL	Report	2022

RES.019 Aviation emissions support

Obtain high-quality technical expert support on standardisation issues.

Owner	Activity sector	Deliverable	Date
EASA SM.1	CAT	Report	2021



6.2 Aircraft noise

Issue/rationale

Further to the latest developments at ICAO level under the CAEP/10 framework, the relevant CSs need to be adapted accordingly.

What we want to achieve

To align CS-36 with the ICAO CAEP/11 recommendations.

How we monitor improvement

European Aviation Environmental Report

How we want to achieve it: actions

Rulemaking

RMT.0513 Update CS 36 to refer to the environmental technical manual on noise certification as amended after CAEP
Align CS-36 with the ICAO CAEP recommendations

NB: The below timelines are related to the implementation of CAEP 10. The implementation of CAEP 11 will start in 2019 under this same RMT.

Owner

EASA CT.5

Affected stakeholders

DOA and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0513 & RMT.0514 13/6/2016	2017-01 17/1/2017 2019 Q3	09/2017 7/11/2017 2020 Q4	2018 Q4 2022 Q1	2018 Q4 2022 Q1



7 Efficiency/proportionality

The actions in this chapter are driven by the need to ensure that EU rules are cost-effective in achieving their objective as well as proportionate to the risks identified. Even if for some of the actions under this heading the link to safety is not immediately evident, at the end they will translate, directly or indirectly, into safety improvements.

7.1 Aerodrome design and operations

Issue/rationale

Development of a framework commensurate with the complexity of ADR activities and management of potential risks.

What we want to achieve

Ensure safety with sufficient flexibility for ADR operators to adjust to local conditions.

How we monitor improvement

The EASA ABs and the ADR CAG will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0638 Certification requirements for VFR heliports located at ADRs falling under the scope of the Basic Regulation

Ensure a high uniform level of safety at ADRs by aligning Regulation (EU) No 139/2014 with ICAO Annex 14, Volume II, Heliports; develop necessary CS and GM for design and, if necessary, AMC & GM for operation and oversight of VFR heliports co-located at ADRs (falling under the scope of the Basic Regulation).

Owner			Affected stakeholders				
EASA FS.4.3			ADR operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0638 22/9/2014	2017-14 1/8/2017	n/a	n/a	2019 Q1

RMT.0705 Addition of a new requirement for the handling of dangerous goods at aerodromes

Under the current provisions of Regulation (EU) No 139/2014 (ADR.OR.D.020), ADR operators are required to designate appropriate areas for the storage of dangerous goods. However, Regulation (EU) No 139/2014 does not contain a requirement for the establishment of the methods for the delivery storage, dispensing and handling of dangerous goods at the ADR.

Under the current provisions of Regulation (EU) No 139/2014, there is no direct requirement for ADR operators to train their personnel in the handling of dangerous goods, in the case that the ADR operator is acting as sub-contractor (handling agent) of air operators.

It is therefore recommended to address these issues by incorporating relevant ICAO provisions in Regulation (EU) No 139/2014.

This task is put on hold until further notice.

Owner		Affected stakeholders	
EASA FS.4.3		ADR operators	



7.2 Evaluations

EPAS includes proposals for evaluation of existing rules with the objective of reviewing feedback from implementation and assessing the rules' relevancy, efficiency and effectiveness. The evaluations should identify which rules could be clarified, simplified, updated or possibly repealed. It should also assess whether a performance-based approach could be applied as a tool for increasing regulatory efficiency.

EVT.0006 Evaluation on provisions for flight crew licences laid down in the Commission Regulation (EU) No 1178/2011⁴³

The Regulation will be reassessed with regard to pilot training, testing and periodic checking for performance-based regulation.

Owner

EASA FS.3

Affected stakeholders

ATOs, flight examiners, flight instructors, air operators, pilots and CAs

PIA	Proc	3rdC	ToR	Evaluation report
n/a	ST	-	2018	2019

EVT.0007 Evaluation on Regulation (EU) No 748/2012 'Part 21'

Evaluation of several aspects of the Regulation, including continued validity of TCs

Owner

EASA CT 7.1 in cooperation with SM.2.1

Affected stakeholders

DAHs, POA holders and CAs (including EASA)

PIA	Proc	3rdC	ToR	Evaluation report
n/a	ST	-	2021	2022

⁴³ Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1)



7.3 ATM/ANS

Issue/rationale

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) 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.

What we want to achieve

Regulation (EU) 2017/373 requires the inclusion of additional requirements concerning flight procedure design, ATS, AIS/AIM. Safe and cost-efficient ATM/ANS provision also needs to ensure harmonised conformity assessment of their supporting systems and constituents, so that the equipment involved performs as expected during the intended operation. After the adoption of the new rules, implementation issues associated with ATM/ANS systems and constituents should decrease, especially those related to lack of interoperability and performance that may have an impact on operations.

How we monitor improvement

The EASA ABs and the ATM/ANS CAG will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0161 Conformity assessment

Development and introduction of new technologies and systems that conform to agreed goals needs to be achieved in a harmonised and consistent manner. The general objective is to develop the requirements and guidance material for the declaration or certification of systems and constituents in a manner consistent with the existing process related to changes to the functional systems.

This task is de-prioritised in accordance with criteria described in Chapter 3

Owner

EASA FS.4.2

Affected stakeholders

ANSPs, POA holders of ATM/ANS systems and constituents, organisations maintaining ATM/ANS systems and constituents and CAs (including EASA)

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B2.5	ST	-					



Rulemaking

RMT.0445 Technical requirements and operating procedures for airspace design, including flight procedure design

Development of the necessary organisational and technical requirements on airspace design, thus ensuring that the specific safety objectives of the Basic Regulation are met. Basically, the scope of the task is to establish the requirements for the design of flight procedures and ATS routes, to support the implementation of PBN operations, and evaluate the need for extension to other airspace structures and flight procedure design. This will include an analysis of the need to include procedures for airspace design in the ATM/ANS certification scheme.

Owner

EASA FS.4.2

Affected stakeholders

MSs, CAs, ANSPs, ADR operators and air operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0445 14/7/2014	2016-13 25/10/2016	02/2018 8/3/2018	2020 Q1	2020 Q1

RMT.0464 Requirements for air traffic services

Transposition of the relevant ICAO provisions on ATS. The objective is to establish a sufficient level of harmonisation throughout the EU, based on mandatory and flexible requirements, and to define proportionate and cost-efficient rules.

Owner

EASA FS.4.2

Affected stakeholders

MSs, CAs, ANSPs, ATCOs, ADR operators, aircraft operators, trade unions, pilots and ATCOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0464 9/7/2014	2016-09 14/9/2016	03/2018 22/5/2018	2020 Q1	2020 Q1

RMT.0477 Technical requirements and operational procedures for aeronautical information services and aeronautical information management

Development of the necessary harmonised requirements and AMC & GM for the provision of aeronautical information and data, mainly based on the transposition of ICAO Annex 15 and ICAO Annex 4. The task will also fulfil specific needs stemming from the SES implementation.

Owner

EASA FS.4.2

Affected stakeholders

MSs, CAs, ANSPs, ADR operators and air operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0477 11/10/2013	2016-02 27/4/2016	02/2018 8/3/2018	2020 Q1	2020 Q1



7.4 Airlines (AOC holders in CAT)

Issue/rationale

Passenger and cargo transport by airlines generate producer, consumer and wider economic benefits. Regulatory and administrative burden reduce these benefits and need therefore to be fully justified by corresponding safety benefits.

What we want to achieve

Ensure an efficient regulatory framework for airlines.

How we monitor improvement

The EASA ABs and the CAT CAG will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0190 Requirements for relief pilots

Address the provisions for the use of relief pilots as regards experience, training, checking and CRM.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.3			Pilots, ATOs, and air operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0190 2/11/2012	2014-25 4/11/2014			

RMT.0352 Non-commercial operations of aircraft listed in the operations specifications (OpSpecs) by an AOC holder

Identify the categories of flights considered to be non-commercial flights conducted by AOC holders; Standardise the unofficial terms used in order to have a clear understanding of the different categories of non-commercial flights;

Specify standards for non-commercial operations of AOC holders related to the preparation, programme and operational framework, as appropriate;

Establish the minimum requirements for qualifications and training of the crews for each type of non-commercial flights conducted by AOC holders, as appropriate;

Harmonise implementation.

Owner			Affected stakeholders				
EASA FS.2			CAT operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0352 4/12/2013	2015-05 30/3/2015	04/2017 29/6/2017	2019 Q2	2019 Q2



RMT.0721 RAMP reregulation

Taking into account feedback and standardisation results, it appears that the current AMC & GM to Part-ARO Subpart RAMP (Regulation(EU) 965/2012) are currently too prescriptive in some areas, and lack clarity in others. With RAMP deregulation, EASA intends to reduce the size of the AMC & GM by means of developing a new ramp inspections manual where most of the AMC & GM are being transposed. The resulting documents would also be reviewed in order to modernise them and reduce the level of prescription.

Owner

EASA FS.2

Affected stakeholders

CAs and operators (commercial and non-commercial)

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	Art.16	-	RMT.0721 28/5/2018	n/a	n/a	n/a	2019 Q1

7.5 General Aviation

Issue/rationale

GA is a high priority for EASA. EASA is dedicating effort and resources towards creating simpler, lighter and better rules for GA. Recognising the importance of GA and its contribution to a safe European aviation system, EASA in partnership with the EC and other stakeholders has created the GA roadmap.

What we want to achieve

Reduce the regulatory burden for GA.

How we monitor improvement

The GA Committee (GA.COM) and the GA TeB will provide feedback on the effectiveness of the activities.

How we want to achieve it: actions

General

Rulemaking

RMT.0135 B2L and L Part-66 aircraft maintenance licences

Introduce licensing requirements for maintenance of:

- avionic and electrical systems applicable for lower complexity of light aircraft; and
 - aircraft other than aeroplanes and helicopters and in the maintenance of ELA1 aeroplanes,
- by adapting the current B2 licensing requirements for maintenance of avionic and electrical systems to the lower complexity of light aircraft, and propose a simple and proportionate system for the licensing of certifying staff involved in the maintenance of aircraft other than aeroplanes and helicopters and in the maintenance of ELA1 aeroplanes.

Owner

EASA FS.1

Affected stakeholders

approved maintenance training organisations, maintenance engineers or mechanics/GA

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	15/4/2011	2012-15 4/10/2012	05/2015 22/6/2015	2018/1142 14/8/2018	2019 Q1



RMT.0547 Task force for the review of Part-M for general aviation (PHASE II)

The following important topics are part of this task:

- Light Part-M;
- Defect management; and
- Time between overhaul (TBO) extension.

Owner

EASA FS.1

Affected stakeholders

AMOs (Part-145 and Part-M Subpart F), CAMOs, operators other than airlines, GAs and CAs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0547 23/10/2012	2015-08 9/7/2015	05/2016 13/4/2016	2019 Q2	2019 Q2

RMT.0677 Easier access of general aviation (GA) pilots to instrument flight rules (IFR) flying

Review the existing requirements for the instrument ratings and most probably the development of a new instrument rating specifically catering for the needs of the PPL holders.

Owner

EASA FS.3

Affected stakeholders

Pilots, instructors, flight examiners and ATOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	RMT.0677) 18/12/2015	2016-14 9/11/2016	2019 Q1	2021 Q1	2021 Q1

RMT.0678 Simpler, lighter and better Part-FCL requirements for general aviation

Review the different requirements which have been identified by the GA roadmap to cause problems for GA.

Examples:

- Modular LAPL*;
- Review of different LAPL and PPL requirements (crediting, revalidation, seaplane rating for LAPL);
- Review of class & type ratings requirements (new propulsion systems, amphibious aircraft);
- Review of language proficiency requirements for GA pilots;
- Provisions on touring motor glider (TMG) (definition, additional crediting);
- Mountain rating for helicopters;
- Review of the flight test rating requirements in the context of GA;
- Development of a 'light aircraft flight instructor (LAFI)' for LAPL training only;
- Examiner's vested interests in the context of GA.

