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Dear 'e-STC Newsletter' readers,

The days are getting longer and warmer, and we see ourselves fully immersed in high-tempo certification activities.

Strengthened and motivated by the success of the 2018 e-STC Newsletters and invigorated by the very recent EASA STC workshop, we are delighted to open a new seasonal cycle for 2019 with this spring edition, enriched by a wide variety of topics!

Driven by innovation in all its expressions (at the technological and cultural levels), EASA is taking an active interest in promoting diversity and inclusion as a strength.

This brought us to dedicating the newsletter editorial to topic of *gender balance* as it is approached in EASA.

The world of aviation engineers has a very low representation of women. It is still a delightful rarity when a certification crew arrives for a meeting and women are part of the team.

In line with the times, EASA has taken an active interest in the equality challenge, by adhering to the EU Commission's [Women in Transport Platform](#) and putting in place a gender-balance group. The group's actions are oriented in two main directions: attracting more women, and ensuring the equality of opportunities, for everyone to develop their full potential. We should become more aware of the inevitable unconscious bias, and actively promote the inclusion of everyone.

As an example of bias, a typical complaint is of colleagues being left out of meetings and spontaneous discussions that directly affect them. Another less obvious type of discrimination is described by Melissa Thomas-Hunt in [this video](#) from the Stanford Women's Leadership Innovation Lab. Contributions from low power team members with unique, relevant expert knowledge are often discounted, regardless of their merit. Or a quiet person can bring up a good idea, but it is only registered when mentioned again by a more influential colleague who gets the credit.

You may wonder, what does this have to do with gender? Melissa's research shows that female experts are less influential than male experts. According to [Lean in](#), men interrupt women 3 times more often than they interrupt other men. Sometimes one understands historical cross-dressers such as Georges Sand or Marlene Dietrich.

A more practical approach, knowing this, is for quieter team members to consciously try their wings in meetings, by making an early intervention, with a balanced amount of "time on air". The opportunity is open to observe team dynamics and support participation and truly listening to all, and giving recognition where it is due.

Confident in having a more balanced gender approach in the aviation world in the future, I am glad to welcome you to the spring e-STC Newsletter!

In this edition you will find:

1. Technical subject – Halon Ban
2. Rulemaking – Overview
3. Special supplement – STC Workshop 2019
4. EASA initiatives – CT Roadmap Updates
5. Upcoming events – the EASA-FAA International Aviation Safety Conference & the Rotorcraft and VTOL Symposium
6. Questions & answers – Special Focus on Cabin Safety

I hope you enjoy these topics, and I look forward to your engagement in this two-way communication channel (STC_news@easa.europa.eu).

Sincerely,
Elena García

For this 4th edition of the e-STC Newsletter, special thanks to:

Thomas MANTHEY (Cabin Safety Expert)

Remi DELETAIN (Senior Powerplant Expert)

Antoni GINARD (Trainee in Large Airplane – 2019 STC Workshop team)

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Carla IORIO (CT 2020 Roadmap 1.0 Project Manager and Special Aeroplanes Section Manager)

Javier CASTILLO (CT 2020 Roadmap 1.0 Change Agent)

Thomas OHNIMUS (Senior Cabin Safety Expert)

Enzo CANARI (Cabin Safety Expert)

Michele AMBROSIO (Project Certification Manager – Large Aeroplanes – 2019 STC Workshop team)

Sabine MEISSNER (Cabin Safety Expert)

Phillip BROOKE (Certification Policy Officer)

Andrew BRIDGE (Safety, Software & Airborne Electronic Hardware Expert/Rulemaking Officer)

Nicolas DUPREZ (STC coordinator – 2019 STC Workshop team)

INSIDE STORY



Elena García is an EASA Structure Expert in the CT Directorate.

Before joining EASA, from 1997 onwards, Elena worked as a stress engineer in the Industry, contributing to the analysis and test of space and aeroplane structures. She familiarized herself with certification processes, at that time from the applicant side.

She joined EASA in 2009 as a Structures Expert, working since the beginning on a large variety of products, including post-TC certification activities and a wide range of STCs. Currently she is the Panel 3 - Structures coordinator for the A350, Mitsubishi MRJ, Cessna 700, C-Series and Blackshape projects. In her job, she particularly enjoys dynamic engineering discussions with knowledgeable counterparts from the industry and other authorities. She has an interest in the practical application of probability and statistical inference, so she'll be happy if you talk to her about that.

Elena also supports transversal activities such as Gender Balance and [Sunny Swift](#), the general aviation safety promotion comic (the stories are available in most European languages courtesy of EASA staff). She's a member of the EASA choir. In her free time, she enjoys gardening, the Japanese culture and going out with her family.

TECHNICAL SUBJECT – HALON REPLACEMENT FOR CABIN APPLICATIONS

Commission Implementing Regulation (EU) 2019/133 was released on 28 January 2019 to amend Regulation (EU) 2015/640 introducing new Part 26 requirements covering halon replacement dates for cabin applications. That means in particular:

26.170 Fire extinguishers

Operators of large aeroplanes shall ensure that the following extinguishers do not use halon as an extinguishing agent:

(a) built-in fire extinguishers for each lavatory waste receptacle for towels, paper or waste in large aeroplanes for which the first individual certificate of airworthiness is issued on or after 18 February 2020;

(b) portable fire extinguishers in large aeroplanes for which the first individual certificate of airworthiness is issued on or after 18 May 2019.

26.400 Fire extinguishers

Operators of large helicopters shall ensure that the following extinguishers do not use halon as an extinguishing agent:

(a) built-in fire extinguishers for each lavatory waste receptacle for towels, paper or waste in large helicopters for which the individual certificate of airworthiness is first issued on or after 18 February 2020;

(b) portable fire extinguishers in large helicopters for which the first individual certificate of airworthiness is issued on or after 18 May 2019.

Meaning of Implementing Regulation (EU) 2019/133

Any large aeroplanes or large helicopters must have halon-free lavatory waste receptacle built-in extinguishers if the first individual certificate of airworthiness (CofA) is issued on or after 18 February 2020.

