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General Aviation

GA Roadmap lunchtime update

Trevor Woods
EASA Certification Director

6 April 2017

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GA Roadmap lunchtime update

- AERO's 25th anniversary is also the 10th anniversary of EASA participation
- EASA has learned a lot during these 10 years and has become a true, recognised partner in GA
- GA roadmap project has achieved significant improvements and is pushing for more
- GA roadmap project is more than an EASA project and founded on the close cooperation with all parties

Cooperation of stakeholders

European Commission

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European Aviation Safety Agency

Member States

Success only when all partners work together

GA users/industry

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GA ROADMAP Update

Introduction

Dominique ROLAND – GA Champion

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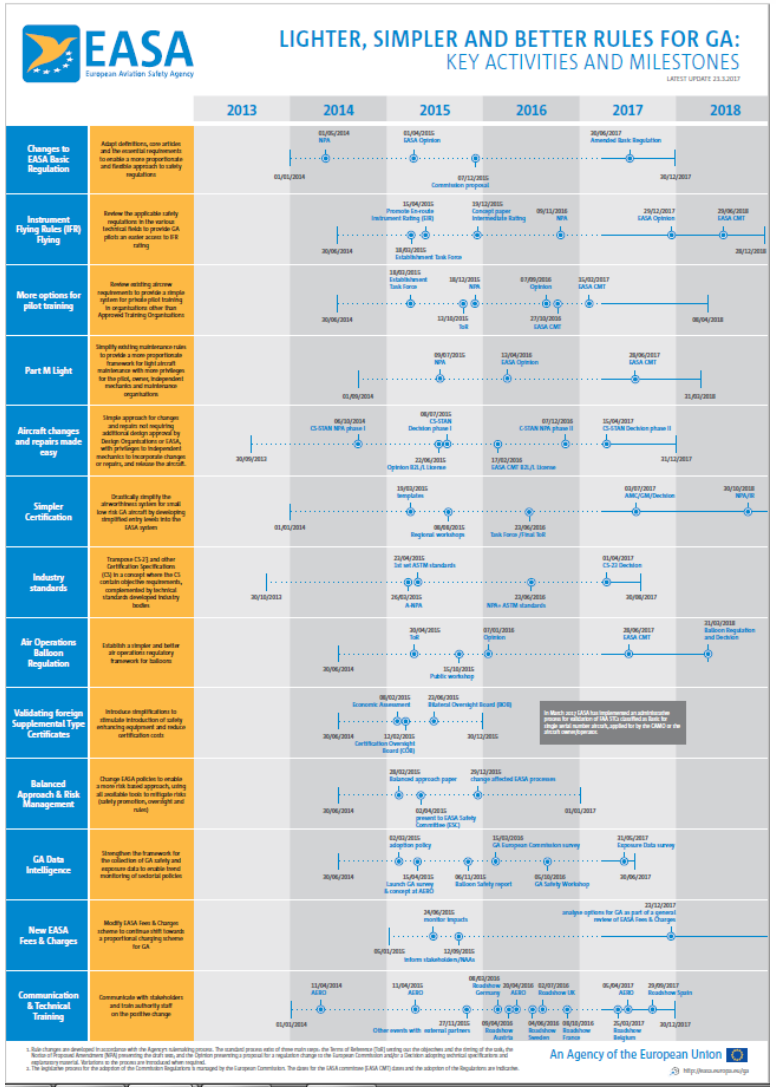
One new year of significant achievements

- **GA Roadmap is delivering in accordance with commitments**
- **Progress towards lighter, simpler and better regulation continues**



Topics in focus for 2017

- Licences (DTO, BIR, modular LAPL, LAPL Medical)
  (Daan Dousi/Christian Kucher - EASA, Magnus Axelsson – CAA Sweden)
- CS-STAN
  (Jannes Neumann - EASA)
- Acceptance of STC
  (Dominique Roland -EASA)
- New CS-23
  (Boudewijn Deuss - EASA)
- Glider regulation
  (Jan Boettcher/Jannes Neumann - EASA, Werner Scholz -European Sailplane Manufacturers)
- Part-21 proportionality
  (Oliver Reinhardt – GAMA Task Force Member)
- Strategic review
  (Julian Scarfe – Europe Air Sports, Michael Erb – IAOPA)
- Questions

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What's new in Aircrew?

Daan DOUSI
Manager Aircrew and Medical Regulations, EASA

Christian KUCHER
Flight Crew Licensing Regulations Officer, EASA

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What's new in Aircrew?

- **Declared Training Organisation (DTO)**
  - New training organisation for LAPL/PPL/SPL/BPL
  - Declaration instead of prior approval
  - Simplified organisation requirements
  - Revised oversight requirements
  - Available from 8 April 2018
  - Easy transition for existing training organisations

What's new in Aircrew?

- **Basic Instrument Rating (BIR)**
  - New rating for flying IFR tailored to GA pilots (PPL)
  - SE and ME class ratings (unless OSD mandates IR)
  - Full competency based training in modules without minimum hour requirements at an ATO
  - Theory: Revised syllabus, exams per module at the ATO
  - Limitations for approach minima
  - BIR → IR via CB-IR with credits
  - More information: NPA 2016-14

What's new in Aircrew?

