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ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other issues to be considered by the Technical Commission

ROTORCRAFT SAFETY ROADMAP

(Presented by Finland on behalf of the European Union and its Member States[1], the other Member States of the European Civil Aviation Conference[2]; and by EUROCONTROL)

EXECUTIVE SUMMARY

The European Union Aviation Safety Agency (EASA) launched in December 2018 a Rotorcraft Safety Roadmap[3] aimed to improve overall rotorcraft safety by 50% within the next 10 years, make positive and visible changes to the safety trends within the next five years and develop performance-based and proportionate solutions to help maintain competitiveness and sustainability of the rotorcraft industry.

Although the Roadmap originally targets Europe, this paper suggests that objectives, contents and safety enhancements could be expanded beyond Europe.

The Assembly is invited to note the proposals of the EASA Rotorcraft Safety Roadmap summarised in this paper.

Strategic Objectives:	This working paper relates to the Safety Strategic Objective.

1. INTRODUCTION

1.1 With over 7,700 civil rotorcraft operating across the Member States of European Union Aviation Safety Agency (EASA), helicopters provide a wide range of services to the community. Rotorcraft are extensively used in a variety of operations, including commercial air transport, Helicopter Emergency Medical Services (HEMS), surveillance, police and State flights, aerial work, agriculture and

1 Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom.

2 Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Iceland, Moldova, Monaco, Montenegro, North Macedonia, Norway, San Marino, Serbia, Switzerland, , Turkey and Ukraine.

3 https://www.easa.europa.eu/download/Events/Rotorcraft%20Safety%20Roadmap%20-%20Final.pdf

General Aviation (GA). They also support a significant part of the economies of various countries through offshore operations.

1.2 Currently in EASA Member States[4], there is on average one non-fatal rotorcraft accident per week, and 1.3 fatal accidents per month: this calls for ambitious and effective improvement measures.

1.3 Based on a review of European and worldwide rotorcraft safety data, EASA decided to launch a top-down strategic approach to set and meet an ambitious target to cut number of accidents by half in Europe. The dataset considered for developing the Roadmap consisted of all civil rotorcraft accidents worldwide from 2008 to 2017. This dataset was large enough to extract statistically meaningful information.

1.4 A group of external experts from National Aviation Authorities (NAAs) and industry was tasked to develop, together with EASA, a Rotorcraft Safety Roadmap with proposals to achieve the above ambitious safety objective. The roadmap focuses on transversal issues and includes training, operations, initial and continuing airworthiness and innovation.

1.5 EASA released and presented the Rotorcraft Safety Roadmap in December 2018 during the 12th EASA Rotorcraft Symposium in Cologne, Germany. The Roadmap's vision is to achieve significant safety improvement with a growing and evolving aviation industry.

1.6 The Roadmap originally applies to the EASA Member States[5]. EASA suggested a first scope extension to the ICAO European and North Atlantic (EUR-NAT) region in the information paper IE-REST/13-IP/06, presented on 3/04/2019 in the Thirteenth ICAO EUR Regional Expert Safety Team (IE-REST) meeting at ICAO EUR/NAT Office in Paris, France. IE-REST is the expert safety team of the European Regional Aviation Safety Group (RASG-EUR).

1.7 This paper suggests that the EASA Rotorcraft Safety Roadmap could be valuably expanded beyond EASA Member States and ICAO EUR/NAT region.

2. OBJECTIVES AND ACTIONS

2.1 Based on the safety data considered, the priority was set on light conventional rotorcraft, small operators and general aviation, and training.

2.2 Strategic objectives:

a) improve overall rotorcraft safety by 50% within the next 10 years, measured by the number of rotorcraft accidents in Europe for all types of EASA operations with at least a fatality or a serious injury;

b) make positive and visible changes to rotorcraft safety trends within the next five years; and

[4] European Union (EU) Member States plus the non-EU European countries Iceland, Liechtenstein, Norway and Switzerland, identified as EASA associated countries.

c) develop performance-based and proportionate solutions to help maintain competitiveness, and the sustainability of the rotorcraft industry.