The starred (*) items will be processed through the procedure in accordance with Article 16 of the Rulemaking Procedure (accelerated procedure). For all other items, the standard rulemaking (ST) procedure will be applied. Opinion No 08/2017 was issued on 23 October 2017.

Owner

EASA FS.3

Affected stakeholders

Pilots, flight examiners and CAs

PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
A-	AP	-	1	RMT.0678 1/9/2016	n/a	08-2017 23/10/2017	2018 Q4	n/a
	ST	-	2		2019 Q4	2020 Q4	2022 Q2	2022 Q2



RMT.0689

'Part 21 proportionality'

Introduction of proportionality and simplification of airworthiness and environmental certification regulations for small aircraft

Simplification of the approval process and the oversight of small design, production and maintenance organisations. A template manual should simplify the approval process. The oversight should be streamlined and privileges can be granted to organisations based on the demonstrated experience.

For individual simple aircraft, the task's objective is to explore if private operation of aircraft where the owner takes full responsibility should be allowed.

This RMT was initially planned to be completed in two phases. In the context of the activities of the former first phase (now being the sole one), EASA will investigate whether some immediate benefits can be derived by amendments to AMC & GM to Part 21. A decision will be issued in Q1/2019. The initially planned second phase of this RMT has been cancelled. The related activities will take place as part of the new RMT.0727.

Owner

EASA CT.7

Affected stakeholders

DOA holders, POA holders and AMOs (Part-145 and Part-M Subpart-F)

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	AP	-	RMT.0689 9/6/2016	FC	n/a	n/a	2019 Q1

Specific tasks for balloons and sailplanes

RMT.0654 Revision of the balloon licensing requirements

Address topics identified by the industry balloon experts on the aircrew and on the medical side. A focused consultation was performed and no NPA was published.

Owner

EASA FS.3

Affected stakeholders

Balloon operators, pilots, flight instructors and flight examiners, CAs and DTOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	Art.16	-	RMT.0654 16/9/2016	n/a	2019 Q1	2021 Q1	2021Q1

RMT.0698 Revision of the operational rules for sailplanes

Establish a set of rules, which addresses the specificities and associated risks in an efficient and proportionate manner, for air operations with sailplanes as the only regulatory reference for such operations.

Owner

EASA FS.2

Affected stakeholders

Sailplane operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	AP	-	RMT.0698 26/4/2016	n/a	07/2017 29/8/2017	2019 Q2	2019 Q2

RMT.0701 Revision of the sailplane licensing requirements

Address topics identified by the industry sailplane experts on the aircrew side.

Owner

EASA FS.3

Affected stakeholders

Sailplane operators, pilots, flight instructors, flight examiners, ATOs and DTOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	AP	-	RMT.0701 15/12/2016	n/a	2019 Q1	2021 Q1	2021 Q1



RMT.0727 Part 21 — simple and proportionate rules for GA (implementation of the NBR)

The objective of this RMT is to revisit Part 21 in view of the amendments to the Basic Regulation (NBR). The focus of this task is to introduce simple rules that will allow to apply a proportionate approach. It will take into account the various risk levels in GA in the initial airworthiness process, and is aiming at achieving a reduction of administrative burden and costs, while at the same time supporting GA innovation. The task will include the preparatory work done under RMT.0689 ‘Part 21 proportionality’.

In the first phase of this RMT, EASA will develop proposals required by NBR Article 140 (3) and a few other topics, while in the second phase EASA will develop proposals for the implementation of all amendments to Part 21 as required by the NBR.

Owner			Affected stakeholders					
			DOA and POA holders and CAs including EASA					
PIA	Proc	3rdC	SubT	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	1	2019 Q3	2019 Q4	2020 Q4	2022 Q4	2022 Q4
			2		2022 Q1	2023 Q1	2025 Q1	2025 Q1

7.6 Manufacturers (design and production)

Issue/rationales

Aircraft design evolves at a rapid pace. Requirements for initial airworthiness and CSs need to be constantly reviewed and adjusted for cost-effectiveness and to keep pace with technological developments.

What we want to achieve

Ensure an efficient regulatory framework for manufacturers.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0180 CS-E engine testing, endurance/IMI/ETOPS

Endurance:

Review the existing engine endurance test requirements, assess their suitability for all engines, and consider an alternate endurance test and associated methods of compliance. The current regulations may not adequately address the technological advancements in modern engines, as related to the current engine endurance test.

Initial maintenance inspection (IMI):

It has become increasingly clear that reliance upon robust development testing to support a certification programme can no longer be guaranteed. There is now a need to consider a potential revision to the CSs to better ensure that any reliability and integrity issues regarding the engine’s design are identified and rectified prior to the engine entering service.

This task will introduce into CS-E a requirement based upon, if not identical to, the current FAR 33.90. This will ensure that engine tests are conducted at conditions representative of those expected to occur in service prior to the issue of a TC. The expected benefits of this include a reduction in the number of issues that arise following type certification, and a more robust certification programme.

This task is de-prioritised in accordance with the NBR roadmap.

Owner			Affected stakeholders				
EASA CT.7			DAHs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B5	ST	-	2021 Q1	2022 Q1	n/a	n/a	2023 Q1



7.7 Rotorcraft operations

Issue/rationale

Helicopter operators perform a wide range of highly specialised operations that are important for the European economy and citizens. There is a need to further develop towards an efficient regulatory framework, considering technological advancements.

What we want to achieve

Increase efficiency by enabling implementation of appropriate and balanced regulation.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0712 Enhancement of the safety assessment processes for rotorcraft designs

The safety assessment of the design of aircraft systems and equipment can help to identify shortfalls in the robustness of the design and also help aircraft designers to mitigate the risk of undesirable events by introducing means to reduce their likelihood. Ensuring robust safety assessment of rotorcraft designs can be considered to be even more critical due to the high number of single-point failures. Technology and techniques have evolved since the inception of formal safety assessment processes and therefore it is vital that CSs keep abreast with the latest thinking on safety assessment to maximise the potential that safety issues are identified during certification.

The safety requirements for equipment, systems and installations contained in the CSs should be improved for small and large rotorcraft to reflect current best practice for safety assessment. The FAA is also developing new rules for the safety assessment of rotorcraft and these changes will create significant standard differences between the EU and US regulations and are likely to result in a lower regulatory efficiency. The proposed RMT also aims at reviewing these changes to achieve harmonisation where possible.

Owner			Affected stakeholders				
EASA CT.7			DAHs and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B5	ST	✓	RMT.0712 15/10/2018	2019 Q3	n/a	n/a	2020 Q2



RMT.0714 Enable the safe introduction of rotorcraft Fly-by-Wire technology

Currently, civil rotorcraft are equipped with mechanical flight controls (with or without hydraulic assistance), and trim and automatic flight control system (AFCS) functions are typically introduced in the mechanical flight control chains. Fly-By-Wire (FbW/FBW) technology has been in service on civil large aeroplanes for more than 40 years and this technology is now being applied to civil rotorcraft. This technology allows the introduction of advanced flight control laws and flight control protections which greatly increase the complexity of the flight control system and integration with the other systems and interaction with the aircraft handling qualities. FbW flight control systems are highly complex and also highly safety-critical.

EASA has already been involved in a validation activity with a US applicant, for which a set of dedicated and bespoke requirements are being developed by the FAA and EASA. It is expected that there will be an application for a design containing FBW technology from an EU applicant shortly. It is for these reasons that appropriate certification specifications for rotorcraft FbW systems should be developed to enable the safe introduction of this technology to rotorcraft.

Owner			Affected stakeholders				
EASA CT.7			DAHs and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B1.2	ST	✓	2020 Q2	2021 Q1	n/a	n/a	2021 Q3

RMT.0494 FTL requirements for helicopter operations

Establish harmonised and state-of-the-art rules for helicopter operations (CAT, SPO, NCC).

Owner			Affected stakeholders				
EASA FS.2			CAT helicopter operators				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	2020 Q3	2021 Q2	2022 Q2	2024 Q2	2024 Q2



7.8 Specialised operations

Issue/rationale

Operators other than CAT, e.g. conducting specialised operations, make an important contribution to aviation's overall role in modern economies. There is thus a need for an efficient regulatory framework.

What we want to achieve

Increase efficiency by enabling implementation of appropriate balanced approach.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

Following completion of the actions included under this section in EPAS 2018-2022, no further actions are included in this EPAS edition. The section is maintained as a placeholder for future actions.



7.9 Maintenance training organisations

Issue/rationale

At present Part-147 excludes the use of distance learning for the purpose of basic knowledge and aircraft type training as the training locations are part of the approval. Part-66 allows the use of ‘synthetic training devices’, but does not define them. Appendix III to Part-66 allows ‘Multimedia Based Training (MBT) methods may be used to satisfy the theoretical training element either in the classroom or in a virtual controlled environment (...); however, it does not define these methods, and no guidance exists on how to evaluate, validate and/or approve courses based on MBT methods.

What we want to achieve

Part-147: The introduction of the new methods and technologies will lead to a level playing field, raise the efficiency, quality and safety of maintenance training. Additionally, this way the training provided amongst the approved maintenance training organisations will be at a similar level. Moreover, it may result in an increased number of young people choosing to engage in maintenance career, which may help to tackle the expected shortage of maintenance staff in the near future.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0281 New training/teaching technologies for maintenance staff

Set up the framework for:

- e-learning and distance learning;
- simulation devices or STDs;
- specialised training such as HF, FTS, continuation training; and
- blended teaching methods.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner			Affected stakeholders				
EASA FS.1			AMTOs, CAMOs and CAs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0281 19/12/2012	2014-22 9/9/2014			

RMT.0255 Review of Part-66

Amend Part-66 in line with the conclusions of the evaluation report issued following EVT.001. In particular, further simplify the licensing system for aircraft below 5 700 kg and legacy aircraft.

Owner			Affected stakeholders				
EASA FS.1			Maintenance engineers and AMTOs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
n/a	ST	-	2019 Q1	2020 Q3	2021 Q3	2023 Q3	2023 Q3



7.10 Maintenance organisations

Issue/rationale

Certain existing requirements are either not efficient or not proportionate to the risks involved.

What we want to achieve

Increase proportionality and efficiency in the airworthiness field.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0018 Installation of parts and appliances that are released without an EASA Form 1 or equivalent

The intent of this task is:

- to provide a consistent interpretation of the definition of ‘parts & appliances’ and other terms used in the various rules;
- to develop criteria for the acceptance of parts and appliances with different production background for installation in certified aircraft;
- to create a parts classification for commercial parts, allowing an installer to install commercial parts on a type-certified product without having to obtain parts manufactured under a POA. This proposal will also allow manufacturers to continue to use parts now categorised as commercial parts in their type designs. The added benefit of the proposal is to have the manufacturers identify for EASA approval the commercial parts they intend to use;
- to develop criteria for production and release of parts and appliances proportionate to the potential impact on safety as determined in the design certification process;
- to develop the draft amendments to Regulations (EU) Nos 748/2012 and 1321/2014 as necessary to incorporate the above concepts and integrate the existing alleviations for sailplanes and European light aircraft (ELA);
- to develop the necessary AMC and GM to accompany the amendments to the regulations;
- to develop AMC and GM to support the interpretation of the above-mentioned provisions in the Basic Regulation related to parts and appliances; and
- to elaborate the AMC and GM related to standard parts.

Owner

EASA FS.1

Affected stakeholders

DAHs, POA holders, aircraft operators, AMOs (Part-145 and Part-M Subpart F) and maintenance personnel

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0018 1/11/2012	2017-19 14/12/2017	2019 Q3	2021 Q3	2021 Q3



7.11 Regular updates

Issue/rationale

The aviation industry is complex and rapidly evolving. The corresponding rules need to be updated regularly to ensure that they are fit for purpose, cost-effective, can be implemented in practice, and are in line with the latest ICAO SARPs.

