EASA VTOL Department

Rotorcraft Safety Roadmap – Highlights 2020

David Solar, EASA, Head of Department Vertical Take-Off and Landing (VTOL) Department

9 December 2020

Your safety is our mission.

An Agency of the European Union

EASA VTOL Webinar 2020

General update

Welcome by David Solar and general update on the work of his team

Rotorcraft Safety Roadmap

The main deliverables of the Roadmap published this year and the ongoing activities of the Rotorcraft Safety Roadmap are presented.

VTOL publications

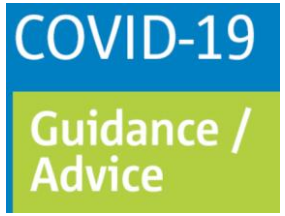
Overview of what is coming next and the subject that the agency is working on.

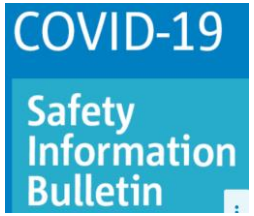
General update - Looking back at 2020

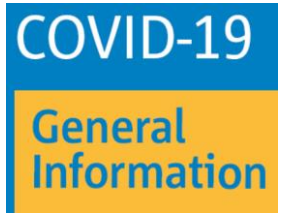
The helicopter community has been instrumental during the Covid19 crisis and delivered services

Thanks to all stakeholers!

EASA COVID 19 actions







Objective: Anticipate the impact of the COVID-19 crisis on the Aviation Industry and support the Industry in what could be a long recovery phase.

Actions:

- **Creation of cross directorate evaluations boards/committees. Including Experts, PCM's and other staff members.**
- **Approving design changes related to cabin conversions, medical evacuation and cargo**
- **Publication of a policy (CM) on remote witnessing of certification tests.**
- **Publish urgent Safety Information Bulletins**
- **Publish guidance material and practical scenarios related to product and design Certification**
- **Changing Implementation Regulations**
- **Issuing exemptions for National Competent Authorities**
- **Updating Safety Directives**
- **Publication of guidelines – Use of Cargo Tracking devices to support vaccine transportation**
- **Other new Health related Activities**
- **Supporting Industry bio-secure research**
- **Passenger Locator Form project**

Return to Normal Operations (RNO)

Helping DOAs to have helicopter ready for patient transportation

Design changes free of charge up to July 2020

Guidance to helicopter cabin installation

Helping pilots to return safely to flying

Making sure that pilots will go back safely to flying was a key objective of the team involved in the RNO. The Safety promotion team: Michel and John, developed and published guidance, training and videos:

Video for pilots

→ Accompanying article and the EASA by GASCo tutorial

→ EASA (Together4Safety) Rotorcraft Community COVID-19 page

VTOL: major Certification projects

Certified July 2020 – new TC

Airbus Helicopters H160
New Medium Class Rotorcraft

Certified June 2020 – Derivative

Airbus Helicopters BK-117 D3 – 5 bladed rotor

COVID-19
Guidance / Advice

- Review of Aviation Safety Issues Arising from the COVID-19 Pandemic
- NAA support on helicopter specific COVID-19 installations

Certified June 2020

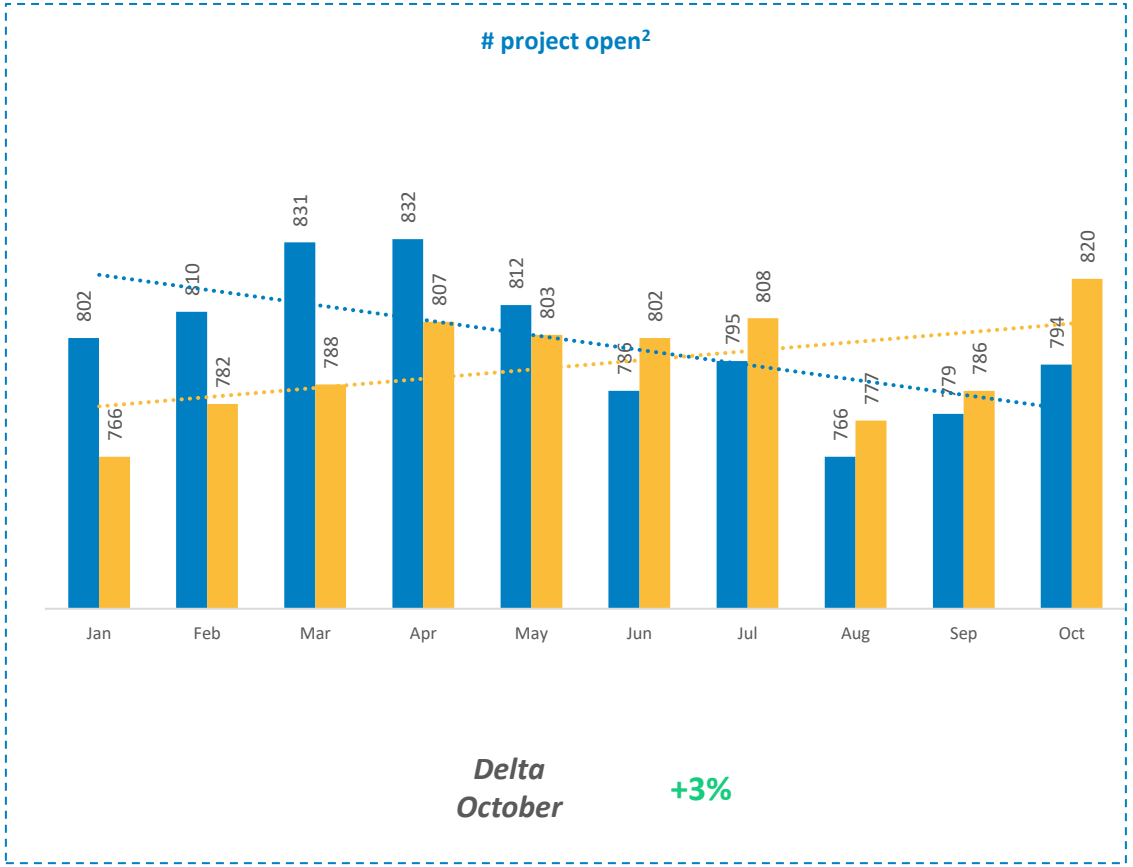
Leonardo AW189 K
New Engine version

EASA

CT.3 Vertical Take-Off & Landing

LAST UPDATE: 06.11.2020

- Trend in Rotorcraft
  - Increase of applications
    - +35% Major Change
    - +23% STC
    - +29% Major Change to STC
  - Overall + 3% open project
  - Overall FH around -15%
- Rotorcraft sector resisted better the COVID-19 crisis
- However, need to see how 2021 will look like



Rotorcraft Safety Roadmap Update 2020

Covid19 impact

Present the reprioritisation and the new activities developed to support the industry in dealing with the Covid19 crisis.