2.3 Define and organise actions by work-streams:

Safety Data Analysis

2.3.1 Engage with OEMs in collecting and aggregating flight hours and data on the number of cycles of their products and develop a framework to exchange information with EASA while respecting personal data protection obligations. In addition, the EASA Network of Analysis (NoA) will engage with National Aviation Authorities (NAAs) to facilitate the collection of fleet and flight hours by the NAAs.

Safety Promotion and Communication

2.3.2 Communication and Safety Promotion are powerful means to raise awareness, change behaviours and enhance safety.

2.3.3 Another key aspect of Safety Promotion is to reinforce existing strategic safety partnerships, which bring together rotorcraft stakeholders and create synergies across the community both in Europe and worldwide. The International Helicopter Safety Team (IHST), recently established as the International Helicopter Safety Foundation (IHSF), brings together various regional safety initiatives at global level, including the European Safety Promotion Network Rotorcraft (ESPN-R) coordinated jointly by EASA and Airbus Helicopters.

2.3.4 The EASA Safety Promotion Strategy aims to reach out and raise awareness to influence safety behaviours. The Strategy encompasses a wide variety of target audiences, including Rotorcraft. EASA's Safety Promotion activity is carried out under the "Safety Together!" brand and the new EASA Safety Promotion website has a specific Rotorcraft Domain gathering all information useful to the Rotorcraft community.

Improving Training Safety: Less Checking, More Training and Less Training Accidents

2.3.5 Training is both as an opportunity and a risk area, as a significant number of in-flight accidents occur in training flights. The Roadmap proposes to reduce checking and do more training, while reducing the risks associated with training flights.

Encourage and Promote the Development and Use of New Types of Affordable Training Devices

2.3.6 Encourage and promote the development and use of new types of affordable training devices will better serve light and medium helicopters currently in operation and reduce number of accidents notably in training flights.

Helicopter Design Improvements and Certification Specifications Modernisation

2.3.7 Support the industry and improve certification efficiency by maintaining Certification Specifications up to date with advancements in technology. A number of rulemaking tasks are scheduled in the coming years to provide safety and efficiency improvements. Details can be found in the European

Plan for Aviation Safety (EPAS) 2019-2023[6], Sections 5.5 and 7.7 and in the EUR Regional Aviation Safety Plan (RASP) 2019–2023[7], Section 4.3.

Simplification and Securing Financial Support for Safety Enhancements

2.3.8 Enhance the visibility and understanding of the various instruments available in Europe to provide financial support for supporting the introduction and on-board installation of technologies with safety benefits.

2.3.9 Encourage the Development of a Positive Safety Culture and Introduce the Concept of Continued Aviation Education (CAE)

2.3.10 Developing of a positive safety culture in all rotorcraft-related activities is key to improve safety. The operational focus will be on airmanship, sharing of information and just culture. The Roadmap next considers introducing a concept of Continued Aviation Education (CAE) using experience from the Continued Medical Education (CME) and assess applicability to rotorcraft personnel: Accountable Managers, Nominated Personnel, pilots, instructors, examiners and inspectors, and maintenance staff.

Facilitate and Encourage the Introduction of New Technologies

2.3.11 New technologies can bring substantial safety improvements. This work-stream includes promoting the installation and retrofit of technologies being developed within the rotorcraft industry or already available in other industries and finding ways to facilitate installation in rotorcraft. Emerging technologies are now at levels of maturity, also called Technology Readiness level (TRL), such that they can be introduced into the rotorcraft sector and bring safety benefits.

Create Market Incentives, Achieve Industry Consensus on Key Solutions and Reduce Administrative Burdens

2.3.12 The Rotorcraft Safety Roadmap includes other enablers and actions such as creating market incentives, securing financial support for safety improvements, achieving industry consensus on key solutions for voluntary adoption through industry standards and safety promotion, developing targeted regulatory actions when necessary and reduce administrative burdens, especially for the small operators.

3. CONCLUSION

3.1 The Assembly is invited to note the contents of this paper.

— END —

[6] https://www.easa.europa.eu/sites/default/files/dfu/EPAS_2019-2023%20final.pdf
[7] https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20RASP/EUR%20RASP%202019-2023.pdf