Regular updates are issued when relevant data is available following an update of industry standards or feedback from certification activities or minor issues raised by the stakeholders.

What we want to achieve

Ensure that the regulatory framework is cost-effective and can be effectively implemented.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0031 Regular update of AMC & GM to Part 21

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0031 15/12/2016	2019 Q2	n/a	n/a	2020 Q1

RMT.0037 Regular update of CS-22

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0037 14/1/2016	2020 Q2	n/a	n/a	2020 Q4

RMT.0128 Regular update of CS-27&29, CS-VLR

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0128 28/9/2016	2020 Q2	n/a	n/a	2021 Q1

RMT.0134 Regular update of rotorcraft AMC

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0134 20/10/2010	2020 Q1	n/a	n/a	2021 Q1

RMT.0184 Regular update of CS-E

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0184 27/7/2015	DP (2/5/2018)	n/a	n/a	2018 Q4

RMT.0287 Updating Part-MED, ARA.MED and ORA.AeMC, and related AMC and GM

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.3	RMT.0287 22/10/2012	2017-22 21/12/2017	2021 Q1	2023 Q1	2023 Q1

RMT.0392 Regular update of OPS rules

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.2		tbd			



RMT.0412 Regular update of the authority and organisation requirements pertaining to Part-FCL

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.3	RMT.0412 30/10/2012				

RMT.0424 Regular update of Part-MED

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.3	RMT.0424 9/10/2017				

RMT.0457 Regular update of EASA TSOs

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0457 21/8/2015	2019 Q1	n/a	n/a	2019 Q3

RMT.0476 Regular update of SERA implementing rules (stemming from ICAO SL)

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.4.2	RMT.0476 18/8/2017	2021 Q4	2022 Q3	2024 Q4	2024 Q4

RMT.0499 Regular update of CS-MMEL

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0499 9/4/2018	2018-08 22/8/2018	n/a	n/a	2019 Q3

RMT.0502 Regular update of CS for balloons

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	tbd	tbd	n/a	n/a	tbd

RMT.0503 Regular update of CS-APU

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	tbd	tbd	n/a	n/a	tbd

RMT.0508 Regular update of CS-CC

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	2019 Q3	2020 Q1	n/a	n/a	2020 Q3

RMT.0509 Regular update of CS-FC

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	2019 Q1	2019 Q2	n/a	n/a	2019 Q4

RMT.0519 Regular update of CS-ACNS

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.4.2	RMT.0519 12/9/2015	2018-02 22/02/2018	n/a	n/a	2019 Q1

RMT.0541 Regular update of aircraft type ratings for Part-66 aircraft maintenance licence

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.1	66.024 12/5/2009	2018 Q4	n/a	n/a	2019 Q2



RMT.0587 Regular update of regulations regarding pilot training, testing and checking and the related oversight

The current cycle will be completed. Further cycles are de-prioritised in accordance with the NBR roadmap.

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.3	RMT.0587 11/5/2016	30/11/2016	03/2017 11/5/2017	2018 Q4	2018 Q4

RMT.0591 Regular update of ADR rules

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.4.3	RMT.0591 29/7/2016	2018 Q4	n/a	n/a	2019 Q3

RMT.0605 Regular update of CS-LSA

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0605 14/1/2016	2020 Q2	n/a	n/a	2020 Q4

RMT.0643

Regular update of AMC-20

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0643 20/7/2015	2018-09 24/08/2018	n/a	n/a	2019 Q2



RMT.0668 Regular update of ATCO licensing rules (IRs/AMC & GM)

Owner	ToR	NPA*	Opinion	Commission IR	Decision
EASA FS.4.1	RMT.0668 10/8/2017	DP	n/a	n/a	2020 Q2

RMT.0673 Regular update of CS-25

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0673 27/4/2015	2018-05 18/6/2018	n/a	n/a	2019 Q1

RMT.0684 Regular update of CS-P

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	tbd	tbd	n/a	n/a	tbd

RMT.0687 Regular update of CS-23

*Instead of the NPA, Article 15/16 will apply

Owner	ToR	NPA*	Opinion	Commission IR	Decision
EASA CT.7	RMT.0687 9/8/2017	2019 Q1	n/a	n/a	2019 Q3

RMT.0688 Regular update of CS-SIMD

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	2020 Q1	2020 Q2	n/a	n/a	2020 Q3

RMT.0690 Regular update of CS-STAN

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA CT.7	RMT.0690 9/6/2016	2018-10 11/9/2018	n/a	n/a	2019 Q1

RMT.0692 Regular update of the acceptable means of compliance and guidance material on the safety (key) performance indicators

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.4.2	8/10/2015	2019 Q1	n/a	n/a	2019 Q3

RMT.0719 Regular update of ATM/ANS rules (IRs/AMC & GM)

Owner	ToR	NPA	Opinion	Commission IR	Decision
EASA FS.4.1	18/8/2017	DP	02/2018 8/3/2018	2020 Q1	2020 Q1

RMT.0723 Development of AMC & GM for SKPI (ATM performance IRs)

Reference Period 3

An accelerated rulemaking procedure will be used, involving the NPA public consultation, but will not include a regulatory impact assessment (RIA), as per Article 16 of the Rulemaking Procedure, as the options are linked with low expected impact and no controversy.

Owner	ToR	NPA*	Opinion	Commission IR	Decision
SM.1	29/6/2018	2019 Q3	n/a	n/a	2020 Q2



RMT.0729 Regular update of Regulation 2019/xxxx (drones in the open and specific category)

Development of IRs for UAS implementing Articles 55 to 57 of and Annex IX to Regulation (EU) 2018/1139.

Categories of UAS:

- Open category: low-risk operation not requiring authorisation or declaration before flight
- Specific operation category: medium-risk operation requiring authorisation or declaration before flight

Owner

EASA CT.7

Affected stakeholders

MSs, UAS operators (individuals and organisations), UAS manufacturers, manned aviation community, model aircraft community, ANSPs, ADRs, all airspace users

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	Art.15	-	2019 Q1	2019 Q2	2019 Q3	2020 Q4	2020 Q4

RMT.0730 Regular update of the AMC & GM to Regulation 2019/xxxx (drones in the open and specific category)

Development of IRs for UAS implementing Articles 55 to 57 of and Annex IX to Regulation (EU) 2018/1139.

Categories of UASs:

- Open category: low-risk operation not requiring authorisation or declaration before flight
- Specific operation category: medium-risk operation requiring authorisation or declaration before flight

Owner

EASA CT.7

Affected stakeholders

MSs, UAS operators (individuals and organisations), UAS manufacturers, manned aviation community, model aircraft community, ANSPs, ADRs, all airspace users

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A-	ST	-	2019 Q1	2019 Q2	n/a	n/a	2019 Q3



8 Level playing field

The actions in this chapter are driven principally by the need to ensure that all players in a certain segment of the aviation market can benefit from the same set of rules, thereby promoting fair competition and free movement of persons and services. This is considered of particular importance for technological or business advancement where common ‘rules of the game’ need to be defined for all actors. This also includes the need for international harmonisation as well as the need to keep pace with ICAO amendments. These projects will also contribute to maintaining or even increasing the current level of safety.

8.1 Aerodrome operators

Issue/rationale

This regulatory requirement is stemming from the Basic Regulation.

What we want to achieve

The changes are expected to ensure compliance with ICAO SARPs on the provision of AMS, maintain a uniform and high level of safety in the MSs and ensure a harmonised approach which will support the free movement of services within the MSs and reduce the administrative burden especially for those providers providing AMS in different MSs.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0485 Requirements for apron management services at ADRs

The changes proposed allow the AMS to be provided either by the ADR operator or by the ANSP (or any subcontractor to them). The changes are expected to ensure compliance with ICAO SARPs on the provision of AMS, maintain a uniform and high level of safety in the MSs and ensure a harmonised approach which will support the free movement of services within the MSs and reduce the administrative burden especially for those providers providing AMS in different MSs. Opinion 02/2014 will be reviewed in 2019 and updated as necessary to bring in line with the NBR.

Owner			Affected stakeholders				
EASA FS.4.3			ADR operators and APs				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0485 and 0465 20/7/2012	2013-24 18/12/2013	02/2014 24/9/2014	tbd	tbd



8.2 Airlines (AOC holders)

Issue/rationale

Rules may need to be harmonised within the EU as well as with the main international trade partners in order to either ensure fair competition or facilitate the free movement of goods, persons and services.

What we want to achieve

Harmonise requirements where this ensures fair competition or facilitates the free movement of goods, persons and services.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0278 Importing of aircraft from other regulatory systems and Part 21 Subpart H review

Develop criteria for importing of aircraft from other regulatory systems and Part 21 Subpart H review.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner Affected stakeholders

EASA FS.1 Air operators and CAs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0278 1/2/2013	2016-08 7/9/2016			

RMT.0312 Review of standard weight

Transposed task from the JAA to review the standard weights due to demographic changes. Review of IRs/AMC & GM based on the weight survey commissioned by EASA.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner Affected stakeholders

EASA FS.2 CAT and NCC operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B3	ST	-					

RMT.0573 Fuel planning and management

Review and update the EU fuel rules, taking into account ICAO amendments and a related SR, and providing for operational flexibility.

Owner Affected stakeholders

EASA FS.2 Air operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0573 27/4/2015	2016-06 15/7/2016	2020 Q1	2022 Q1	2022 Q1

RMT.0577 Extended diversion time operations

To harmonise the extended diversion time operation (EDTO) rules with the related ICAO SARP's and modernise the EASA ETOPS rules.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner Affected stakeholders

EASA FS.2 CAT aeroplane operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B3	ST	-					



RMT.0601 Transposition of provisions on electronic flight bag from ICAO Annex 6

Transpose ICAO SARPs in EU rules and update the EU rules in line with the latest EFB developments.

Owner

EASA FS.2

Affected stakeholders

CAs and air operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0601 & 0602 5/10/2015	2016-12 4/10/2016	10/2017 18/12/2017	2019 Q2	2019 Q2

Safety Promotion

SPT.097 Promote the new European provisions on fuel planning and management

The objective is to complement the new regulatory package on fuel planning and management with relevant safety promotion material. The event theme changes every year.

Owner

EASA SM.1

Activity sector

ALL

Deliverable

Safety Promotion
material

Date

2019



8.3 Manufacturers (design and production)

Issue/rationale

Rules may need to be harmonised within the EU as well as with the main international trade partners in order to either ensure fair competition or facilitate the free movement of goods, persons and services.

What we want to achieve

Harmonise requirements where this ensures fair competition or facilitates the free movement of goods, persons and services.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0252 Instructions for continued airworthiness (ICA)

Subtask 1:

- Definition and identification of ICA (to be provided during the certification process)
- Completeness of ICA (during the certification process)
- LOI of the CA (during the certification process)

Subtask 2:

- Availability of ICA (to owners, operators, MOs, etc.)

Subtask 3:

MRB Scheduling Information (guidance on the MRB process) -> cancelled Subtask 4:

- Acceptance/approval of ICAs by other than the authority.

Subtask 5:

- Certification maintenance requirements.

With regard to Subtasks 1, 2 and 4, EASA developed an NPA, which was published in 2018. Following the NPA public consultation, EASA will develop an opinion proposing amendments to Part 21 and Regulation (EU) No 1321/2014 (Continuing Airworthiness).

Subtask 5, is completed with the amendment to CS-25 (ED Decision 2017/018/R issued on 30 of August 2017)

Owner

EASA CT.7

Affected stakeholders

DAHs and POA holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0252 15/05/2013	2016-15 23/11/2016 2018-01 29/1/2018	n/a 2019 Q3	n/a 2021 Q3	2017/018/R 30/8/2017 2021 Q3

RMT.0348 Flights related to design and production activities

To establish IRs and associated AMC & GM on operational requirements for flights related to design and production activities ('manufacturers flights').