Implementation

The main deliverables published this year and the ongoing activities.

Coming next

Give a short overview of what is coming next and the subject that the agency is working on.

Vision and Strategic objectives

Endorsed by EASA and published in Dec 2018

Vision:

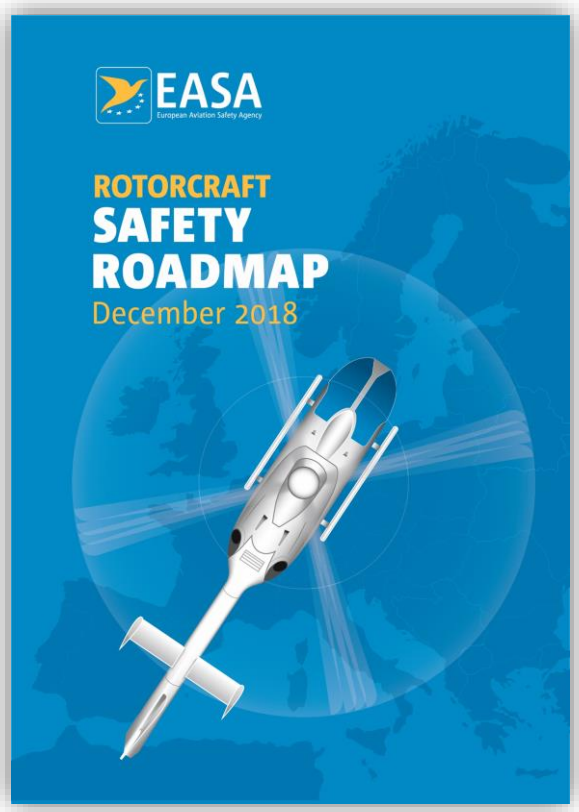
Achieving significant safety improvement for Rotorcraft with a growing and evolving aviation industry

Strategic objectives:

1. Improve the overall Rotorcraft safety by 50% within the next 10 years.
2. Make positive and visible changes to the Rotorcraft safety trends within the next 5 years.
3. Develop performance-based and proportionate solutions.

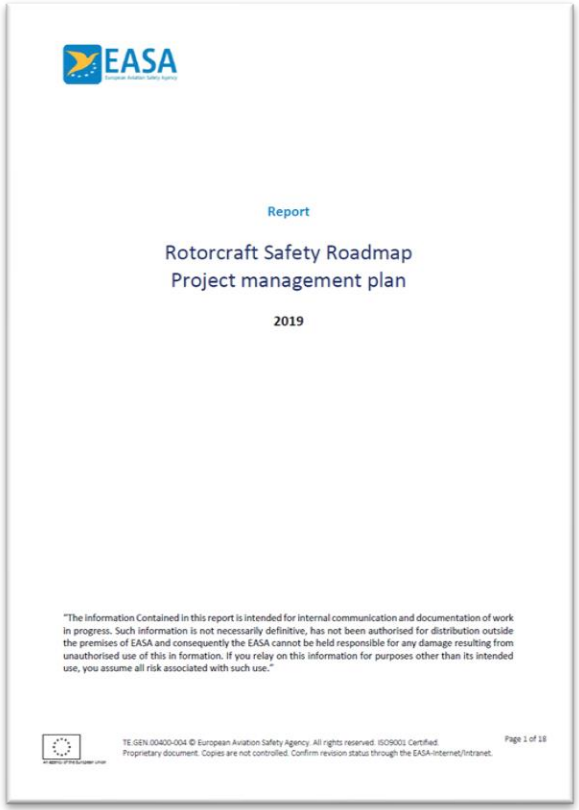
1. **Number of Rotorcraft accidents in Europe with at least a fatality or a serious injury**.
2. Additional KPIs based on European Risk Classification Scheme (ERCS).
3. Complemented by data collection activity using D4S to built robust accident rates data.

Roadmap report

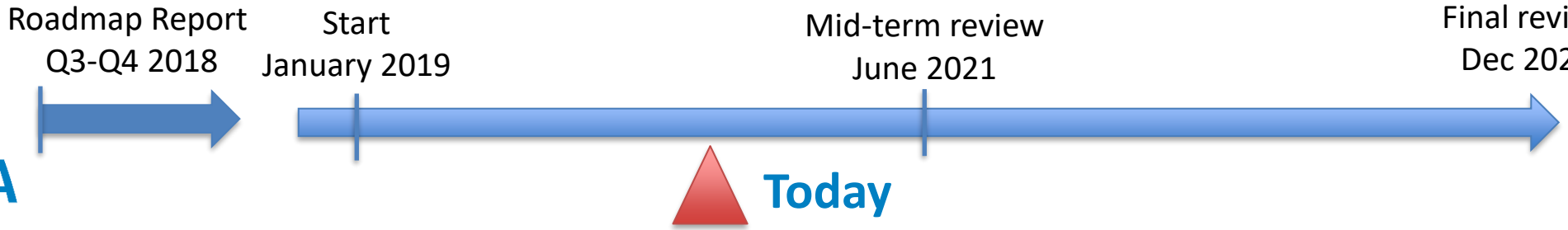


- Endorsed by EASA in December 2018,
- Contain ambitious recommendations in all domains,
- Significant communication,
- Actions for all stakeholders.

Roadmap project plan



- Project plan,
- Creation of an Agency horizontal project to implement these recommendations,
- Organise the activities in Wok-streams,
- Define for each work stream objectives and deliverables,



Covid 19 and Rotorcraft Safety Roadmap

- Reprioritisation of the actions toward supporting the industry,

  Strengthen strategic objective 3 to "Develop performance-based and proportionate solutions",

- Cancellation of the all international activities and workshops,

- Rulemaking Resources re-directed to support the Exemptions and facilitate the continuity of operations during the Crisis. EPAS re-prioritisation and RMT delayed.

- Support the Return to Normal Operations (RNO) project

- Medium/long term impact on the helicopter operators ?

Rotorcraft Safety Roadmap Update 2020

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Work-stream Design

Helicopter Safety Technology Survey

- A joint survey on the helicopter safety technologies was made together with the International Helicopter Safety Team.
- 1376 answers were received.
- The results are available online and are providing inputs for the work-stream on design.

Voluntary design improvements

- Work engaged with the Manufacturers to develop on a voluntary basis product improvements.
- Net Safety Benefit: The Agency is working on a Certification Memo aiming to facilitate the introduction of technologies having safety benefits in the cockpit. It will provide a relaxation of the compliance demonstration effort for the retrofit of system having safety benefits.