Any large aeroplane or large helicopter must have a halon-free portable fire extinguishers if the first individual certificate of airworthiness (CofA) is issued on or after 18 May 2019.

It has to be noted that the first individual certificate of airworthiness (CofA) dates are also known as so-called forward fit dates for newly produced aircrafts.

For lavatory waste receptacles, halon replacement fire extinguishing agents are well known and available on the market.

For the installation of new halon-free portable fire extinguishers, EASA considers the installation of those fire extinguishers will require the issuance of a MOC CRI, and therefore it has to be considered to be a major change to the aircraft design. EASA has developed generic MOC CRIs to address the installation of portable halon-free fire extinguishers on large aeroplanes and large helicopters. The CRIs define an acceptable means of compliance with the requirements of CS 25.851 and CS 29.851 respectively for large aeroplanes and large helicopters and are based on:

- the minimum performance standard outlined in ETSO-2C515 (but an ETSO Approval is not mandatory),
- the guidance of FAA AC 20-42D.

The CRIs require a demonstration that the performance of the extinguisher is guaranteed in all applicable environmental and operation conditions.

Regulation (EU) No 1005/2009

In addition to Commission Implementing Regulation (EU) 2019/133, Regulation (EU) No 1005/2009 refers to two other kinds of halon replacement dates which are the end dates and cut off dates.

The end date is the date after which the use of halon would no longer be permitted, i.e. all halon fire extinguishers and fire protection

Expert TIPS

In case of any doubt about halon replacement dates, do not hesitate to contact the EASA Panel 11 (Cabin Safety) experts and/or CT PCMs at an early stage.

systems should be replaced, converted or decommissioned by the end date. The end dates for cabin applications are:

- 31.12.2020 for lavatory waste receptacle built-in extinguishers;
- 31.12.2025 for portable fire extinguishers; and
- 31.12.2040 for unoccupied cargo compartments.

The cut-off date is the date after which the use of Halon is prohibited for new applications for a Type Certificate (TC). The cut off dates for cabin applications are:

- 31.12.2011 for lavatory waste receptacle built-in extinguishers;
- 31.12.2014 for portable fire extinguishers; and
- 31.12.2018 for unoccupied cargo compartments.

The cut-off dates are not applicable for new STC applications.

Derogation Process

A derogation process is available for the halon replacement dates described above. For EU Applicants, the derogation request must be filed to DG-CLIMA by a supporting EU member State. Non-EU Applicants must directly contact DGCLIMA. EASA will provide support to DG-CLIMA upon request. However the support is limited to the evaluation of the technical aspects of the derogation proposal.

RULEMAKING – OVERVIEW

EASA is continuously reviewing the existing rules to ensure a high level of safety and environmental compatibility. To that end, the Agency assesses new or amended ICAO standards and recommended practices, technological and scientific progress, new business models, safety recommendations and occurrence reports, experience gained from the implementation of the rules, proposals from competent authorities or regulated entities, and many more sources. Following an initial assessment and prioritisation, the rulemaking actions that the Agency intends to address in the following 5 years are published in the European Plan for Aviation Safety (EPAS). The current EPAS 2019-2023 is available here.

For you as an STC applicant and an STC holder, any revision of the certification requirements in Part 21 and the related acceptable means of compliance (AMC) and guidance material (GM), as well as any revision of the design standards contained in the various certification specifications (CSs) and AMC, will be most relevant. In addition, you should also be aware of the additional airworthiness requirements for operation contained in Part 26, as those may require new design solutions for already-certified designs. Some ongoing rulemaking projects, which are potentially relevant for you, are shown here, with an indication of when EASA plans to deliver them. You can follow the development of a rulemaking action on EASA's website

- starting with a description of the issue that the Agency intends to address and an initial description of the intended way to do this in the Terms of Reference,
- via the proposed text of the rule, which is complemented with a regular impact assessment of the different regulatory options in the Notice of Proposed Amendment (NPA),
- up to the decision issuing new or amending existing design specifications or AMC and GM, or the opinion addressing a proposal to the European Commission for the amendment of Part 21 or Part 26.