This task is put on hold until further notice.

Owner

EASA FS.2

Affected stakeholders

DOA and POA holders



RMT.0384 Enable open rotor engine & installation

A new engine concept is being proposed to power future large transport aircraft as a means of improving aircraft fuel burn and emissions. This concept is known as the ‘open rotor engine’.

The objective of this task is to identify and recommend harmonised draft requirements and advisory material for CS-E, 14 CFR Part 33, CS-25 and 14 CFR Part 25 to address the novel features inherent in open rotor engine designs and their integration with the aircraft.

Consideration should also be given to the development of new requirements to provide the required safety objectives based on the unique nature of the open rotor configuration. These new provisions and associated AMC material should ensure that the safety levels of open rotor engine installations are consistent with those of the existing turbofan fleet.

Harmonisation with 14 CFR Part 25 and 33 (and/or Special Conditions) is an objective of this RMT.

EASA will issue a second NPA on this RMT in Q2/2021. EASA plans to issue its decisions on the basis of the first and second NPA.

Owner			Affected stakeholders				
EASA CT.7			Engine DOA and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	✓	RMT.0384 14/3/2011	2015-22 21/12/2015 2021 Q2	n/a n/a	n/a n/a	n/a 2022 Q2

RMT.0561 Update of AMC-20 ‘in-flight entertainment (IFE), lead-free soldering, harmonisation of safety and software criteria’

The objective of this task is to address issues related to those parts of AMC-20 that contain provisions on airworthiness for various systems that can be installed on different aircraft categories, namely related to the criteria for safety assurance and software development, lead-free soldering and IFE systems.

Owner			Affected stakeholders				
EASA CT.7			AOC holders, POA holders of aircraft and equipment				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B	ST	-	RMT.0561 20/7/2015	2017-09 22/6/2017	n/a	n/a	2019 Q1

RMT.0695 Non-ETOPS operations using performance class A aeroplanes with a MOPSC of 19 or less

The objective is to accommodate new business-jet aeroplanes operated by European CAT operators in the 180’ non-ETOPS category.

Owner			Affected stakeholders				
EASA FS.2			Air operators (CAT) and POA holders				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0695 15/12/2015	2017-15 25/9/2017	2019 Q1	2021 Q1	2021 Q1



8.4 Operators other than airlines (AOC holders)

Issue/rationale

Rules may need to be harmonised within the EU as well as with the main international trade partners in order to either ensure fair competition or facilitate the free movement of goods, persons and services.

What we want to achieve

Harmonise requirements where this ensures fair competition or facilitates the free movement of goods, persons and services.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0300 Operations with airships

Development of rules for the operation of airships.

This task is put on hold until further notice.

Owner

EASA FS.2

Affected stakeholders

Airship operators and airship DOA/POA holders

RMT.0318 Single-engine helicopter operations

Review the applicable rules and the associated AMC and GM in order to re-evaluate:

- Restrictions on piston engine helicopters to operate over hostile environment;
- Restrictions on single-engine helicopters to operate over congested environment.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner

EASA FS.2

Affected stakeholders

Helicopter operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0318 6/2/2018				



RMT.0492 Development of FTL for CAT operations of emergency medical services (EMS) by aeroplanes

Harmonised and state-of-the-art rules for EMS.
This RMT will continue only in the field of EMS with aeroplanes (AEMS).
Development of FTL for HEMS will be addressed in RMT.0494.

Owner EASA FS.2
Affected stakeholders CAT aeroplane operators performing EMS

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	18/4/2012	2017-17 30/10/2017	2021 Q3	2023 Q3	2023 Q3

RMT.0493 Update and harmonisation of FTL for CAT by aeroplane for air taxi operations and single-pilot operations taking into account operational experience and recent scientific evidence

Develop harmonised and state-of-the-art-rules for air taxi and single-pilot operations.

Owner EASA FS.2
Affected stakeholders CAT aeroplane operators

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0493 21/8/2012	2017-17 30/10/2017	2021 Q3	2023 Q3	2023 Q3

RMT.0495 FTL requirements for aeroplane commercial operations other than CAT

Establish harmonised and state-of-the-art rules for aeroplane commercial operations other than CAT.

Owner EASA FS.2
Affected stakeholders AOC holders

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
A2	ST	-	2020 Q2	2021 Q2	2023 Q1	2025 Q1	2025 Q1



8.5 Maintenance organisations — CAMOs

Issue/rationale

Rules may need to be harmonised within the EU as well as with the main international trade partners in order to either ensure fair competition or facilitate the free movement of goods, persons and services.

What we want to achieve

Harmonise requirements where this ensures fair competition or facilitates the free movement of goods, persons and services.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0096 Amendments (IR and AMC & GM) in line with the process of granting foreign Part-145 approvals
Streamline the approval process.

Owner			Affected stakeholders				
EASA FS.1			AMOs (Part-145)				
PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B-	ST	-	RMT.0096 (145.023) 17/6/2008	2013-12 11/7/2013	n/a	n/a	2020 Q3



8.6 Medical requirements

Issue/rationale

Rules may need to be harmonised within the EU as well as with the main international trade partners in order to either ensure fair competition or facilitate the free movement of goods, persons and services.

What we want to achieve

Harmonise requirements where this ensures fair competition or facilitates the free movement of goods, persons and services.

How we monitor improvement

The EASA ABs will give feedback on the effectiveness of the activities.

How we want to achieve it: actions

Rulemaking

RMT.0707 Medical Regulation — combine Part-MED and Part ATCO MED

The main benefits are that the medical assessor (MA) within the authorities, and the aero-medical examiner (AME) and aero-medical centres (AeMC) only need to use one common regulatory document, encouraging harmonisation and removing duplication between Part-MED and Part ATCO.MED. Consequently, the regulation should be easier to keep up to date. Moreover, currently AMEs and AeMCs require duplicate certifications on both Part-MED and Part ATCO.MED.

The task may also consider alleviations to the existing pilot age limitation by applying a more evidence-based medical approach, subject to existing scientific evidence available as a results of EASA commissioned study on pilot age limitations, complemented with other scientific research on the same topic.

This task is de-prioritised in accordance with criteria described in Chapter 3.

Owner

EASA FS.3

Affected stakeholders

AMEs, AeMCs, pilots and ATCOs

PIA	Proc	3rdC	ToR	NPA	Opinion	Commission IR	Decision
B5	ST	-					



Appendix A: Opinions and Decisions published in 2018

Title of official publication	Task Number	Task Title	Delivery Date ToR	Delivery Date Decision / Opinion	Duration (years)
2018/001/R	RMT.0595	Technical review and regular update of learning objectives and syllabi for commercial licences (IR)	11/03/2015	08/02/2018	2,9
2018/002/R	RMT.0457	Regular update of EASA TSOs	21/08/2015	19/02/2018	2,5
2018/003/R	RMT.0674	Revision of the European operational rules for balloons	23/04/2015	23/03/2018	2,9
2018/004/R	RMT.0674	Revision of the European operational rules for balloons	23/04/2015	23/03/2018	2,9
2018/005/R	RMT.0647	Loss of control or loss of flight path during go-around or climb	06/07/2015	27/03/2018	2,7
2018/005/R	RMT.0673	Regular update of CS-25	27/04/2015	27/03/2018	2,9
2018/006/R	RMT.0196	Improve flight simulation training devices (FSTDs) fidelity	15/07/2016	03/05/2018	1,8
2018/007/R	RMT.0120	Helicopter ditching and water impact occupant survivability	24/10/2012	25/06/2018	5,7
2018/007/R	RMT.0128	Regular update of CS-27&29, CS VLR	29/09/2016	25/06/2018	1,7
2018/007/R	RMT.0608	Rotorcraft gearbox loss of lubrication	22/05/2014	25/06/2018	4,1
2018/008/R	RMT.0456	Integrated modular avionics (IMA)	24/10/2013	27/08/2018	4,8
2018/009/R	RMT.0657	Review of the Aircrew Regulation in order to provide a system for private pilot training outside approved training organisations, and of the associated acceptable means of compliance and guidance material	13/10/2015	14/09/2018	2,9
Opinion 01/2018	RMT.0230	Introduction of a regulatory framework for the operation of drones	22/12/2016	06/02/2018	1,1
Opinion 02/2018	RMT.0445	Technical requirements and operational procedures for airspace design, including flight procedure design	14/07/2014	08/03/2018	3,7
Opinion 02/2018	RMT.0477	Technical requirements and operational procedures for aeronautical information services and aeronautical information management	11/10/2013	08/03/2018	4,4
Opinion 02/2018	RMT.0719	Regular update of ATM/ANS rules (IR/AMC/GM)	18/08/2017	08/03/2018	0,6
Opinion 03/2018	RMT.0464	Requirements for air traffic services	09/07/2014	22/05/2018	3,9

Please note:

- Regular updates have varying cycles and may have produced more than 1 Decision and / or Opinion;
- RMT.0657 is a Decision that was published following the adoption of the relevant IR amendment;
- Like for the “regular updates” some tasks have produced more than 1 Decision and / or Opinion; therefore please consult EPAS for detailed information.



Opinions adopted by the Commission in 2018, including duration (ToR to Opinion to adoption)

Task Number	Task Title	Opinion ref	DATE OF PUBLICATION			DURATION (years)		
			ToR	Opinion	Commission IR	Opinion	Commission IR	Total
RMT.0135	B2L and L Part-66 aircraft maintenance licences	05/2015	15/04/2011	22/06/2015	01/08/2018	4.19	3.11	7.30
RMT.0697	Part-66 basic examinations performed by Part-147 maintenance training organisations (MTOs)	07/2015	09/09/2015	12/10/2015	01/08/2018	0.09	2.81	2.90
RMT.0371	TAWS operation in IFR and VFR and TAWS for turbine-powered aeroplanes under 5 700 kg MTOM able to carry six to nine passengers	15/2016	31/01/2014	16/12/2016	01/08/2018	2.88	1.62	4.50
RMT.0555	Control of suppliers	12/2013	15/04/2011	10/12/2013	01/08/2018	2.66	4.64	7.30
RMT.0674	Revision of the European operational rules for balloons	1/2016	23/04/2015	07/01/2016	13/03/2018	0.71	2.18	2.89
RMT.0587	Regular update of regulations regarding pilot training, testing and checking and the related oversight	16/2016	11/05/2016	19/12/2016	01/08/2018	0.61	1.62	2.22
RMT.0587	Regular update of regulations regarding pilot training, testing and checking and the related oversight	3/2017	11/05/2016	11/05/2017	01/08/2018	1.02	1.20	2.22
RMT.0657	Review of the Aircrew Regulation in order to provide a system for private pilot training outside approved training organisations, and of the associated AMC/GM	11/2016	13/10/2015	07/09/2016	01/08/2018	0.90	1.90	2.80
RMT.0591	Regular update of aerodrome rules	3/2016	10/04/2014	29/03/2016	15/03/2018	1.97	1.96	3.93
RMT.0639	Performance-based navigation implementation in the European air traffic management network	10/2016	25/06/2014	28/07/2016	01/08/2018	2.09	2.01	4.10
RMT.0700	Germanwings task force	14/2016	20/04/2016	09/12/2016	26/10/2018	0.64	1.88	2.52



Appendix B: Deliverables expected in 2019

Terms of Reference (ToRs):