Main Actions – Example Squirrel

Crash Resistant Fuel System

- *Certification of 27.952 compliant configuration for AS 350 B3 and EC 130,*
- *Validation of STC for legacy fleet,*
- *Second source bladder certification.*
- *Implementation of ambitious Retrofit Plan (EASA SIB 2017-018R1).*

Engine Overspeed Protection

- *Certification of EOP for Arriel 2D and Arriel 2B1 (ref EASA SIB 2019-010).*

Occupant Protection

- *Certification of AFT pax seats 27.562 compliant configuration.*
- *Certification of pilot seats 27.562 compliant configuration.*

Hydraulic System

- *Hydraulic training improvements (EASA SIB 2018-013)*
- *Dual hydraulic architecture improvement.*
- *New TR accumulator.*
- *Increase of pressure on single hydraulic (feasibility phase).*

Other actions

- *Affordable Autopilot STC with yaw control.*
- *Alert Systems STC, Main Rotor Strike Alerting System.*
- *Lightweight Recorders EASA SIB 2019-15R1.*

Work-stream Design - Promote Technologies with Safety Benefits

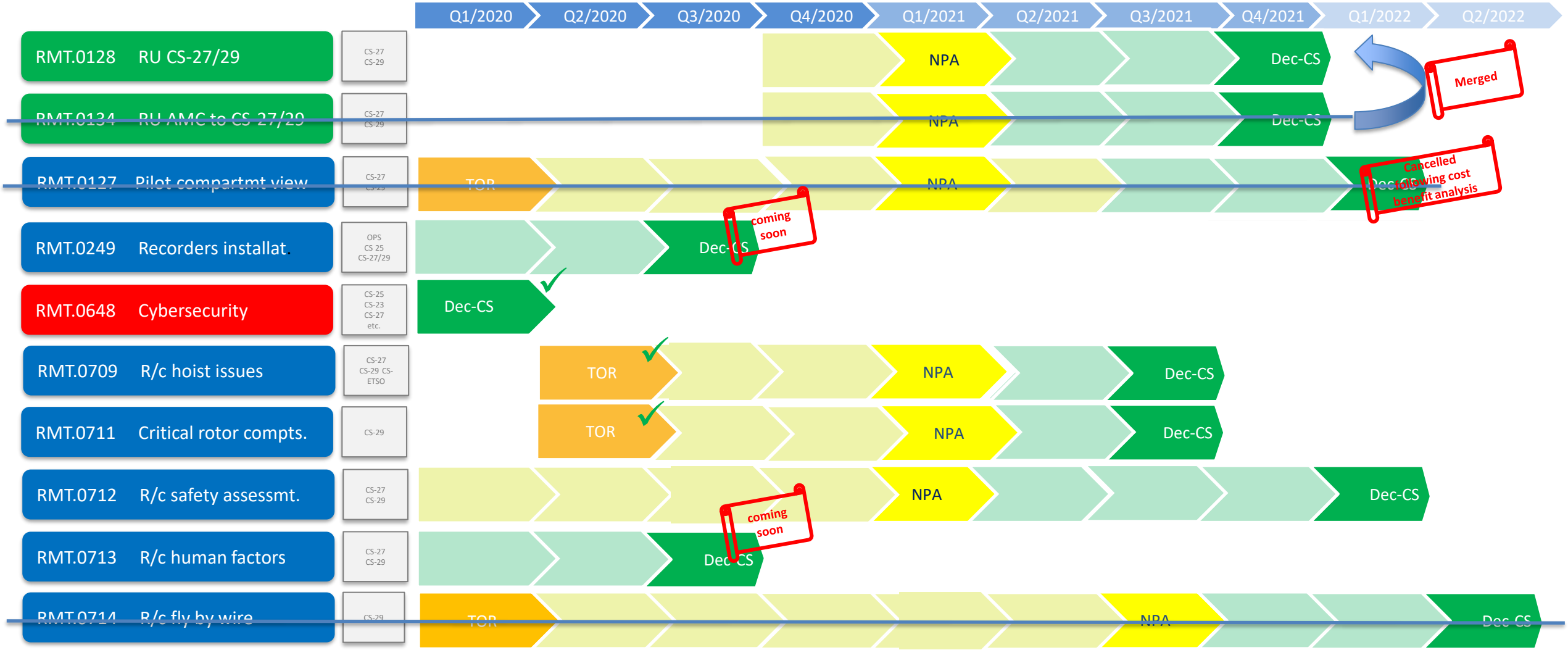
EASA internal strategy paper to **Promote Technologies with Safety Benefits on helicopters** and define the approach for toward Net Safety Benefit.

1. Introduce proportionality in initial airworthiness certification
   - ✓ Part21 light, RMT.0712 Proportionality in CS27.1309, CS-STAN update ongoing
2. Review the technologies that are available that may bring operational safety benefits to helicopters
   - ✓ EASA internal review, discussions with some OEMs, NLR study and IHSF survey
3. Promote the voluntary retrofit and installation of systems and equipment having safety benefits
   - ✓ EASA article Flight Data Recorders for Light Helicopters, accompanying the EASA SIB 2019 15 R1 Flight Recorders on Small Rotorcraft.

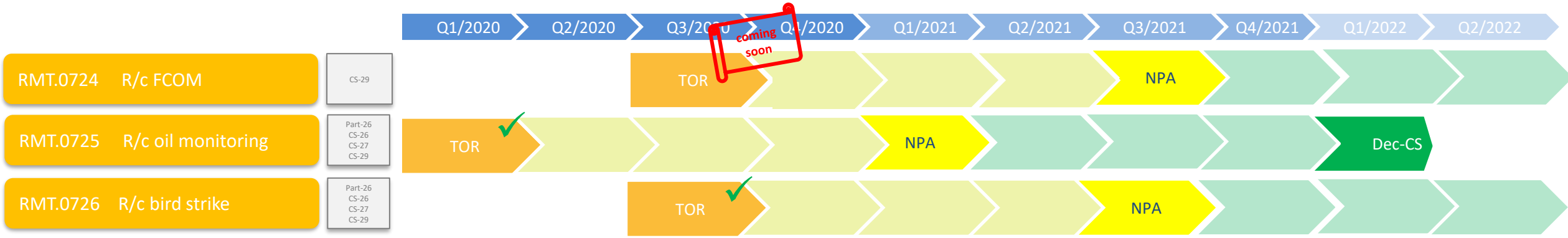
Work-Stream on CS modernisation

- In 2020, the Agency published:
  - Regular update of CS-ETSO: These amendments are expected to reduce the regulatory burden for the validation of FAA TSO authorisations by EASA and vice versa, to increase cost-effectiveness of compliance demonstrations and to reflect in CS-ETSO the technical state of the art.
  - Update of AMC-20 (amt 19) on aircraft cybersecurity
  - Regular updates of miscellaneous nature (RMT.0457)
  - OPR, AEH (RMT.0643); IFE, occurrence reporting etc (RMT.0561)
  - CS-MMEL / GEN-MMEL, Issue 2
  - CS-MCSD – Maintenance Certifying Staff