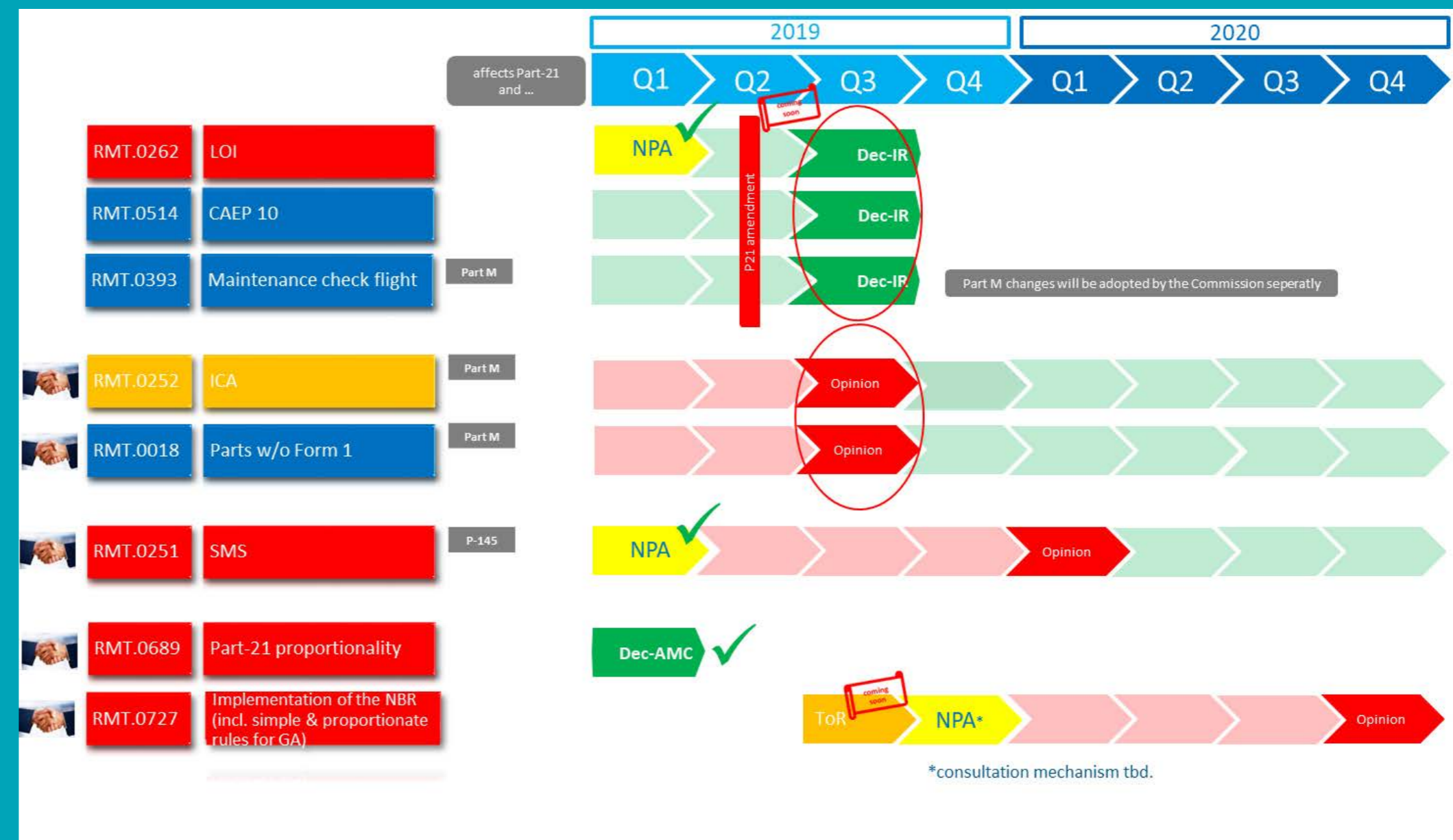
You may wish to contribute to any of those rulemaking projects by commenting on EASA's concepts and rulemaking proposals. You can do this directly by commenting on any NPA or by participating in focused consultation workshops. You can also indirectly – via your associations which represent your organisation in the EASA advisory bodies – comment on draft Terms of Reference documents or (in the accelerated or direct publication procedure) on draft decisions or opinions.

Is there a rulemaking action that you would like to see implemented, or do you have a proposal that could increase safety, environmental compatibility, efficiency or contribute to establishing a level playing field? Share your proposal with us here. Your contribution matters to ensure that we maintain a high level of safety and environmental compatibility!

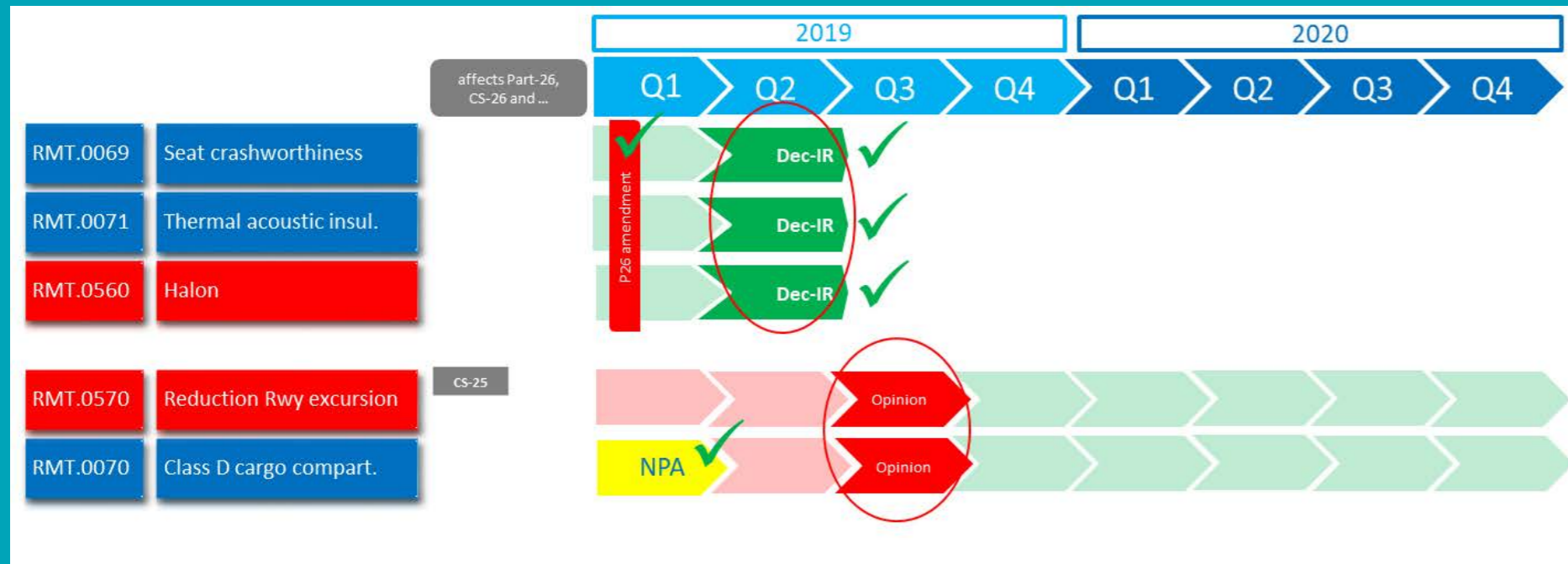
LEGEND

	Strategic task	ToR	Terms of Reference
	Important task	NPA	Notice of Proposed Amendment
	Standard task	A-NPA	Advanced Notice of Proposed Amendment
	Regular update task	ABC	Advisory Body Consultation
	Harmonisation with bilateral partners	Dec-CS	Decision re Certification Specification
	Delivery completed	Dec-AMC	Decision re Means of Compliance to IR
	Delivery postponed	Dec-IR	Decision pending adoption of Implementing Rule
	Postponed to free resources for NBR	Opinion	Proposal to European Commission
	Technical work completed, delivery ahead	Dec/O	Combined Decision (CS or AMC) & Opinion
	Use of Art. 15 or Art. 16 procedure	RU	Regular Update
	Publication pending adoption of the IR		
	Delivery cancelled		