Driver	Baseline Quarter	Task Number	Task Title	Count
Safety	1	RMT.0708	Controlled Flight into Terrain (CFIT) prevention with Helicopter Terrain Avoidance Warning Systems (HTAWS)	1.0
	3	RMT.0127	Pilot compartment view	1.0
	3	RMT.0194	Modernising the European pilot training system and improve the supply of competent flight instructors	1.0
	3	RMT.0376	Anti-collision systems on aircraft other than aeroplanes in excess of 5 700 kg or 19 pax	1.0
	3	RMT.0709	Prevention of catastrophic accidents due to rotorcraft hoists issues	1.0
	3	RMT.0710	Improvement in the survivability of rotorcraft occupants in the event of a crash	1.0
	3	RMT.0724	Rotorcraft FCOM	1.0
	3	RMT.0725	Rotorcraft chip detection system	1.0
	3	RMT.0727	Implementing NBR into Part 21	1.0
	4	RMT.0711	Reduction in accidents caused by failures of critical rotor and rotor drive components through improved Vibration Health Monitoring Systems	1.0
Efficiency / Proportionality	1	RMT.0509	Regular update of CS-FC	1.0
	1	RMT.0729	Regular update of Regulation 2019/xxxx (drones in the open and specific category)	1.0
	1	RMT.0730	Regular update of the AMC/GM to Regulation 2019/xxxx (drones in the open and specific category)	1.0
	2	RMT.0714	Enable the safe introduction of rotorcraft Fly-by-Wire technology	1.0
	3	RMT.0508	Regular update of CS-CC	1.0
	3	RMT.0682	Implementation of the regulatory needs of the SESAR common projects	1.0
Level Playing field	2	RMT.0728	Organisation requirements for Groundhandling service providers / Development of requirements for Groundhandling operations	1.0
TOTAL				17.0



Notice of Proposed Amendments (NPAs):

Driver	Baseline Quarter	Task Number	Task Title	Count
Safety	1	RMT.0070	Additional airworthiness specifications for operations: Fire hazard in Class D cargo compartments	1.0
	1	RMT.0196	Improve flight simulation training devices (FSTDs) fidelity	1.0
	1	RMT.0251	Embodiment of safety management system requirements into Commission Regulations (EU) Nos 1321/2014 and 748/2012	1.0
	1	RMT.0262	Embodiment of level of involvement (LOI) requirements into Part-21	1.0
	1	RMT.0400	Amendment of requirements for flight recorders and underwater locating devices	1.0
	1	RMT.0648	Aircraft cybersecurity	1.0
	1	RMT.0713	Reduction in human factors caused rotorcraft accidents that are attributed to the rotorcraft design	1.0
	2	RMT.0720	Cybersecurity risks	1.0
	2	RMT.0379	All-weather operations	1.0
	3	RMT.0249	Recorders installation and maintenance thereof — certification aspects	1.0
	4	RMT.0708	Controlled Flight into Terrain (CFIT) prevention with Helicopter Terrain Avoidance Warning Systems (HTAWS)	1.0
	4	RMT.0727	Implementing NBR into Part 21	1.0
	Efficiency / Proportionality	1	RMT.0457	Regular update of EASA TSOs
1		RMT.0591	Regular update of aerodrome rules	1.0
1		RMT.0692	Regular update of the acceptable means of compliance and guidance material on the safety (key) performance indicators	1.0
2		RMT.0031	Regular update of AMC/GM to Part-21	1.0
2		RMT.0230	Introduction of a regulatory framework for the operation of drones	1.0
2		RMT.0509	Regular update of CS-FC	1.0
2		RMT.0524	Data link services	1.0
2		RMT.0673	Regular update of CS-25	1.0
2		RMT.0712	Enhancement of the safety assessment processes for rotorcraft designs	1.0
2		RMT.0730	Regular update of the AMC/GM to Regulation 2019/xxxx (drones in the open and specific category)	1.0
3		RMT.0230	Introduction of a regulatory framework for the operation of drones	1.0
3		RMT.0723	Development of AMC/GM for SKPI (ATM performance IR)	1.0
4	RMT.0678	Addressing other FCL GA issues (FCL 'Light')	1.0	
Environment	3	RMT.0513	Update CS 36 to refer to the environmental technical manual on noise certification as amended after CAEP	0.5
	3	RMT.0514	Implementation of the CAEP amendments	0.5
TOTAL				26.0



Decisions:

Driver	Baseline Quarter	Task Number	Task Title	Count
Safety	1	RMT.0249	Recorders installation and maintenance thereof — certification aspects	1.0
	2	RMT.0049	Specific risk and standardised criteria for conducting aeroplane-level safety assessments of critical systems	1.0
	3	RMT.0570	Reduction of runway excursions	1.0
	3	RMT.0589	Rescue and firefighting services (RFFS) at aerodromes	1.0
	3	RMT.0648	Aircraft cybersecurity	1.0
	4	RMT.0713	Reduction in human factors caused rotorcraft accidents that are attributed to the rotorcraft design	1.0
	3	RMT.0106	Certification specifications and guidance material for maintenance certifying staff type rating training	1.0
	4	RMT.0400	Amendment of requirements for flight recorders and underwater locating devices	1.0
	4	RMT.0469	Assessment of changes to functional systems by service providers in ATM/ANS and the oversight of these changes by competent authorities	1.0
Efficiency / Proportionality	1	RMT.0519	Maintaining CS-ACNS	1.0
	1	RMT.0561	Update of AMC-20 — ‘In-flight entertainment (IFE), lead-free soldering, harmonisation of safety and software criteria’	1.0
	1	RMT.0673	Regular update of CS-25	1.0
	1	RMT.0689	PART-21 proportionality	1.0
	1	RMT.0690	Regular update of CS-STAN	1.0
	1	RMT.0721	RAMP Deregulation	1.0
	2	RMT.0643	Regular update of AMC-20	1.0
	3	RMT.0499	Regular update of CS-MMEL	1.0
	3	RMT.0230	Introduction of a regulatory framework for the operation of drones	1.0
	3	RMT.0457	Regular update of EASA TSOs	1.0
	3	RMT.0591	Regular update of aerodrome rules	1.0
	3	RMT.0687	Regular update of CS 23	1.0
	3	RMT.0692	Regular update of the acceptable means of compliance and guidance material on the safety (key) performance indicators	1.0
	3	RMT.0730	Regular update of the AMC/GM to Regulation 2019/xxxx (drones in the open and specific category)	1.0
	4	RMT.0509	Regular update of CS-FC	1.0
TOTAL				24.0



Opinions:

Opinion	DA / IA	Task Number	Driver	Task Title	Baseline Quarter
1	IA	RMT.0249	Safety	Recorders installation and maintenance thereof — certification aspects	1
		RMT.0271		In-flight recording for light aircraft	
		RMT.0296		Review of aeroplane performance requirements for CAT operations	
		RMT.0695	Level Playing field	Non-ETOPS operations using performance class A aeroplanes with an MOPSC of 19 or less	
2	IA	RMT.0654	Efficiency / Proportionality	Revision of the balloon licensing requirements	
		RMT.0677		Easier access of General Aviation (GA) pilots to instrument flight rules (IFR) flying	
		RMT.0701		Revision of the sailplane licensing requirement	
3	IA	RMT.0703	Safety	Runway Safety	2
4	IA	RMT.0570	Safety	Reduction of runway excursions	3
		RMT.0070		Additional airworthiness specifications for operations: Fire hazard in Class D cargo compartments	
5	IA	RMT.0599			
6	DA+IA	RMT.0252	Level Playing field	Instructions for continuing airworthiness (ICA)	
		RMT.0018	Efficiency / Proportionality	Installation of parts and appliances that are released without an EASA Form 1 or equivalent	
7	IA	RMT.0729	Efficiency / Proportionality	Regular update of Regulation 2019/xxxx (drones in the open and specific category)	4



Decisions pending IR:

Driver	Baseline Quarter	Task Number	Task Title	Count
Safety	2	RMT.0069	Seat crashworthiness improvement on large aeroplanes — Dynamic testing 16g	1.0
	2	RMT.0071	Additional airworthiness specifications for operations: Thermal/acoustic insulation material	1.0
	2	RMT.0188	Update of EASA FCL implementing rules	1.0
	2	RMT.0262	Embodiment of level of involvement (LOI) requirements into Part-21	1.0
	2	RMT.0516	Update of the rules on air operations (Air OPS Regulation - all Annexes & related AMC/GM)	1.0
	2	RMT.0581	Loss of control prevention and recovery training	1.0
	2	RMT.0700	Germanwings task force	1.0
	3	RMT.0393	Maintenance check flights (MCFs)	1.0
Efficiency / Proportionality	1	RMT.0445	Technical requirements and operational procedures for airspace design, including flight procedure design	1.0
	1	RMT.0464	Requirements for air traffic services	1.0
	1	RMT.0477	Technical requirements and operational procedures for aeronautical information services and aeronautical information management	1.0
	2	RMT.0230	Introduction of a regulatory framework for the operation of drones	1.0
	2	RMT.0287	Updating Part-MED and related AMC and GM	1.0
	2	RMT.0352	Non-commercial operations of aircraft listed in the operations specifications (OpSpecs) by an AOC holder	1.0
	2	RMT.0547	Task force for the review of Part-M for General Aviation (PHASE II)	1.0
	2	RMT.0679	Revision of surveillance performance and interoperability (SPI)	1.0
	2	RMT.0639	Performance-based navigation implementation in the European air traffic management network	1.0
	2	RMT.0698	Revision of the operational rules for sailplanes	1.0
Level Playing field	2	RMT.0601	Transposition of provisions on electronic flight bag from ICAO Annex 6	1.0
	3	RMT.0276	Technical records	1.0
Environment	1	RMT.0560	Halon — Update of Part-26 to comply with ICAO standards	1.0
TOTAL				21.0



Appendix C: New actions, deleted actions and negative priorities overview

New tasks

Type	Strategic Priorities	Driver	Task Number	Task Title	Chapter	
Regulation	Regular Update	Efficiency/Proportionality	RMT.0723	Development of AMC & GM for SKPI (ATM performance IR)	7.11.0	
	standard - high	Safety	RMT.0724	Rotorcraft FCOM	5.3.0	
	standard - high		RMT.0725	Rotorcraft chip detection system	5.3.0	
	standard - high		RMT.0726	Rotorcraft occupant safety in event of a bird strike	5.3.0	
	strategic		RMT.0727	Implementing NBR into Part 21	5.2.8	
	strategic	Level Playing field	RMT.0728	Organisation requirements for Groundhandling service providers	5.2.5	
	strategic	Efficiency/Proportionality	RMT.0729	Regular update of Regulation 2019/xxxx (drones in the open and specific category)	7.11.0	
	strategic		RMT.0730	Regular update of the AMC/GM to Regulation 2019/xxxx (drones in the open and specific category)	7.11.0	
	Research/Study	strategic	Safety	RES.021	SESAR 2020 research projects aiming to prevent mid-air collision risks	5.4.4
		strategic		RES.022	SESAR 2020 research projects aiming to safely integrate drones in the airspace	5.5.1
strategic		RES.023		U-space exploratory research launched by SESAR JU as a steps towards realising the European Commission's U-space vision for ensuring safe and secure access to airspace for drones	5.5.1	
Safety Promotion	strategic	Safety	SPT.097	Promote the new European provisions on fuel planning and management	8.2.0	
	strategic		SPT.098	European Safety Promotion Task on Rotorcraft	5.3.0	
	strategic		SPT.099	Promote of helicopter hoists	5.3.0	
	strategic		SPT.100	Safety Promotion on Disruptive Passengers	5.6.2	
	strategic		SPT.101	Develop new Safety Promotion material on high profile commercial flight operations safety issues	5.2.8	
	strategic		SPT.102	Develop new Safety Promotion material on high profile aerodrome and ground handling safety issues	5.2.5	
	strategic		SPT.103	Develop new Safety Promotion material on high profile ATM safety issues	5.2.8	
	strategic		SPT.104	Develop new Safety Promotion material on high profile maintenance safety issues	5.2.4	
	strategic		MST.028	Member States to establish and maintain a State Plan for Aviation Safety	5.1.1	
	strategic		MST.029	Implementation of SESAR Runway safety solutions	5.2.2	
	strategic		MST.030	Safety Promotion on Disruptive Passengers	5.2.3	
strategic	MST.031	Implementation of SESAR solutions aiming to facilitate safe IFR operations	5.3.0			



Deleted tasks

Strategic Priorities	Task Number	Task Title	Driver	Reason
standard	EVT.0005	Evaluation of Part-145	Efficiency / Proportionality	Given the fact that changes are still planned to be introduced in Part-145 (i.e. SMS), the Part-145 EVAL action from the EPAS has been removed in order to first let the planned changes materialise.
standard	RMT.0209	Contracting of continuing airworthiness management activities	Level Playing field	This task has been deleted as a result of the strategic priorities identified in the EPAS to prioritise the work. An Opinion will be issued to close the task, which will include the analysis of the impacts of this deletion.