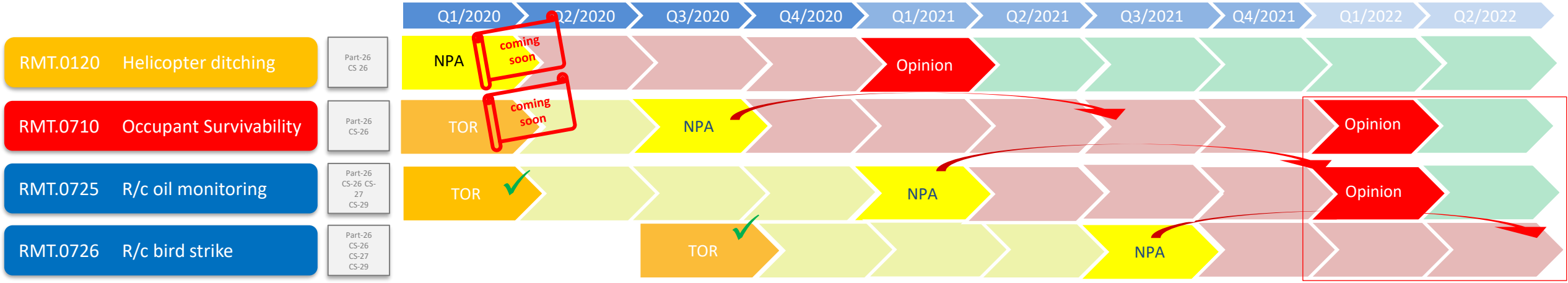
RMTs affecting CS-27/29 (EPAS 2020-2024)



RMTs affecting CS-27/29 (EPAS 2020-2024)



RMTs affecting Part-26 (EPAS 2020-2024)



Work-Stream on Training safety

- Creation of the Helicopter Group of NAA Experts (HEG)
- Start of the work with NAAs on some action of the Roadmap

2020: NAA nominated members. Kick-off meeting. Working meeting

- RMT.196 WP3 to address Virtual Reality Simulators. CS-FSTD(Rotorcraft) and FCS rotorcraft (Helicopter/VTOL/PL) – ToR published and Group Composition completed

Deliverable 2020: ToR published. Group nominated. Kick-off held on 2nd December.

- Two internal papers on the review of the PPLH provisions and the helicopter instructor certificates have been developed and given to the relevant RMT Teams for consideration.

Deliverable 2020: Two internal papers based on the outcome of the survey to NAAs and ATOs done in 2019.

Training is a number 1 priority!

Where the most safety gains could be achieved!

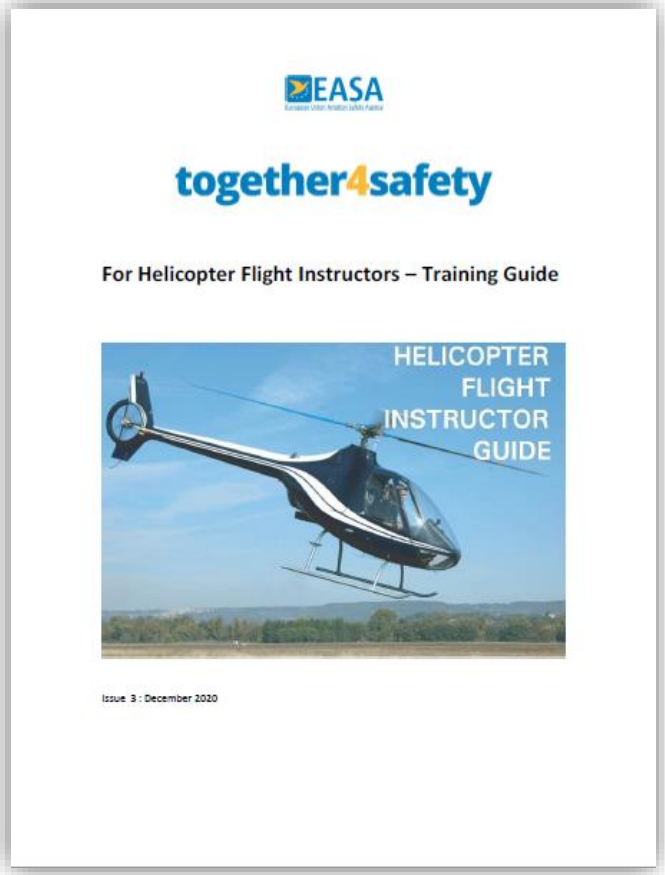
- **Task 1** Training needs identification for light helicopters
- **Task 2** Reduce high-risk training scenarios in-flight
- **Task 3** Introduce Mandatory Safety Awareness in recurrent training
- **Task 4** Review Regulations to promote less checking and more training
- **Task 5** Reconsider recurrent training requirements for rotorcraft

→ Deliverable 2020: NPA to be published in Dec as part of RMT.0678. Revalidation requirement for PPLH pilots.

Approach toward introducing regulatory changes:

- → Benefit from ongoing RMTs close to NPA stage to feed “quick-wins” such as re-validation requirement for PPLH, — RMT.0678
- → Create a new sub-task in the regular update of FCL to include “a limited number of other non-controversial recommendations stemming for the GA and Rotorcraft Safety Roadmap. — RMT.0587
- → To address the Helicopter Instructor Qualification process in the view of simplification and of the introduction of the CBTA concept as an alternate to the traditional process — RMT.0194

Training safety



→ Helicopter Flight Instructor Guide

→ Revision 3 stands for :

- → Re-branding from former EHEST to EASA/Together4Safety publication
- → content equal to previous EHEST published revision 2 correcting for typos and editorial inconsistencies, in a format that is easily adaptable to any form of publishing
- → an invite to further improve the content, i.e. on practical Threat and Error Management - TEM

Work-Stream - Safety Rating Schemes

The next big concept proposed is the introduction of a voluntary rotorcraft safety rating scheme. Such a scheme is used in the automotive industry with the crash test programmes Euro NCAP. It is a good way to give an incentive for safety improvements to their vehicles and differentiate themselves (from the competition).

Extend to environmental criteria?

1. Review of Safety Rating Schemes worldwide

- → Survey across the industry of the Safety Rating Schemes available
- → Particular emphasis on automotive industry
- → Review and compare the Schemes based on a set of defined criteria

2. Concept evaluation for a Rotorcraft Safety Rating Scheme

- → Define objectives and aim of a rotorcraft Safety Rating Scheme
- → Apply the analysis of the first presentation to suggest a concept

3. Initial discussions with the industry on the subject

Work-Stream on training devices and Simulators

- Objective: to facilitate and promote the development and use of new innovative and cost-effective training devices.