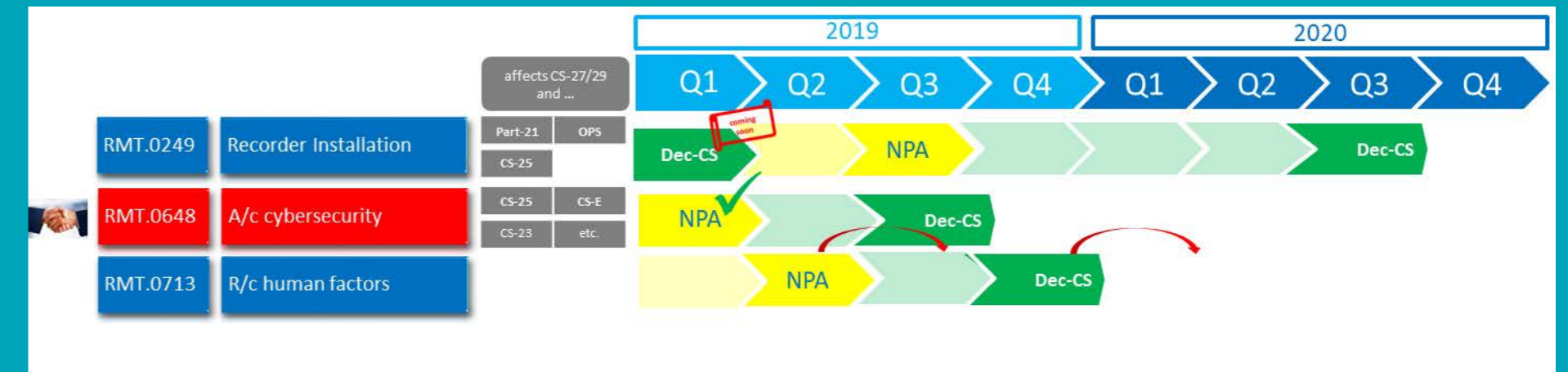
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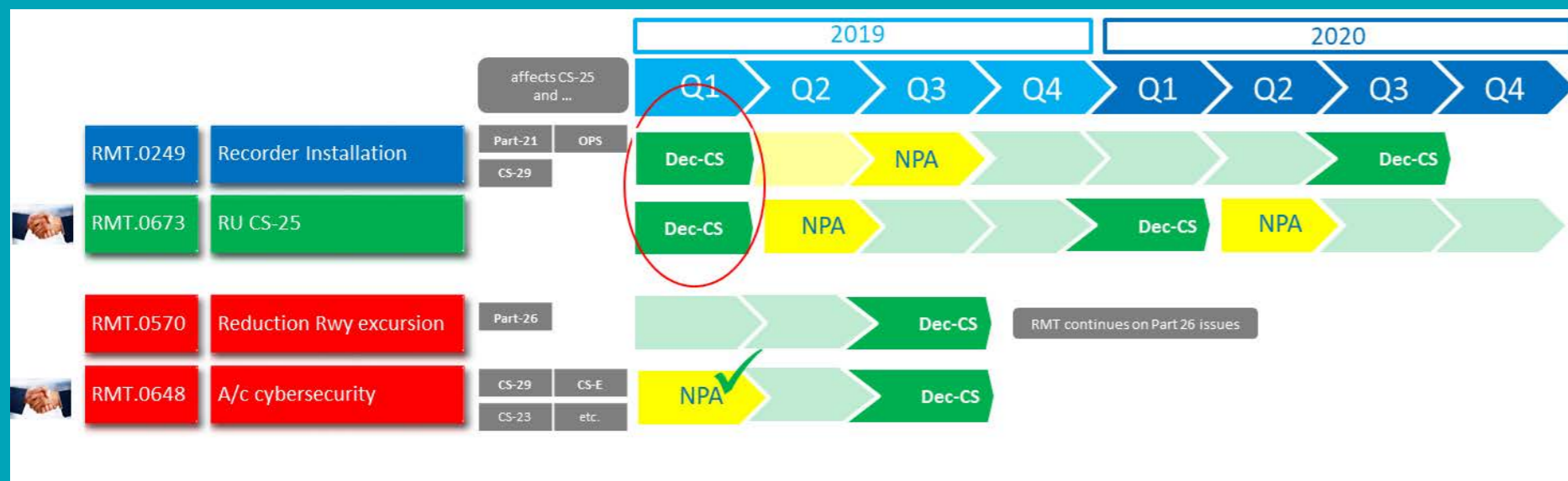
PART 26