De-prioritised tasks

Driver	Task Number	Task Title	Domains
Safety	RMT.0116	Real weight and balance of an aircraft	IAW
	RMT.0217	CAMOs' and Part-145 organisations' responsibilities	CAW
	RMT.0486	Alignment with ICAO on ATCO fatigue management provisions	ATM/ANS std
	RMT.0521	Airworthiness review process	CAW
	RMT.0586	Tyre pressure monitoring system	IAW
	RMT.0706	Update of authority and organisation requirements	SM
	RMT.0722	Provision of aeronautical data by the aerodrome operator	ADR
Efficiency / Proportionality	RMT.0161	Conformity assessment	ATM/ANS std
	RMT.0190	Requirements for relief pilots	Aircrew
	RMT.0281	New training/teaching technologies for maintenance staff	CAW
	RMT.0392	Regular updates of OPS rules	OPS
	RMT.0412	Update of the authority and organisation requirements pertaining to Part-FCL	Aircrew
	RMT.0424	Regular update of Part-MED	Aircrew
Level Playing field	RMT.0587	Regular update of regulations regarding pilot training, testing and checking and the related oversight	Aircrew
	RMT.0097	Functions of B1 and B2 support staff and responsibilities	CAW
	RMT.0278	Importing of aircraft from other regulatory system, and Part-21 Subpart H review	CAW
	RMT.0312	Review of standard weight	OPS
	RMT.0318	Single-engine helicopter operations	OPS
	RMT.0577	Extended diversion time operations	OPS
	RMT.0707	Medical Regulation – Combine and harmonise Part-MED and ATCO MED	Aircrew



Appendix D: European Commission's priorities and EASA's Strategic Plan

EASA is a European Union body, therefore its planning exercise must be aligned to the 10 key priorities defined by the Juncker's Commission at the beginning of its mandate, which are the following:

- | | |
|--|--|
| <p>1. Jobs, Growth and Investment
✓ Creating jobs and boosting growth</p> <p>2. Digital Single Market
✓ Bringing down barriers to unlock online opportunities</p> <p>3. Energy Union and Climate
✓ Making energy more secure, affordable and sustainable</p> <p>4. Internal Market
✓ Stronger industry, fewer national trade barriers, stricter business ethics</p> <p>5. Economic and Monetary Union
✓ A deeper and fairer economic and monetary Union</p> | <p>6. EU-US Free Trade
✓ Reaching a reasonable and balanced trade agreement</p> <p>7. Justice and Fundamental Rights
✓ Upholding shared values, the rule of law and fundamental rights</p> <p>8. Migration
✓ Towards a European agenda on Migration</p> <p>9. EU as a Global Actor
✓ A stronger global actor</p> <p>10. Democratic Change
✓ Making the EU more democratic</p> |
|--|--|

Out of the above priorities for the transport sector, Commissioner Bulc identified the following as key priorities:

- Jobs, Growth and Investment
- Internal Market
- EU as a Global Actor
- Democratic Change

Cascading from these priorities, the Transport Agencies of the EC have been assigned the following objectives:

- Become global leaders
- One-stop shop for all domain-related matters
- Efficiency effort to be made, in particular on the simplification of processes
- Support to the industry
- Strategic alignment with the Juncker Objectives
- Innovative funding schemes

EASA reviewed its planning framework taking into account all the elements above, aiming for a clear cascade from the Commission's vision to its objectives and actions. This led to the development of 6 strategic statements that represent the goals to be achieved by . The strategic statements respond to the inputs analysed by EASA as well as the objectives set by Commissioner Bulc.

1. Our ambition is to be the foremost Aviation Safety Agency in the world
(Linked to the Juncker objective: EU as Global Actor)

2. EASA works on safety, in a proactive manner, helped by an enhanced safety analysis capability
(Linked to the Juncker objective: EU as Global Actor)

3. One system based on partners working in an integrated, harmonised and coordinated manner
(Linked to the Juncker objective: Jobs, Growth and Investment)

4. EASA builds on committed, agile and talented staff
(Linked to the Juncker objective: EU as Global Actor)



5. Rules are smart, proportionate and contribute to the competitiveness of the Industry
(Linked to the Juncker objective: Jobs, Growth and Investment)

6. EASA will continue to be independent from political or economic influence in all its safety actions
(Linked to the Juncker objective: EU as Global Actor)

Strategic objectives

Each strategic statement has a set of underlying strategic objectives which are further described through the expected outcomes and a brief description of the actions EASA will take to achieve the objectives. The strategic actions will be monitored through specific KPIs that together with the ones used to monitor the recurrent activities of EASA will constitute the 'operational dashboard'.

<i>Strategic statement</i>	Objective	Outcome	Action
1. Our ambition is to be the foremost Aviation Safety Agency in the world	1.1	Facilitating competitiveness, innovation and emerging technologies which generate European success	Achieving proportionate and performance-based regulatory actions that efficiently maintain safety, stimulate jobs, growth and European industry
	1.2	Sustaining worldwide recognition for the European aviation safety system	Recognition and respect as a strong partner with integrity, transparency and professional excellence
2. EASA works on safety, in a proactive manner, helped by an enhanced safety analysis capability.	2.1	Applying an advanced, pro-active and systematic approach to aviation safety	In consultation with NAAs and Industry, develop a Safety Management capability that can programme and deliver effective and robust safety actions.
	2.2	Using information technology to the benefit of the European Safety Management process	Managerial and technical processes and interactions with stakeholders are simplified, efficient and information is accessible to multiple parties
3. One system based on partners working in an integrated, harmonised and coordinated manner	3.1	Identifying safety deficiencies and taking corrective actions in a common, coordinated and rapid manner	A comprehensive risk-based oversight system provides safety performance monitoring of aviation activities.
	3.2	Integrating technical resource management at European level for efficiency, effectiveness and flexibility	Competent well-trained technical experts can be deployed in a coordinated manner to support safety activities and NAAs throughout Europe.
	3.3	Establishing a new resource scheme to sustain the European aviation safety system	One new harmonised resource management mechanism that forecasts revenues and reliably provides funds over the complete business cycle. Cooperative oversight and pooling of experts at EU level will also ensure a proper use of funds to sustain the European Aviation Safety System.



<i>Strategic statement</i>	Objective	Outcome	Action	
4. EASA builds on committed, agile and talented staff	4.1	Empowering individuals to develop, engage and grow so as to deliver on our priorities	Clear, concise and complete HR policies, procedures and practices that include encompassing recognition, training and development	For all activities, EASA shall ensure regular tailored job evaluations, professional growth opportunities and succession planning for its staff. EASA shall train its staff based on training programmes and prioritised needs assessments.
	4.2	Creating a quality work environment that helps staff succeed	Facilities that encourage team work, cooperation and collaboration and encompass a paperless workplace with up-to-date support tools	EASA shall provide customised work premises and tools for active staff collaboration and support.
	4.3	Pledging to improve, refine and simplify processes, procedures and practices so as to drive efficiency.	Stakeholders receive an efficient, straightforward, quality service at a high level of availability and low level of bureaucracy.	EASA shall implement improvements, track progress, benchmark and review performance; with particular attention to developing stakeholders' two-way feedback.
5. Rules are smart, proportionate and contribute to the competitiveness of the Industry.	5.1	Optimising Rulemaking activities to ensure a consistent, efficient and effective approach	Consultation mechanisms and rules, opinions and guidance that are objective, understandable and responsive to demand	EASA shall monitor the rulemaking process, in order to ensure a consistent, efficient, and effective approach. In addition EASA shall consistently conduct preliminary impact assessments.
	5.2	Assessing implementation of Rules and Regulations to ensure they are effective, proportionate and remain relevant	A smart feedback loop constantly improving aviation rules and regulations.	In consultation with stakeholders, EASA shall regularly review enacted rules and regulations to maintain, amend, remove or replace them with measures like safety promotion.
6. EASA will continue to be independent from political or economic influence in all its safety actions	6.1	Demonstrating integrity by assuring technical independence and robustness of safety decision-making	Technical safety decision-making that is objective, based on analysis, impact assessment and fair judgment and not influenced by bias or undue influence.	EASA shall maintain a conflict of interest management system and strengthen existing mechanisms such as the job rotation scheme.
	6.2	Minimising the consequences of political or unexpected constraints that may impact on aviation safety	Problems are anticipated and countermeasures are enacted so that safety risks are minimised and stakeholder expectations are satisfied	EASA shall employ data-based decision-making processes and establish practical measures to counter safety risks stemming from resource constraints and the impact of undue influence.



Appendix E: Policy on Safety Management Systems

General

- 1.1. The main purpose of an SMS is to ensure that, beyond assuring mere compliance with regulations, organisations have the capacity of identifying the risks they may pose to flight safety and mitigating those risks.
- 1.2. Accidents having generally multiple, cross-domain causes, Authorities and organisations should have a consistent approach when dealing with the identification of hazards and management of safety risks.
- 1.3. In its report 'Harmonised European Approach to a Performance Based Environment'⁴⁴ EASA identified that effective implementation of SMS is the most important driver for implementing a risk- and performance-based approach⁴⁵.

Applicability and consistency

- 1.4. As a general principle, all organisations exposed to or possibly contributing to aviation safety risks, should be subject to SMS requirements. Possible exceptions should be determined based on:
 - the overall contribution of a particular activity to the safety of the total system;
 - the relative costs and benefits of SMS implementation both for organisations and authorities.
- 1.5. Applicability dates should be adapted to the type of activity of the organisations, in particular as regards their contribution to aviation safety risks.
- 1.6. In order to minimise changes in existing regulations and therefore the impact on organisations, the introduction of SMS requirements into new domains should be based on a careful gap analysis between existing requirements and the ICAO Annex 19 framework.
- 1.7. While minimising those changes, the resulting regulations should foster consistent implementation of SMS in the regulated fields. This is particularly important for those organisations holding multiple approvals within the scope of the Basic Regulation.
- 1.8. Common core authority requirements should apply in all technical domains to support the standardisation objectives set out in the Basic Regulation, support the implementation of SSP/EPAS, to streamline competent authority management systems and procedures, and to ensure consistency in organisation approvals.

Proportionality and flexibility

- 1.9. The Organisation's SMS must be commensurate with the size and complexity of the organisation and the level of risks involved.
- 1.10. To ensure proportionality and flexibility, the SMS requirements at Implementing Rule level should be limited to key principles. Non-essential implementation provisions should be included as AMC.
- 1.11. The implementation provisions at AMC level should be further adapted to the size, nature and complexity of specific technical domains or categories of organisations, while ensuring a consistent approach between different technical domains.

⁴⁴ <https://www.easa.europa.eu/document-library/general-publications/harmonised-european-approach-performance-based-environment>

⁴⁵ This view also aligns with the majority views expressed by stakeholders through the A-NPA 2014-12 consultation as related to question 3.1.1, which gave birth to [Regulation \(EU\) 2018/1139](#).