- Plan: The regulatory framework for initial (**FCL**) and recurrent pilot training (**OPS**) will be adapted. Training providers will first analyse the FCL/OPS regulatory training objectives and then identify the device requirements and training tool needs. The identified needs will be subsequently matched with the appropriate training tool available on the market.

- Ongoing actions:
  - IPC with VR Motion,
  - Support to SC to CS FSTD development (with FOCA),
  - Definition of the training needs,
  - Link between training device capability and training needs.
  - Strongly impacted by Covid-19.

Work-Stream - Safety Promotion

1. Rotorcraft Together4Safety Community Website now launched

- → Material developed through a collaborative approach with industry partners in the ESPN-R
- → 1 Poster, 8 videos, 18 articles and over 400,000 views – we are really starting to reach the community
- → Stand by for the launch of the latest video involving World Rally Champion – Ari Vatanen

2. An exciting plan awaits for 2021

- → Covering a wide range of operational and systemic topics (Hoists, Sling Load, SMS, Flight Instruction)

Work-stream on simplification

Study on the Administrative Burden for small helicopter operations:

- → The focus is on helicopter OPS and Aircrew rules,
- → Contract signed, activity started and concluded in Nov 2020,
- → Ecorys and the NLR performed an review of the rules and provisions that impose unnecessary administrative burden to small helicopter operators,
- → In-depth interviews with NAAs and small helicopter operators were performed and will provide first hand information,
- → Proposals for regulatory changes will be analysed into a Best Intervention Strategy.

Deliverable 2020: Final Report published.

Work-stream on simplification

- **Study of the financial size of the helicopter industry.**
  - Part of the wider study “Social Indicators Data Collection to Support Impact Assessment, Monitoring and Evaluation Activities (Task 2) “, led by the Impact Assessment Team SM,
  - Final report released in July 2020 but the data are no more directly useful.

Deliverable 2020: Final Report.

- **A review of the financing possibility at European-level**
  - The EASA Trainees made a review of the funding possibilities at European-level for helicopter operators to implement new safety systems and equipment.
  - They analysed the current EU funding programmes and interviewed the EASA Research team and the Chief Engineer for guidance
  - A informal WebEx was organised with company in Brussels specialised in getting EU findings.

Deliverable 2020: Paper published.

- **SMS Manual for small helicopter operators. Coming soon.**

Coming next: Helicopter AWO

Main feature: **Enable helicopter onshore IFR**

- → increase the number of available and accessible destination alternates, including the option to use GNSS only at destination and alternate.
- → Ensure that IFR operating minima and planning minima match the capability of helicopters and are at or below the standard VFR minima.
- → Reduce VFR minima on a hybrid IFR/VFR flight with PinS VFR departures/approaches.
- → Avoid prohibition of IFR approaches to non-aerodromes
- → Provide additional flexibility for helicopter IFR.

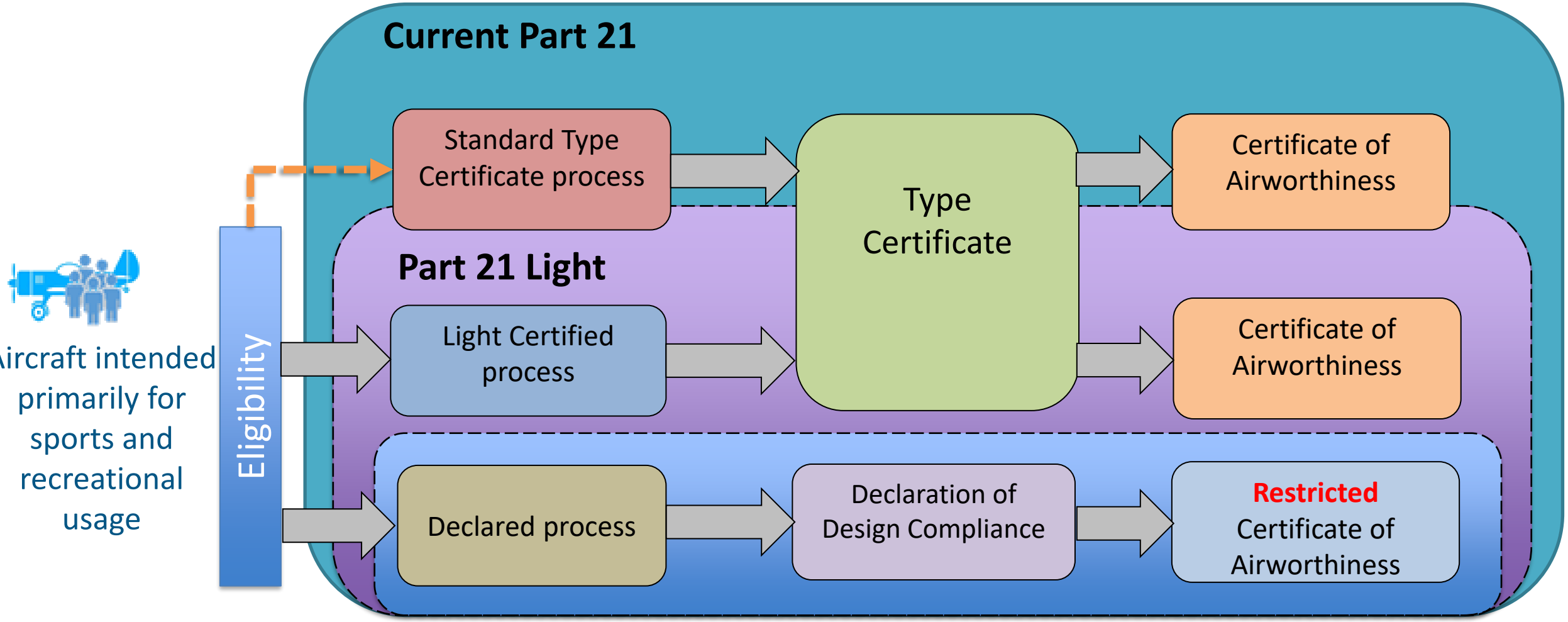
- → Additional features :
  - → Use of NVIS for visual segments of an IFR flight
  - → Use of EFVS, including operational credit when flying to runways
  - → Modernisation of Offshore approaches: extension to NCC and SPO, and use of OEM designed offshore approaches
  - → Update regarding coastal aerodromes.

Coming next: Helicopter training and checking

- Enables multi-pilot operations of single-pilot certified helicopters on a voluntary basis.
- Simplifies operations on more than one type or variant of helicopters : SEP and SET groups of types are created. The maximum number of types becomes 3 types or groups of types.
- CAT: Updates checking schemes, CRM assessments and increases the use of simulators
- Extends the use of CAT alleviations to non-CAT including CAT A to A operations (circular flights)
- Simplifies aerodrome knowledge requirements for day VFR
- Introduces a new training and checking scheme for SPO and new AMC and GM for NCC
- Non-commercial operations: Introduces a policy for the crediting of training delivered by other persons or organisations.