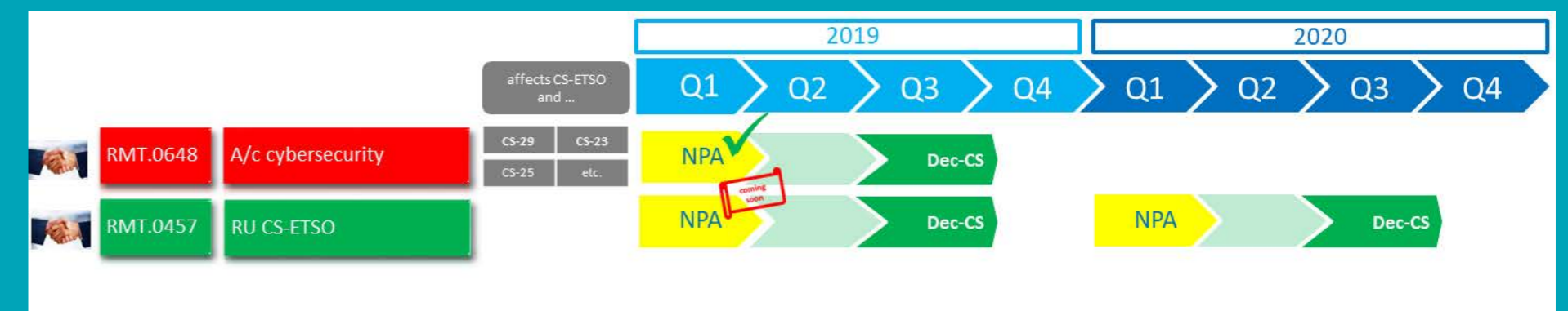
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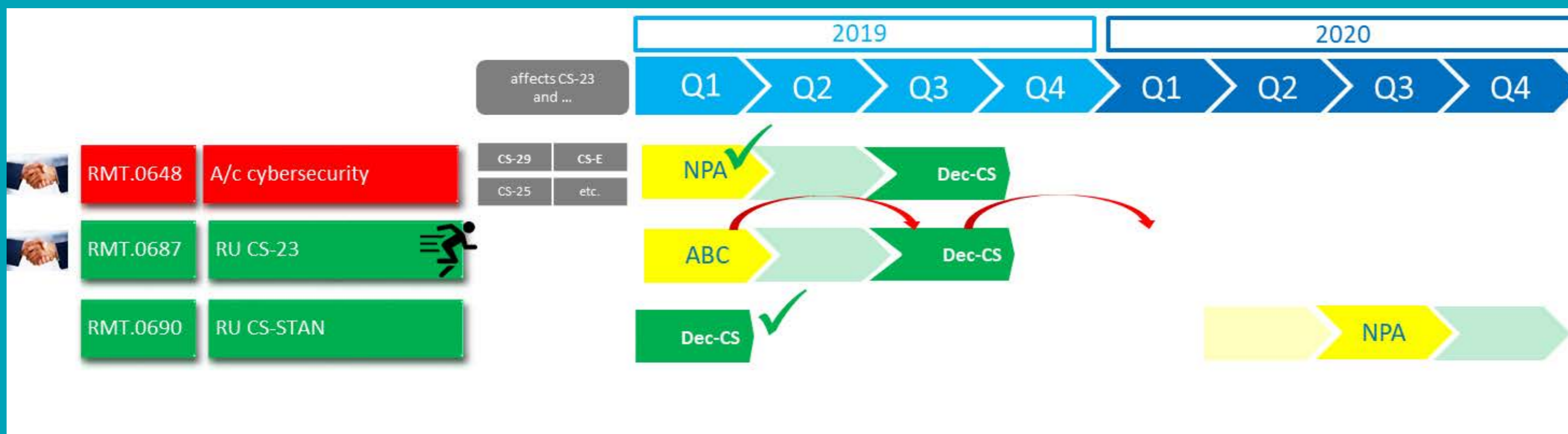
CS 25



CS-ETSO



SMALL AEROPLANES



STC WORKSHOP 2019

The 2019 EASA STC Workshop was held at the Agency on 16-17 May 2019. During those two days, around 110 external participants, together with other organisations such as the FAA, Austro Control, maintenance organisations and operators enjoyed discussing a wide range of topics (available soon on our [YouTube channel](#)).



On the first day, a counselling event took place which was split into 9 panels, during which 20 EASA experts and PCMs were available for individual questions.



The lively interactions between all the participants and external organisations helped to achieve better awareness of key Safety topics (some came all the way from the UAE & China).

The online survey answered by the participants shows a level of satisfaction of nearly 90 % (“good” and “very good” ratings).

The STC Workshop helps to understand issues that arise between the applicant and the Agency, leading to the efficient handling of future STCs (on both sides).

Special thanks go to the members of the organisation team and to those colleagues who actively supported them.

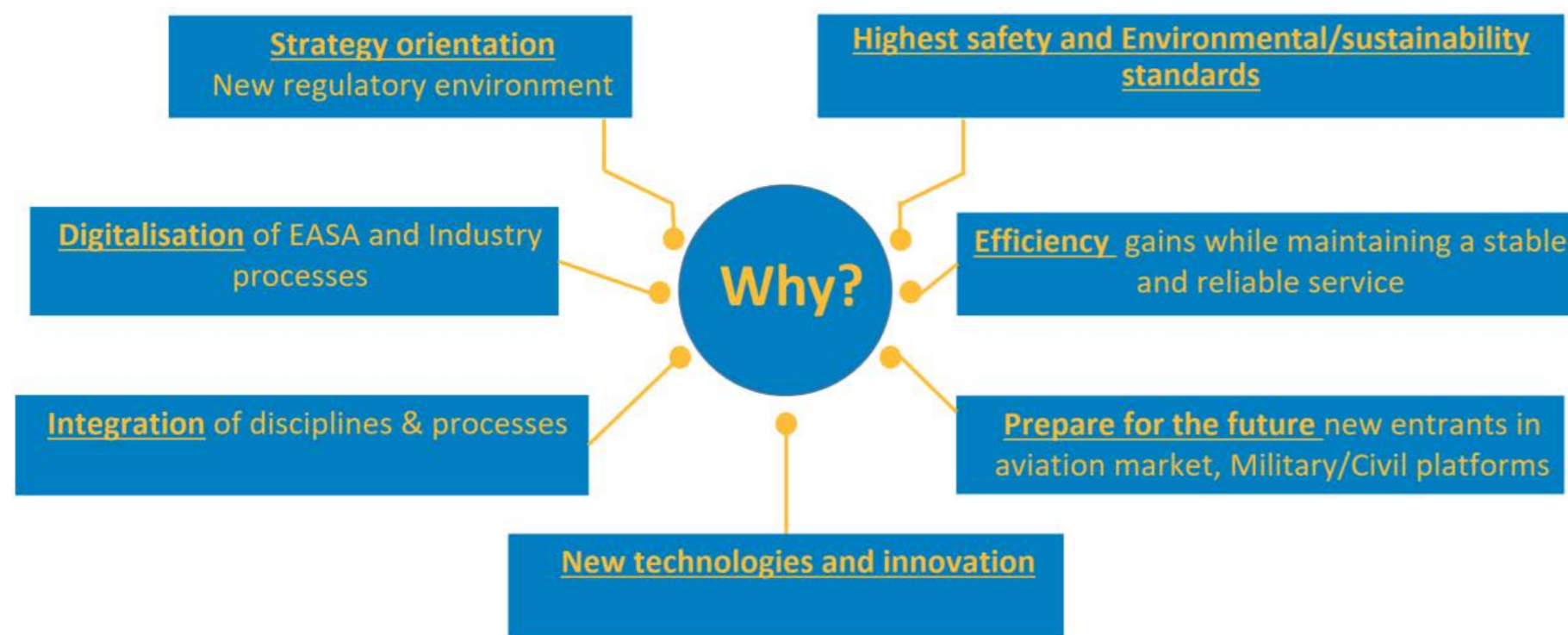


CT ROADMAP - UPDATES

CT is facing major challenges across domains.