Implementation

- 1.12. The development and acceptance of industry standards and Safety Promotion material should be encouraged to support SMS implementation.
- 1.13. SMS implementation should be given reasonable time, beyond the mere implementation deadline, following a phased, performance-based approach.
- 1.14. Further emphasis should be put on supporting the implementation of simple, robust and proportionate SMS for simple, low-risk organisations.

General aviation and small organisations

- 1.15. Safety management principles, centred on the individual, should systematically be considered when developing or amending regulations.

International harmonisation

- 1.16. The common EASA management system framework should address the elements of ICAO Annex 19 while providing proportionality and flexibility. However, a less prescriptive and more proportionate approach than the ICAO Annex 19 SARPS is desirable.



Appendix F: Acronyms and definitions

14 CFR Part 25	airworthiness standards: transport category airplanes
14 CFR Part 33	airworthiness standards: aircraft engines
4G	fourth generation of wireless mobile telecommunications technology
AAD	advanced anomaly detection
ABs	Advisory Bodies
ACARE	Advisory Council for Aviation Research and Innovation in Europe
ACAS	airborne collision avoidance system
ACNS	Airborne Communications, Navigation and Surveillance
ADR	aerodromes
ADS-B	automatic dependent surveillance - broadcast
ADS-C	automatic dependent surveillance - contract
AMTO	approved maintenance training organisation (Part-147)
EAER	European Aviation Environmental Report
AFCS	automatic flight control system
AFIS	aerodrome flight information service
AI	Artificial Intelligence
AIW	Airworthiness
AltMoC	alternative means of compliance
AMAN	arrival management
AMC	acceptable means of compliance
AMC 20	general Acceptable Means of Compliance for airworthiness of products, parts and appliances
AMM	aircraft maintenance manual
AMO	approved maintenance organisation
ANAC	Agência Nacional de Aviação Civil (Portuguese national aviation authority)
A-NPA	advance notice of proposed amendment
ANS	air navigation services
ANSP	air navigation service provider
AOC	air operator certificate
AP	accelerated procedure
ARA	authority requirements (in the aircrew Regulation)
ARAC	Aviation Rulemaking Advisory Committee
ASAGA	aeroplane state awareness during go-around
ASAWG	ARAC Airplane-level Safety Analysis Working Group
ASBUs	Aviation System Block Upgrades
ASISP	Aircraft Systems Information Security/Protection



ASR	annual safety review
ATC	air traffic control
ATCO	air traffic controller
ATM	air traffic management
ATM MP	The ATM Master Plan
ATO	approved training organisation
ATPL	air transport pilot licence
ATQP	Alternative and Training Qualification Programme
ATS	air traffic services
AV-CERT	Aviation Computer Emergency Response Team
AWOs	all-weather operations
B777	Boeing 777
BEA	Bureau d'Enquêtes et d'Analyses
BPL	balloon pilot licence
BR	Basic Regulation (Regulation (EU) 2018/1139)
CA	competent authority
CAA	civil aviation authority
CABA	Certification Authorities for Bilateral Agreements & Certification Procedures
CAEP	Committee on Aviation Environmental Protection (ICAO)
CAEP/10	tenth meeting of the committee on Aviation Environmental Protection
CAG	Collaborative Analysis Group
CAMO	continuing airworthiness management organisation
CASA	Civil Aviation Safety Authority of Australia
CAT	commercial air transport
CAT I, II, III	category I, II, III
CAW	continuing airworthiness
CB	Cumulonimbus
CBTA	competency-based training and assessment
CE	Critical Element
CERT-EU	Computer Emergency Response Team
CFIT	controlled flight into terrain
CMT	Certification Management Team
CO ₂	carbon dioxide
CPDLC	controller–pilot data link communication
CPL	commercial pilot licence
CRM	crew resource management
CS	certification specification
CS SIMD	Certification Specifications for Simulator Data



CS VLR	Certification Specifications for Very Light Rotorcraft
CS-22	Certification Specifications for sailplanes and powered sailplanes
CS-23	Certification Specifications for normal, utility, aerobatic and commuter aeroplanes
CS-25	Certification Specifications for large aeroplanes
CS-26	Certification Specifications for additional airworthiness specifications for operations
CS-27	Certification Specifications for small rotorcraft
CS-29	Certification Specifications for large rotorcraft
CS-34	Certification Specifications for aircraft engine emissions and fuel venting
CS-ACNS	Certification Specifications for Airborne Communication, Navigation and Surveillance
CS-APU	Certification Specifications for Auxiliary Power Units
CS-CC	Certification Specifications for cabin crew data
CS-E	Certification Specifications for Engines
CS-ETSO	Certification Specifications for European Technical Standard Orders
CS-FCD	Certification Specifications for flight crew data
CS-LSA	Certification Specifications for Light Sport Aeroplanes
CS-MMEL	Certification Specifications for Master Minimum Equipment List
CS-STAN	Certification Specifications for Standard Changes/Standard Repairs
CS-VLA	Certification Specifications for Very Light Aeroplanes
CTIG	Common Training Initiative Group
CVS	combined vision systems
CZ	Czech Republic
DAH	design approval holder
DAT provider	(aeronautical) data provider, indirectly, competent authority
DAT.OR	organisational requirements for the data service providers
DAT.TR	technical requirements for the provision of data services
D-ATIS	Data link-automatic terminal information service
DCL	departure clearance
DLS	data link services
DOA	design organisation approval
DP	direct publication
D-TAXI	delivery of planned and cleared departure routes by datalink
DTO	declared training organisation
EACTB	Engine Aircraft Certification Tracking Board
EACWG	Engine/Aircraft Certification Working Group
EAFDM	European Authorities Coordination Group on Flight Data Monitoring
EAPPRE	European Action Plan for the Prevention of Runway Excursions
EASA	European Union Aviation Safety Agency
EASA CT	EASA Certification



EASA CT.2	EASA General Aviation & Remotely Piloted Aircraft Systems (RPAS) Department
EASA CT.5	EASA Environment Department
EASA CT.7	EASA Certification Policy & Safety Information Department
EASA FS.1	EASA Maintenance & Production Department
EASA FS.2	EASA Air Operations Department
EASA FS.3	EASA Aircrew & Medical Department
EASA FS.4	EASA Air Traffic Management/Air Navigation Services (ATM/ANS) & Aerodromes Department
EASA FS.4.1	EASA Air Traffic Management/Air Navigation Services (ATM/ANS) Standards, Implementation and Oversight Section
EASA FS.4.2	EASA Air Traffic Management/Air Navigation Services (ATM/ANS) Development Section
EASA FS.4.3	EASA Aerodromes Regulations Section
EASA SM.1	EASA Safety Intelligence & Performance Department
EASA SM.2	EASA Strategy & Programmes Department
EASA SM.2.1	EASA Safety Programmes Section
EATMN	European air traffic management network
EBT	evidence-based training
EC	European Commission
ECCSA	European Centre for Cyber Security in Aviation
ECQB	European Central Question Bank
ECR	European Central Repository for accident and incident reports in aviation
ECTRL	Eurocontrol
EDTO	extended diversion time operation
EEA	European Environment Agency
EFB	electronic flight bag
EFVS	enhanced flight vision systems
EHEST	European Helicopter Safety Team
EI	Effective Implementation
ELA	European light aircraft
EMS	emergency medical services
EOFDM	European Operators Flight Data Monitoring forum
EPAS	European Plan for Aviation Safety
ERCS	European Risk Classification Scheme
ESCP	European Strategic Coordination Platform
ESSI	European Strategic Safety Initiative
ETOPS	extended-range twin-engine operational performance standards
ETSO	European technical standard order
ETSOA	European technical standard order (authorisation)
EU	European Union



EUROCAE	European Organisation for Civil Aviation Equipment
EVS	enhanced vision systems
FAA	Federal Aviation Administration
FABs	functional airspace blocks
FAR 33.90	Federal Aviation Regulation Section 33.90 — Initial maintenance inspection test
FbW/FBW	fly-by-wire
FCHWG	ARAC Flight Controls Harmonisation Working Group
FCOM	flight crew operating manual
FDD	fault detection & diagnosis
FDM	flight data monitoring
FEM	flight examiner manual
FIS	flight information services
F-NI	fire - non-impact
FOT	focused attention topics
FR	France
FRM	fatigue risk management
FTC	fault tolerant control
FSTD	flight synthetic training devices
FTE	flight test engineer
FTL	flight time limitation
FTS	flight time specifications
FW	fixed wing
GA	general aviation
GA.COM	General Aviation Committee (EASA Advisory Body)
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan (ICAO)
GBAS	Ground-based augmentation system
GCOL	ground collision
GH	Ground Handling
GLS	GBAS (ground-based augmentation system) landing system
GM	guidance material
GNSS	global navigation satellite system
GPS	global positioning system
H2020	Horizon 2020
HE	Helicopter
HEMS	helicopter emergency medical services
HF	human factors
HF CAG	Human Factors Collaborative Analysis Group



HOSSWG	Helicopter Offshore Safety and Survival Working Group
HP	Human performance
HPA	high-performance aircraft
HTAWS	helicopter terrain avoidance warning systems
HUD	head-up displays
HUMS	health and usage monitoring systems
IAW	initial airworthiness
IATA	International Air Transport Association
ICA	instructions for Continued Airworthiness
ICAO	International Civil Aviation Organization
ICAO SL	ICAO State letter
IFE	in-flight entertainment
IFR	instrument flight rules
IHST	International Helicopter Safety Team
ILS	instrument landing system
IMA	Integrated modular avionics
IMC	instrument meteorological conditions
IMI	initial maintenance inspection
Init. Airw.	initial airworthiness
IR	(Commission) implementing rule
IR	Instrument rating
JAA	Joint Aviation Authorities
JAR-25	joint aviation requirements
JARUS	Joint Authorities for Rulemaking on Unmanned Systems
KPI	key performance indicator
KRE	key risk element
LAFI	light aircraft flight instructor
LAPL	light aircraft pilot licence
LAPL(A)	allows pilots to act as pilot in command on aeroplanes or touring motor gliders
LAPL(S)	allows pilots to act as pilot in command on EASA sailplanes and powered sailplanes
LFTE	lead flight test engineer
LO	learning objective
LOCART	loss of control avoidance and recovery training
LOC-I	loss of control - inflight
LOI	level of involvement
LVO	low-visibility operation
MA	medical assessor
MB	Management Board



MAC	mid-air collision
MCF	maintenance check flights
MET	meteorology/meteorologic
MET provider	Meteorological service provider, indirectly, competent authority
MGB	main gearbox
MH17	Malaysia Airlines flight 17
MMEL	master minimum equipment list
mn	Minutes
MO	maintenance organisation
MOPS	minimum operational performance specification
MOPSC	maximum operational passenger seating configuration
MPL	multi-crew pilot licence
MRB	Maintenance Review Board
MS	Member States
MST	Member States' task
MTO	maintenance training organisation
MTOM	maximum take-off mass
NBR	New Basic Regulation - Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91
NCC	non-commercial air operations with complex motor-powered aircraft
NCO	non-commercial air operations with other-than-complex motor-powered aircraft
NDB	non-directional beacon
NextGen	next generation
NO	Norway
NoAs	Network of Analysts
NPA	notice of proposed amendment
OEM	original equipment manufacturer
OJ	Official Journal of the European Union
OPS	air operations
OpSpecs	operations specifications
ORO.FC	organisation requirements for air operations - flight crew
PANS	procedures for air navigation services (ICAO)
Part-145	maintenance organisation approvals
Part-147	training organisations requirements
Part 21	airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations
Part 21 Subpart H	Airworthiness certificates and restricted certificates of airworthiness