- Interface with AWO: Simplifies access to helicopter instrument flight.
  - merger of the SE.IR(H) and ME.IR(H) rating into a single IR(H).
  - crediting of certain FSTD hours towards the instrument flight experience required in CAT IFR single-pilot operations.

Part 21 Light- Overview



Key principles of the Part 21 Light Concept

- → Authority involvement is reduced, and is made proportionate to the risk
- → Scoping of Part 21 Light is limited to low risk products, primarily intended for sports and recreational use
- → Obligation for an organisational approvals are removed
- → A product focussed approach to oversight aims at having a less bureaucratic system

A stepped scope of Part 21 Light using risk proportionality

Lowest risk

Part 21 Light Subpart C: Declared aircraft

1. aeroplane with a MTOM of 1 200 kg or less with a seating configuration of maximum 2 persons;
2. sailplane or powered sailplane of 1 200 kg MTOM or less;
3. balloon designed for maximum 4 persons;
4. hot air airship designed for maximum 4 persons.

Limited risk

Part 21 Light Subpart B: Certified aircraft

1. aeroplane with a MTOM of 2 000 kg or less with a seating configuration of maximum 4 persons;
2. sailplane or powered sailplane;
3. balloon;
4. hot air airship designed for more than 4 persons;
5. passenger gas airship designed for maximum 4 persons
6. **rotorcraft with a MTOM of 1 200kg or less with a seating configuration of maximum 4 persons.**
7. **Gyroplanes**
8. Piston engines and fixed pitch propeller on (1-7)

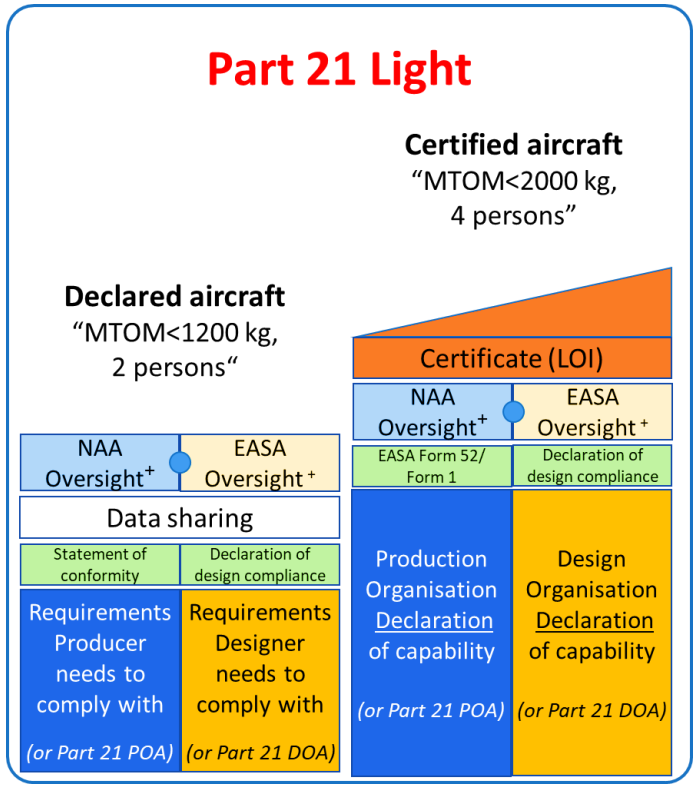
Developing a Part 21 Light
Design & Production for Sports & Recreational aviation

Status:

Finalising the focussed consultation of the new concept & draft rule (4th workshop 19/11/2020)

Next step is Advisory Bodies consultation of the draft opinion (2021/Q1)

Following stakeholders request and BR provisions, the Agency is developing these Objective, risk proportionate rules, stimulating entry into the EU market using the “declaration tool” from the BR



Rotorcraft Safety Roadmap Progress

On-going ✓ Completed Updates

(despite COVID impact)

SAFETY RATING FINANCIAL SUPPORT

Introduce an industry led Rotorcraft Safety rating scheme.
Schemes studies completed
Next – Definition of criteria

Identify the technologies granting safety benefits
SIB Flight Data Recorders
NRL study
IHSF survey
OEM engagement
Key Technologies identified

Financial support to implement changes.
Coordination with EC
EU funding specialist feedback
No EU scheme possible so far

TRAINING TRAINING DEVICES CONTINUED EDUCATION

More mandatory & recurrent training. Develop the concept Continued Aviation Education
NAA Helicopter Expert Group
RMT.0678 NPA publication
Creation of RMT.0587 in EPAS

Awareness & reduction of high-risk training scenarios
Helicopter Flight Instructor Guide rev 3 publication

Modernise the EU pilot training system & devices (advance technologies)
R22 VR simulator at EASA
RMT.0196 WP3 ToR Published

Align licensing recurrent requirements with GA
RMT.0678 NPA publication

Encourage development of cheap new training devices for light & medium rotor.
R22 VR simulator at EASA for evaluation
RMT.0196 WP3 ToR Published

SAFETY PROMOTION SIMPLIFY

Effective communication on safety topics (change behaviours)
Rotorcraft Together4Safety Community Website created
1 Poster, 8 videos, 18 articles and over 400,000 views
COVID specific communication

Evaluate & address the unnecessary admin. burden put on operators.
Survey published
Next: Analysis of outcome and proposed integration in Rulemaking Program

DESIGN NET SAFETY BENEFITS CS MODERNISATION

Crashworthy fuel tanks and seats.
All newly produced EU helicopter fully compliant (except one – on-going)
Approval of STCs for retrofit of existing fleet
Part 26 update on-going

Develop product safety improvement roadmap
All EU products covered
One US products covered
Covering 80% of the market

Facilitate the introduction of new technology & identify the systems & equipment providing safety benefits
Part21 light, RMT.0712 Proportionality in CS27.1309, CS-STAN update ongoing
Cert Memo on Net Safety Benefit drafted

Project team & industry to modernise CSs
Significant activities – ref. EPAS 2020-2025

Hybrid and electrical VTOL
Update 2020

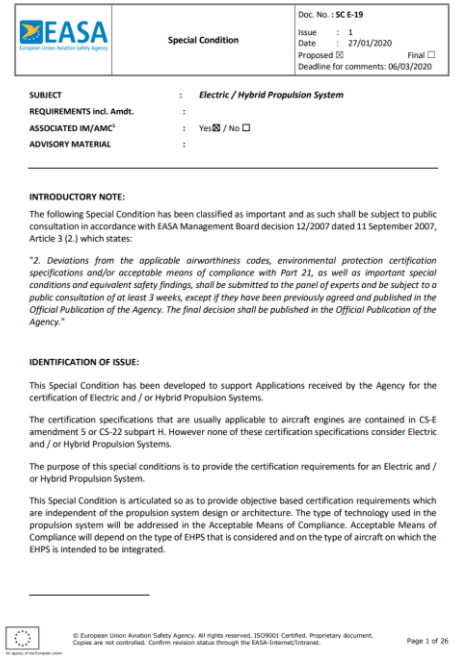
MoC Package 1	MoC Package 2	Coming next
Published last year during the Rotorcraft and VTOL Symposium	Today	…