Some key anticipated changes in CT for the years 2019-2020 (and beyond) include:

- Changes to the EASA regulatory and financial environment (e.g. NBR, F&Cs, other);
- Changes related to technological innovation (UAS, EVTOL and urban mobility, Electric and hybrid propulsion, Artificial Intelligence, supersonic aircraft, other); and
- Changes related to business models and certification processes (Digitalization, New industry, military-civil dual platforms, other).



These changes will come in addition to recent or on-going changes or contextual elements:

- The introduction of Level of Involvement in the certification process;
- The development of “quick fixes” to deal with innovative projects already in the pipeline (e.g. Special Conditions,,CMs), not necessarily in full transversal coordination in the directorate;
- Strategic priorities (e.g. the GA Roadmap, the Rotorcraft Roadmap, Software strategy, environment);
- The outsourcing strategy;
- The need for workload management;
- The need for efficiency gains; the deployment of CORAL, including the roll-out in CT of SEPIAC;
- Bilateral partners in Aviation Safety: FAA-EASA TIP Roadmap; new agreements with other countries, other aspects.

Being urged by the above-mentioned future and also current challenges, the CT Directorate will evolve. The purpose of the CT Roadmap 2020 management change project since its start in 2018 has been, is, and will be:

To anticipate and drive a transformation of the way EASA manages airworthiness and environmental activities, to integrate new working methods into certification/validation processes, to be capable of influencing and facilitating innovation, and being able to respond to unexpected technical innovation.

The CT2020 Roadmap project has been divided into parts 1.0 and 2.0 to differentiate between the reorganisation of CT and the full implementation of the following items:

- The organisational structure (physical move, departments/sections coordination etc.);
- Processes / ways of working across the complete system, with, in particular, the need to move towards a performance-based culture and to develop synergies between certification and organisation approvals;
- The management of competences;
- Knowledge Management;
- The management of technical and administrative resources; and
- IT supporting tools.

This article only talks about CT Roadmap 1.0.

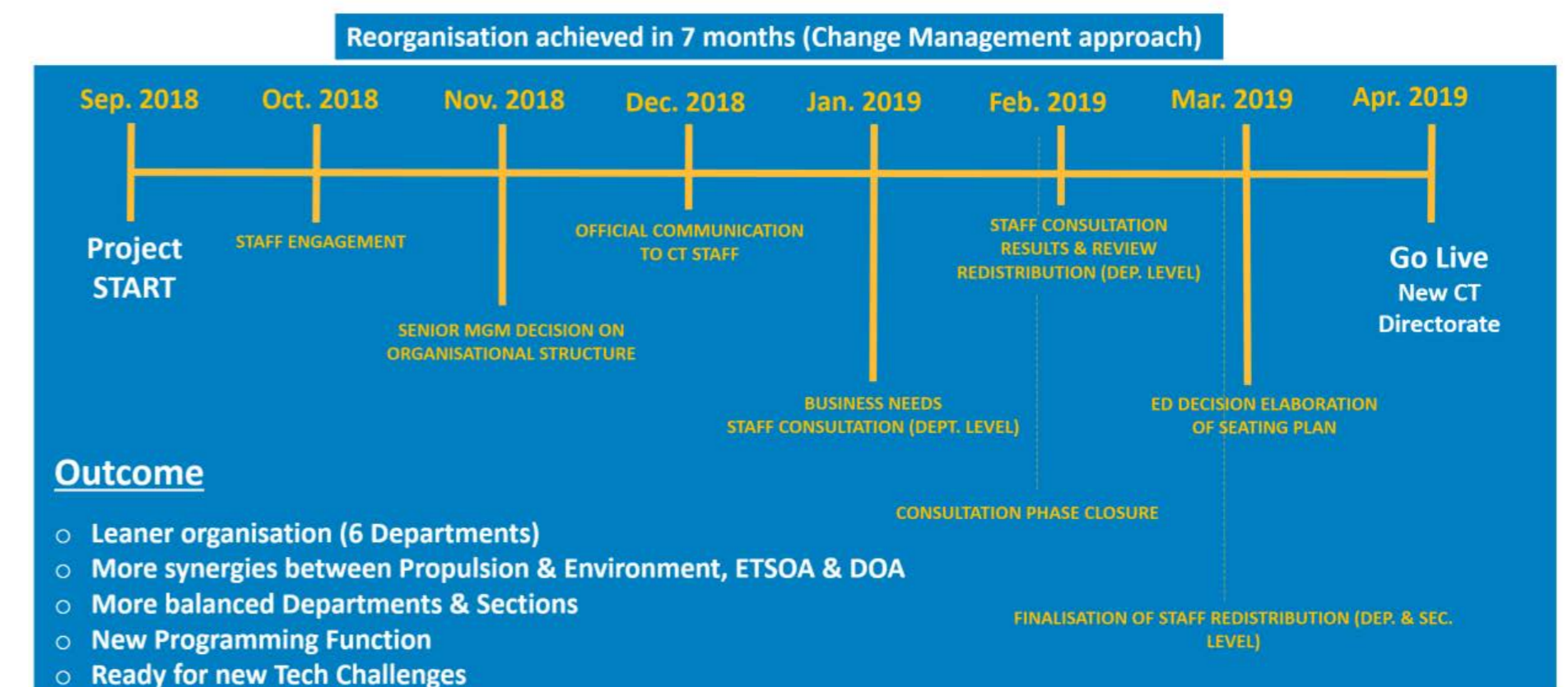
The achievement of CT Roadmap 1.0 has been to establish the new CT organigram and the redistribution of staff.