Part-26	additional airworthiness requirements for operations
Part-66	certifying staff
Part-ARO	authority requirements for air operations
Part-FCL	flight crew licensing
Part-M	continuing airworthiness requirements
Part-MED	medical certification of pilots, medical fitness of cabin crew, certification of AMEs and requirements of GMPs and OHMPs
Part-ORA	Organisation requirements for aircrew
Part-ORO	Organisation requirements for air operations
Part-SPO	specialised operations
pax	passengers
PBN	performance-based navigation
PBR	performance-based regulation
PCP	pilot common project (SESAR)
PED	personal electronic device
PIA	preliminary impact assessment
PIA A	preliminary impact assessment 'Strategic'
PIA B	preliminary impact assessment 'Standard'
PIA C	preliminary impact assessment 'Regular Update'
PIS	public interest sites
PM CPDLC	protected mode controller–pilot data link communication
POA	production organisation approval
PoC	proof of concept
PPL	private pilot license
Q	Quarter
RASG	Regional Aviation Safety Group
RASP	Regional Aviation Safety Plan
RAMP	aerodrome ramp
RE	runway excursion
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals – EC Directive 1907/2006
RES	research actions
RFFS	rescue and firefighting services
RFID	radio frequency identification
RI	runway incursion
RIA	regulatory impact assessment
RI-VAP	runway incursion (vehicle animal person)
RMT	rulemaking task
RNAV	area navigation



R.COM	Rotorcraft Committee (Advisory Body)
RSOO	Regional Safety Oversight Organisation
SA CAT I	Special authorisation CAT I
SAR	Standardisation Annual Report
SARPS	Standards and Recommended Practices (ICAO)
SATCOM	Satellite Communications
SBAS	satellite-based augmentation system
SCF-NP	system component failure (non-powerplant)
SCF-PP	system component failure (powerplant)
SERA IR	standardised European rules of the air implementing rule
SERA Part C	Commission Implementing Regulation (EU) 2016/1185 of 20 July 2016 amending Implementing Regulation (EU) No 923/2012 as regards the update and completion of the common rules of the air and operational provisions regarding services and procedures in air navigation (SERA Part C) and repealing Regulation (EC) No 730/2006
SES	single European sky
SESAR	Single European Sky ATM Research
SET	single-engined turbine
SIA	safety issue assessment
SHARP	Safety Helmet Assessment and Rating Programme
SJU	SESAR Joint Undertaking
SLD	super-cooled large droplets
SMICG	Safety Management International Collaboration Group
SMS	safety management system
SM TeB	Safety Management Technical Body
SOPs	standard operating procedures
SPAS	State Plan for Aviation Safety
SPD	Single Programming Document
SPI	safety performance indicator
SPL	sailplane pilot license
SPN	Safety Promotion Network
SPO	specialised operations
SPT	safety promotion task
SR	safety recommendation
SRIA	Strategic Research and Innovation Agenda
SRM	safety risk management
SSIP	supplemental structural inspection programme
SSP	state safety programme
SSR	secondary surveillance radar (SSR)
ST	standard (rulemaking) procedure



STC	supplemental type certificate
STD	synthetic training device
Subparts J & K of Part-FCL	instructors and examiners
SVGS	synthetic vision guidance systems
SVS	synthetic vision systems
SWI	survivable water impact
SWIM	system-wide information management
TAWS	terrain awareness warning system
TBD	to be determined
TBO	time between overhaul
TC	type certificate
TCO	third-country operator
TCAS	traffic collision avoidance system
TCCA	Transport Canada Civil Aviation
TCP	tricresyl phosphate
TeB	Member State technical body
TeC	Stakeholder technical body
TEM	threat and error management
TMA	terminal manoeuvring area
TMG	touring motor glider
TO	training organisation
ToR	terms of reference
TSO	technical standard order
UAS	unmanned aircraft systems
UDPP	user-driven prioritisation process
UK	United Kingdom
UNCs	Undertaking Non-Compliances
UPRT	upset prevention and recovery training
USOAP	Universal Safety Oversight Audit Programme
UTM	unmanned traffic management
VFR	visual flight rules
VHF	very high frequency
VHM	vibration health monitoring
VLA	very light aeroplane
VLD	very large-scale demonstration
VOR	VHF omnidirectional range
WFD	widespread fatigue damage



WIDDCWG	Water Impact, Ditching Design and Crashworthiness Working Group
WP	working paper



Appendix G: Working groups and bodies having a role in EPAS

EAFDM

[Web Link](#)

EASA and CAs have formed a group of experts called the **European Authorities Coordination Group on FDM (EAFDM)**. It is a voluntary and independent safety initiative with the objectives of contributing to:

- improving the implementation of FDM programmes and to making them more safety effective;
- EASA's objective of a high and uniform level of safety in Europe;
- a better overview of air transport operational safety in Europe for EASA and CAs.

Among the topics covered by EAFDM are:

- Development of national FDM forums;
- Oversight of FDM programs by CAs; and
- FDM-based indicators.

EOFDM

[Web Link](#)

The **European Operators Flight Data Monitoring (EOFDM)** forum is a project of a voluntary partnership between European operators and EASA in order to:

- facilitate the implementation of Flight Data Monitoring (FDM) by Operators,
- help operators draw the maximum safety benefits from an FDM Programme.

The EOFDM steering groups manages its work with a series of working groups. Depending on the group the following organisations may participate: Operators, Operator associations, Flight-crew associations, Aircraft Manufacturers, Flight-data-monitoring software vendors, Research and educational institutions, Regulators (national aviation authorities and international aviation regulators) and EASA. Non-European organisations are encouraged to join this safety initiative.

CTIG

The **Common Training Initiative Group (CTIG)**, is composed of training managers from CAs. The CTIG plays a crucial role in the implementation of the new EASA aviation training strategy. The Group is mandated to harmonise training and assessment standards for aviation inspectors, with the aim to provide for highly qualified and sufficiently trained authority inspectors across Europe. The CTIG is now a Subgroup of the MAB.

The CTIG deliverables, among others, are contribute to the functioning of the pool-of-experts, training-related annex in CA Partnership Agreements strengthen the role of EASA as an RSOO (Regional Safety Oversight Organisation).

NoAs

The **Network of Analysts** was established in 2011 to provide a collaborative framework for the EASA MSs to work together on safety analysis activities. The NoAs was formalised within European Regulation (EU) 376/2014. It has the purpose (at Union level) of:

- reporting, analysing and following -up of occurrences in civil aviation using the European Central Repository of mandatory occurrences,
- assisting States in assessing their priorities for the State Safety Programmes (SSP),
- supporting both EPAS and to assist States in assessing their priorities for the State Safety Programmes (SSP).
- working closely with the CAGs in the identification of Safety Issues, Safety Risk Assessment and the monitoring of safety performance.

SM ICG

[Web Link](#)

The **SMS International Collaboration Group (SMICG)** was created in February 2009. It is a joint collaboration activity between aviation regulatory authorities in order to

- promote a common understanding and collaboration of SMS / State Safety Programme (SSP) principles and requirements in different countries, facilitating their implementation across the international aviation community
- share lessons learned
- encourage the progression of a harmonised SMS.



- collaborate with international organisations such as ICAO and civil aviation authorities that have implemented or are implementing SSP/SMS

The SMICG consists of a core group and a participant group. The core group is comprised of authorities with resources and expertise for product development. It includes members from the FAA, TCCA, EASA, FOCA Switzerland, DGAC France, AESA Spain, CAA of the Netherlands, ENAC Italy, Irish Aviation Authority, Trafi Finland, UK CAA, CASA of Australia, JCAB of Japan, CAA of New Zealand, ANAC of Brazil, United Arab Emirates General Civil Aviation Authority, Civil Aviation Authority of Singapore and Civil Aviation Department of Hong Kong. The International Civil Aviation Organization (ICAO) is an observer to this group.

SPN

[Web Link](#)

The **Safety Promotion Network (SPN)** is a voluntary partnership between EASA and other aviation organisations. The objective of the SPN is to enhance aviation safety in Europe by providing a framework for the collaboration of safety promotion activity throughout the MSs.

For mutual benefit and a common purpose the members of the safety promotion network take on these objectives:

- exchanging information.
- coordinating activities.
- cooperating and sharing joint activities.
- collaborating to increase the capacity for activities.

The Network activities will include coordinating, cooperating and collaboration with respect to the design, development, publication, translation and dissemination of safety information. The Network will also explore common tools and develop means to measure the effectiveness of Safety Promotion products that have been disseminated.

ESPN-R

[Web Link](#)

The **European Safety Promotion Network Rotorcraft (ESPN-R)** is a mixed industry-authorities team established by the Rotorcraft Sectorial Committee (RSC) in January 2017.

The ESPN-R develops, disseminates and evaluates Safety Promotion (SP) material and actions on a voluntary basis in support of the RSC, of EASA and of the industry. The ESPN-R can also contribute to Safety Promotion campaigns and ensuring that Safety Promotion material reaches the target audience.

The ESPN-R contributes to the implementation of rotorcraft Safety Promotion actions from EPAS, rotorcraft section, and can suggest Safety Promotion actions for inclusion in EPAS or other considerations. Scope includes but is not limited to operations and SMS, training and emerging safety-enhancing technologies.

Members come from the former European Helicopter Safety Team (EHST) community and the former European Helicopter Safety Implementation Team (EHSIT), the implementation team of the EHST. The ESPN-R leverages the former EHSIT competences for development, dissemination and evaluation of Safety Promotion material and actions.

CAG

The **Collaborative Analysis Groups (CAGs)** enable EASA to work with both the EASA MSs and industry on the tasks of identifying Safety Issues, Safety Risk Assessment and the monitoring of Safety Performance.

The CAGs produce the following outputs:

- Safety Risk Portfolios per aviation domain,
- Safety Issue Assessments (SIA),
- Best Intervention Strategy (BIL)
- Preliminary Impact Assessments (PIA)

These outputs can stem in action proposals for EPAS.

The CAGs provide a mechanism for external engagement with industry and the MS' NoA Representatives on the Safety Risk Portfolios, which are used to ensure agreement on the Key Risk Areas and Safety Issues in each domain. CAGs operate at a domain level and have been established for the following ones: CAT Aeroplanes, offshore helicopters, Balloons, Human Factors, ATM, Aerodrome/ground handling, HEMS and GA aeroplanes.



Advisory Bodies

[Web Link](#)

The **Advisory Bodies (ABs)** provide EASA with a forum for consultation of interested parties and national authorities. The main purpose of the ABs is to :

- facilitate the discussion of strategic/technical priorities as well as controversial or horizontal issues at early Agency programming stage,
- provide EASA with a forum to consult on strategic safety priorities,

When the proposed actions affect the MS, the purpose of the ABs is to:

- provide advice to EASA on content, priorities and execution of its safety programmes,
- provide advice on ongoing efforts to improve EPAS, rulemaking, standardisation, safety promotion, and research programming process.

The following ABs are relevant for the EPAS:

Member States Technical Bodies (TeBs): The TeBs encompass the scope of the TAGs and Standardisation meetings and enlarge their scope to also include safety promotion.

Stakeholder Technical Bodies (TeCs): The TeCs replaces the sub-committees of the Safety Standards Consultative Committee (SSCC). They are responsible for reviewing and committing to concrete actions that address the specific Safety Issues at sectorial and technical level.

Member State Advisory Body (MAB): The MAB is body advising on strategic developments. It encompasses and extends the scope of RAG, EASAC and EASp Summit.

Stakeholder Advisory Body (SAB): The SAB replaced the Safety Standards Consultative Committee (SSCC) and the EASA Advisory Board (EAB). Within the SRM process is responsible for advising on strategic developments.

The **Safety Management TeB (SM TeB)** is particularly relevant for the EPAS as it is the forum to

- advise MSs with the implementation and maintenance of their SSPs and SPASs by exchanging information and addressing implementation issues;
- provide input and feedback on the implementation of the EPAS in regards to systemic issues;
- provide recommendations to EASA/EC on further actions required to support SSP / EPAS implementation;
- address issues stemming from the Standardisation SYS inspections; and
- discuss and provide recommendations where action is required on any safety management implementation issues.



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