Hybrid and electrical VTOL

- COVID Impact on eVTOL
  - Access to resources
  - Number of projects in development still high
  - Funding
    - May become more difficult
    - Will probably limit the number of new projects
    - Will probably induce a consolidation of robust projects

VTOL: major Certification Publications

Published Jan. 2020



EASA — Special Condition — Doc. No. : SC E-19
Issue : 1
Date : 27/01/2020
Proposed ☒ Final ☐
Deadline for comments: 06/03/2020

SUBJECT : *Electric / Hybrid Propulsion System*
REQUIREMENTS incl. Amdt. :
ASSOCIATED IM/AMC[1] : Yes☒ / No ☐
ADVISORY MATERIAL :

INTRODUCTORY NOTE:

The following Special Condition has been classified as important and as such shall be subject to public consultation in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

IDENTIFICATION OF ISSUE:

This Special Condition has been developed to support Applications received by the Agency for the certification of Electric and / or Hybrid Propulsion Systems.

The certification specifications that are usually applicable to aircraft engines are contained in CS-E amendment 5 or CS-22 subpart H. However none of these certification specifications consider Electric and / or Hybrid Propulsion Systems.

The purpose of this special conditions is to provide the certification requirements for an Electric and / or Hybrid Propulsion System.

This Special Condition is articulated so as to provide objective based certification requirements which are independent of the propulsion system design or architecture. The type of technology used in the propulsion system will be addressed in the Acceptable Means of Compliance. Acceptable Means of Compliance will depend on the type of EHPS that is considered and on the type of aircraft on which the EHPS is intended to be integrated.

SC Hybrid/Electric Propulsion Systems

Published May 2020

EASA — Proposed Means of Compliance with the Special Condition VTOL — Doc. No: MOC SC-VTOL
Issue: 1
Date: 25 May 2020

Proposed Means of Compliance with the Special Condition VTOL

Statement of Issue

EASA has received a number of requests for the type certification of vertical take-off and landing (VTOL) aircraft, which differ from conventional rotorcraft or fixed-wing aircraft. In the absence of suitable certification specifications for the type certification of this type of product, a complete set of dedicated technical specifications in the form of a Special Condition for VTOL aircraft was developed. The Special Condition addresses the unique characteristics of these products and prescribes airworthiness standards for the issuance of a type certificate, and changes to this type certificate, for a person-carrying VTOL aircraft in the small category, with lift/thrust units that are used to generate powered lift and control.

This Special Condition was subject to a public consultation process and finally issued by EASA in July 2019.

The Special Condition VTOL establishes the safety and design objectives. This approach, previously utilised for the development of CS-23 Amendment 5, is also used for VTOL designs in order not to limit technical innovation by describing prescriptive design solutions as certification standards. The Special Condition does not contain the means that are possible to demonstrate compliance with the safety and design objectives.

The Means Of Compliance (MOC) contained within this document address the applicant's requests for clarification of EASA's interpretation of these objectives and of possibilities how to demonstrate compliance with them. Some of these MOCs contain material which should be considered to be guidance material to assist the applicant with an understanding of the objective rather than providing a definitive means of compliance.

In the preparation of these MOCs EASA has followed the same principles, and pursued the same objectives, as with the Special Condition. First, to provide sufficient flexibility to address different architectures and design concepts, although it is acknowledged that all possible cases cannot be considered in these MOCs and alternatives can be proposed by applicants to address some particular design features. In addition, the proposed MOCs should enable an equal treatment of all applicants, by establishing a level playing field and ensuring that a comparable level of safety in the compliance with the objectives of the Special Condition is achieved by all designs.

EASA is committed to continue supporting the industry in the development of safe VTOL aircraft. To this end EASA has decided to prioritise the publication of MOC with the Special Condition VTOL and to issue them in a sequential manner. This approach will allow EASA to focus its resources where the greatest safety impact will be achieved and where the need for clarity is more urgently required. It will furthermore allow the industry to gain an early insight into EASA's interpretation and expectations from the design objectives of the Special Condition which could have an important effect in the design decisions, instead of waiting until exhaustive guidance for the Special Condition is developed.

Consequently, the first issue of the MOCs mostly concerns subjects that are considered to drive basic design choices and have a higher safety impact on the overall VTOL aircraft architecture. Successive issues of this MOC document will include new MOCs as well as supplements to the existing ones.

Finally, it is recognised that the experience gained during the certification of these new products and their entry into service will allow to increase the knowledge in their certification. It is possible that a better insight into the particular characteristics of these products is gained, which might result in modifications of particular elements

eVTOL MoC – Phase 1

Published May. 2020

EASA — Special Condition — Doc. No.: SC-GYRO-1
Issue : 1
Date : 28-05-2020
Proposed ☒ Final ☐
Deadline for comments: 31-07-2020

PROPOSED SPECIAL CONDITION

for

Gyroplane - Road Vehicle Use

INTRODUCTORY NOTE:

The following Special Condition (SC) has been classified as important and as such shall be subject to public consultation in accordance with EASA Management Board decision 12/2007 dated 11 September 200 ...ide 3 (2.) which states:

"2. Deviations ...airworthiness codes, environmental protection certification specifications ...compliance with Part 21, as well as important special conditions ar... ...itted to the panel of experts and be subject to a... ...ave been previously agreed and publis... ...be published in the Official P...

IDENTIF...

The A... by t... appr... Bel... pr... 27 tec... helicopters or... establishing specific tech... Additionally a set of SCs is nec... ...duct as gyroplane/road vehicle. This SC addresses thos... ...affecting the flying mode as a gyroplane, but not any requirement... ...nality.

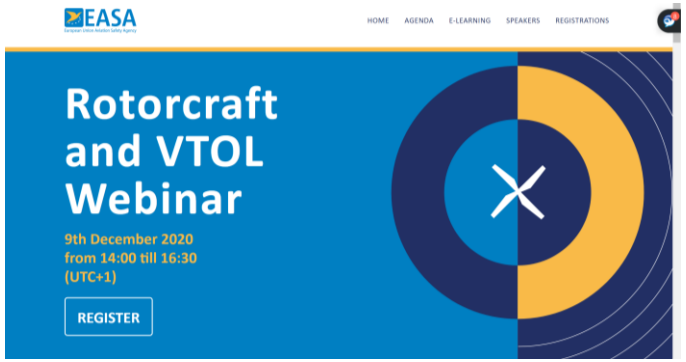
BACKGROUND/SCOPE

The Agency considers that the current certification specifications in CS-27 for rotorcraft are not fully adequate to prescribe the certification basis for a gyroplane to comply with the essential requirements of the Basic Regulation. Therefore there is a need to complement the applicable CS-27 with appropriate technical specifications in the form of special conditions that can be used to establish the certification basis for this gyroplane, in accordance with EASA Part 21.B.75 (a).1.