CT2020 Roadmap 1.0 has been conducted by embracing the *Change Management Methodology*, offering tools and techniques to manage the people side of the change and achieve the required business outcome.

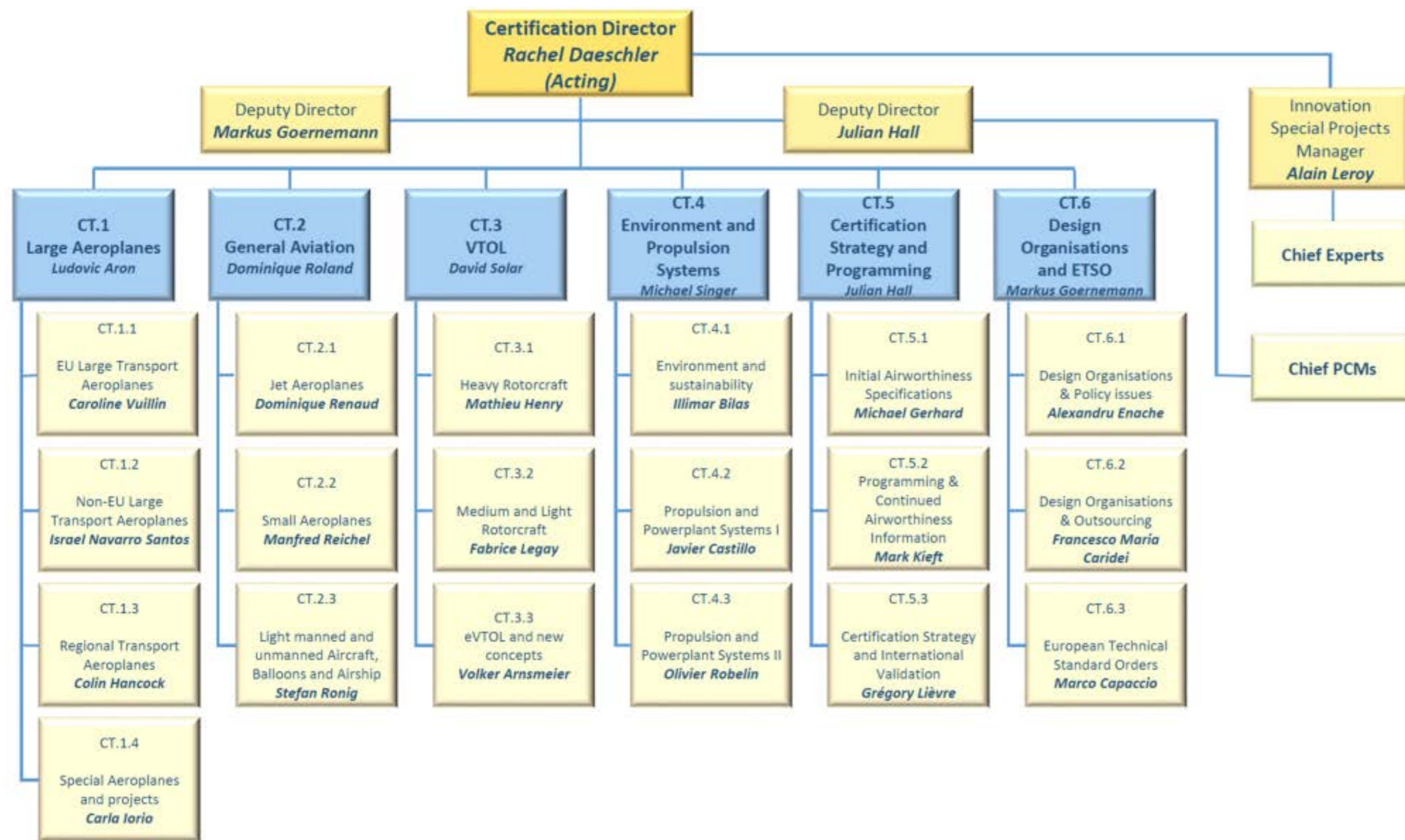
It’s all about creating a structured approach to support individuals and teams as they move from the current state to the desired future state.

CT2020 Roadmap 1.0 implemented strategies to deal with the impact on people of the reorganisationrelated changes.

The timeline of the CT re-organisation has been impressive, as shown in the image below:



The final result of the CT Organization Chart was communicated to the CT Staff during a dedicated 'All CT Staff Meeting' on February 2019, and is reported here:



Start from left to right.

CT 1: Business Jet Aeroplanes have been transferred to GA, resulting in a more proportionately sized & balanced department, additionally having the opportunity to split the EU and Non EU aspects. The STC coordination tasks have been attached to the head of department office under the responsibility of an STC coordinator

CT 2: the Business Jet group has been integrated into GA due to commonalities in aircraft configurations and max passenger numbers.

CT 3: We'd like to highlight that the vertical take-off part of the section will include innovative products that will have strong links to new rulemaking activities.

CT 4: The Environmental department has become a section that is integrated with propulsion. This brings aircraft, engines and EU environmental objectives and future regulations together in one department.

CT 5: We'd like to highlight the introduction of the new programming and resource and management function.

CT 6: The ETSO group has now been incorporated with the DOA section, enhancing synergies between APDOA and ETSOs.

Innovation & Special Projects: will bring many changes for the future, and this is why this area of activity reports directly to the director level.