The SCs have been established taking into account the unique characteristics of this product and prescribe the set of technical specifications for the issuance of the type certificate, and changes to

SC Gyroplane – Road vehicle use

Presented Dec. 2020



1400+ registrations
Dec. 9th live

eVTOL MoC – Phase 2

CRD under consolidation

VTOL, - Coming Next

- Final publication of SC Hybrid and Electrical propulsion and associated CRD
- Final publication of MoC phase 1 and associated CRD
- Publication for comment of MoC Phase 2
- Work on MoC phase 3 for next Symposium
- Publication of EUROCAE Standards
  - 23 standards publication planned in 2021!
  - Significant Industry and EASA effort

Certification Directorate Update

Background

What were the main drivers?

New Organisation

Present the new Certification organogram

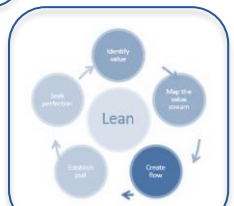
What's next

Main challenges ahead

CT Adjust purpose

Management of Expert resources ---> **Achieve** critical size of expert resources per product line

Synergies ---> **Expand** synergies between GA and VTOL

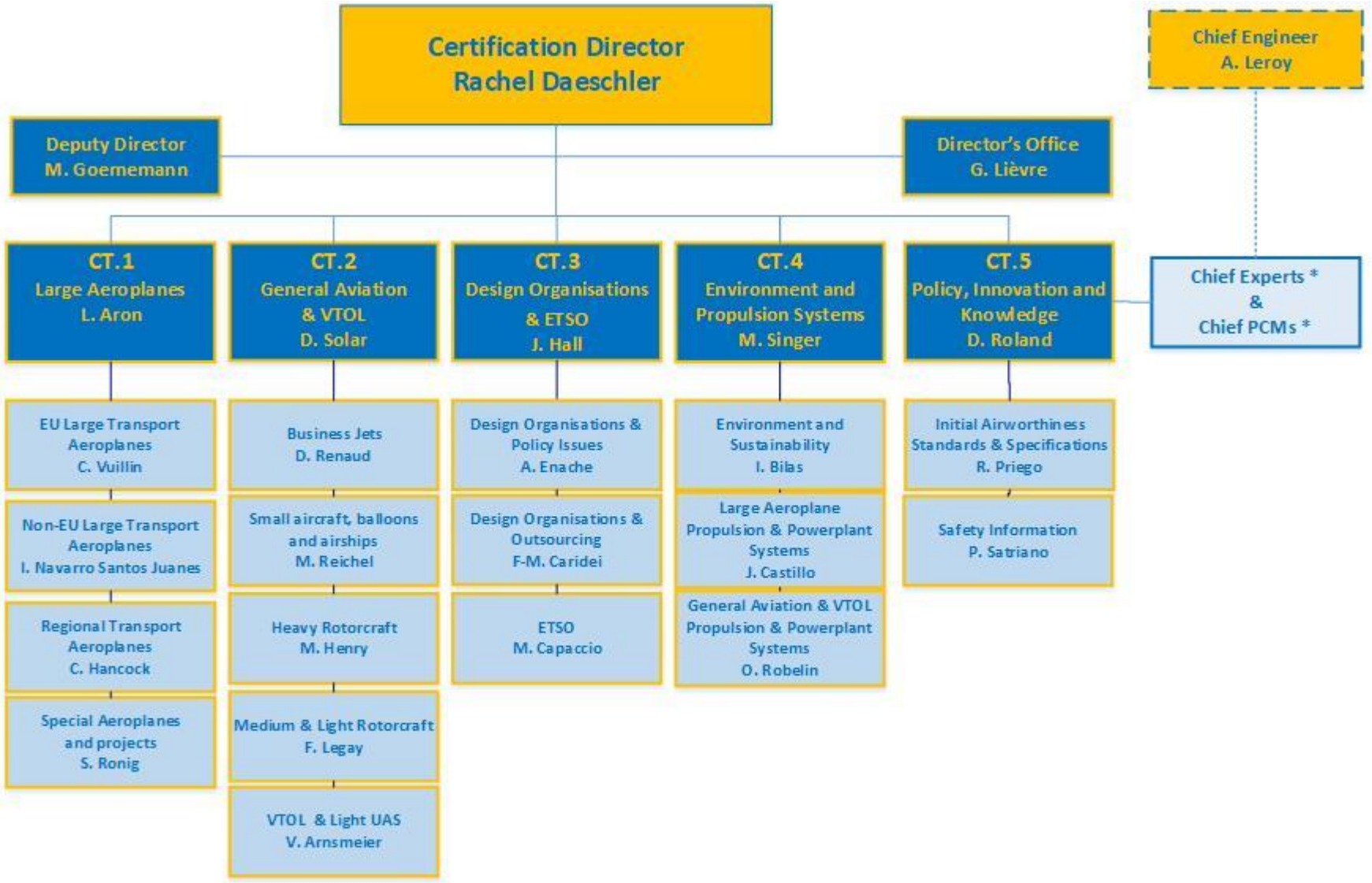


Lean organisational structure ---> **Reduce** overhead & **Protect** technical resources

Policies ---> **Reinforce** the management of policy development

Knowledge Management ---> **Develop** knowledge management initiatives

Adjusted organisation



* Technical reporting to the Chief Engineer

EASA
European Union Aviation Safety Agency

Thank you for your attention

Feel free to submit your questions on our live event platform.....

easa.europa.eu/connect

Your safety is our mission.

An Agency of the European Union

RMT.xxxx	Strategic task
RMT.xxxx	Important task
RMT.xxxx	Standard task
RMT.xxxx	Regular update task
	Harmonisation with bilateral partners
✓	Delivery completed
	Delivery postponed
	Technical work completed, delivery ahead
	Use of Art. 15 or Art. 16 procedure
	Publication delayed
	Publication pending
	Cancelled
	Current position on timeline

ToR	Terms of Reference
NPA	Notice of Proposed Amendment
A-NPA	Advanced Notice of Proposed Amendment
ABC	Advisory Body Consultation
Dec-CS	Decision re Certification Specification
Dec-AMC	Decision re Means of Compliance to IR
Dec-IR	Decision pending adoption of Implementing Rule
Opinion	Proposal to European Commission
Dec/O	Combined Decision (CS or AMC) & Opinion
RU	Regular Update

Design Improvement internal project - Methods