Start of CT 2020 Roadmap 2.0

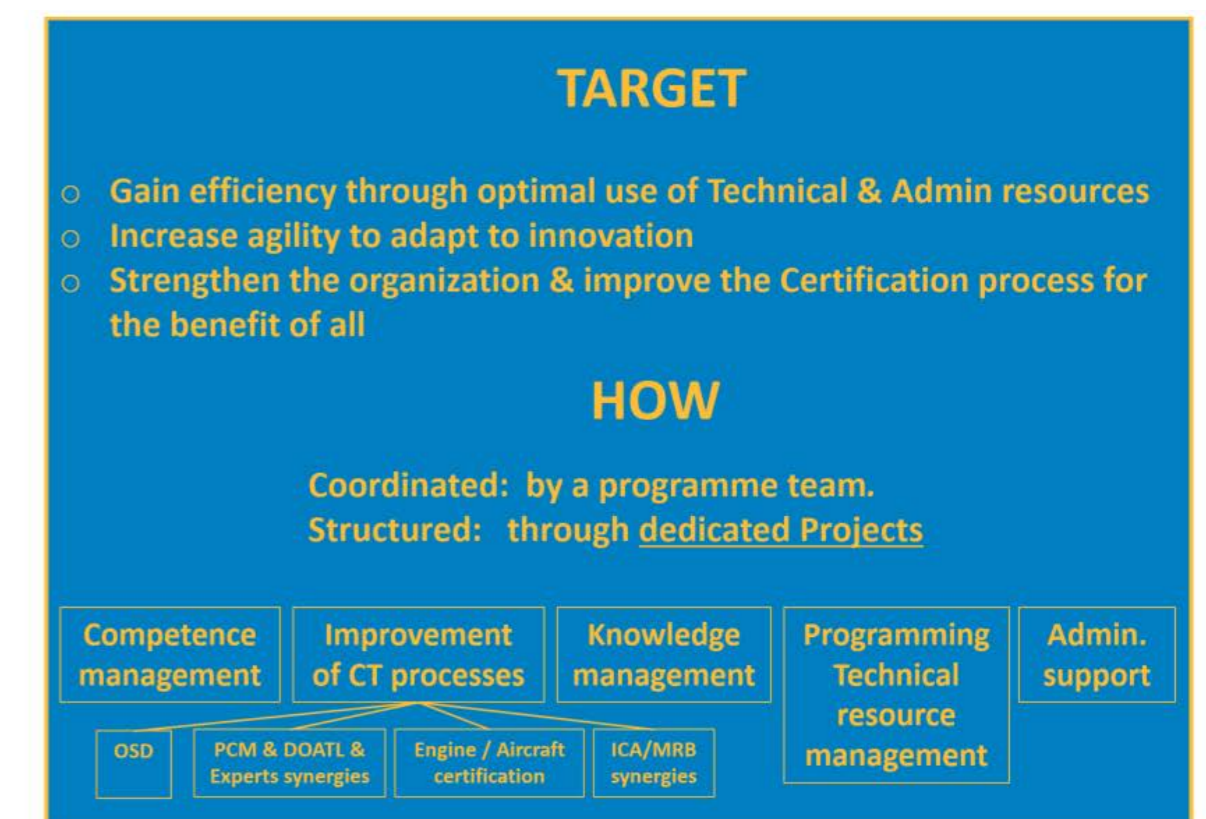
The official go-live of the new CT organisational chart took place in April 2019. This date also marked the kick-off of CT2020 Roadmap 2.0. The high level objectives for this phase are:

- To gain efficiency through the optimal use of resources;
- To increase our agility to adapt to innovation; and
- To strengthen the organization for the benefit of all.

CT Roadmap 2.0 is structured through dedicated *Projects* as described below. All the projects are coordinated through a programme team.

The project relevant to the PCM/DOATL/Experts synergies will dedicate a great deal of attention to improving the efficiency of the management of STCs, and properly addressing all the queries shared by the STC Holders community in recent years.

Interactions and exchanges with external stakeholders will be set-up during the development of this project in the frame of CT2020 Roadmap 2.0 to ensure that the inputs/contributions of the STC Holders are fully taken into account.



UPCOMING EVENTS

2019 EASA - FAA International Aviation Safety Conference

Date & time: 12/06/2019 - 14/06/2019

Description: the conference will bring together senior aviation professionals from regulators, manufacturers, airlines and associations from all world regions, to discuss global aviation safety issues from the perspective of both the regulators and industry.

Rotorcraft and VTOL Symposium

Date & time: 10/12/2019 - 11/12/2019

Description: The EASA Rotorcraft and VTOL Symposium is a unique forum in Europe to present and discuss the latest developments for rotorcraft from a safety perspective.

QUESTIONS ANSWERED

In this edition, we would like to focus our attention on cabin safety, an essential domain for the STC community. You can find here some of the unanswered questions / comments from the STC workshop 2018 related to cabin safety:

- › Concerning cabin loading for occupant safety, TC holder specifications remain acceptable for the demonstration of compliance, however these specifications are not made available by EASA through CSs.

Some specifications are the property of the aircraft manufacturers. It would not be legal for EASA to publish those specifications. The same concept applies to individual agreements on compliance findings. It is up to the manufacturer to pass the data on to either their customer or to other DOAs. In cases where the CSs don't cover a novel or unusual design, EASA prepares special conditions or equivalent safety findings and publishes them for comments. On common and generic compliance issues, EASA publishes guidelines in the form of certification memoranda. The generic CRIs that are used on certain aircraft types are accepted via TCDSs, and are available on request.

- › Are cabin loads applicable for cockpit installations as well?

In principle, the same loads do apply, as the regulations are the same. However, as the cockpit interior is designed as a workspace for pilots, additional loads may need to be considered.

- › Where can we find samples of STCs with zero LOPA?

The design data is the property of the approving DOA. If you would like to have an idea of what it takes to approve such STCs, please have a look at the proposed EASA certification memorandum <https://www.easa.europa.eu/document-library/product-certification-consultations/proposed-easa-cm-cs-010-001>

- › Seat cover replacements on 16g seats: is it required to perform certification tests to demonstrate compliance with 25.562?

In most cases the dress cover can be exchanged without performing additional dynamic tests. Please follow the guidance provided in AC25.562-1B.

Let's continue this two
ways communication
and cooperation.

**We kindly invite you
to share by e-mail to:**

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