- **Modular LAPL(A) – Proposal for rule change**
  - Concept for LAPL(A) training considered to be introduced as ‚option' for Member States
  - Training modules, followed by issue of a restricted licence with privileges to be added for finally obtaining the full licence, for example
    - Module 1 (Local flights) → LAPL restricted to local flights
    - Module 2 (passengers) → + local flights with passengers
    - Module 3 (cross-country) → + cross-country flights
  - Discussions with Member States ongoing
  - New proposal by mid of 2017 to the Member States

What's new in Aircrew?

- **LAPL medical certificate – benefits for GA**
  - Below ICAO Class 2 standards – better access to pure private flying in Europe
  - Issue of LAPL medical also possible by General Medical Practitioner (GMP) (option to be taken by Member State)
  - LAPL medical included in Class 1 and 2 medical certificates → possible to continue with LAPL privileges in case of decrease of medical fitness
  - Validity: 5 years (after age of 40: 2 years)

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CS-STAN regular updating

Jannes NEUMANN
General Aviation Product Certification Manager, EASA

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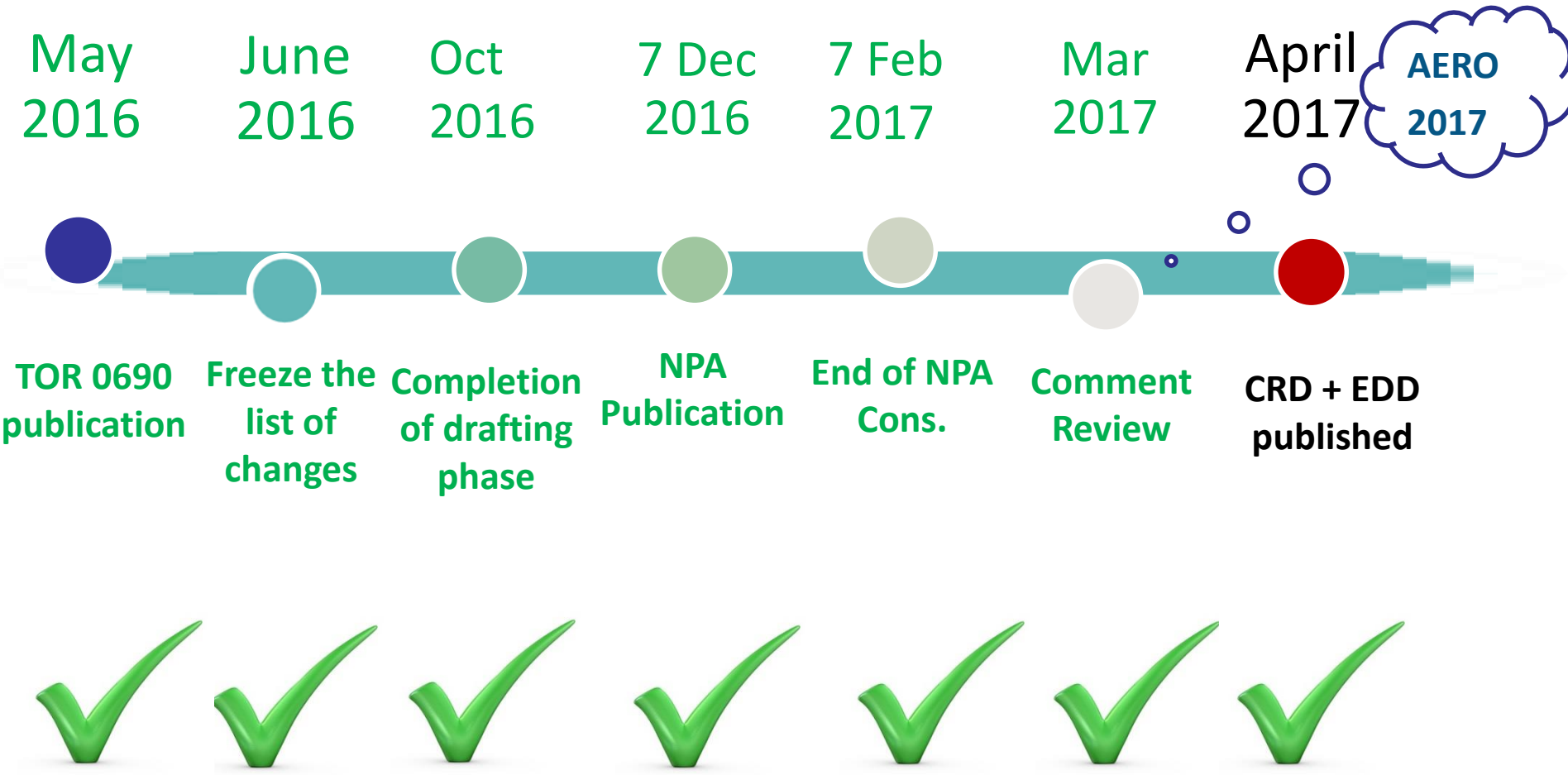
Standard Changes

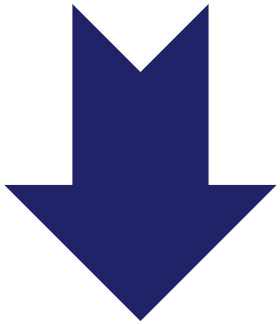
- Minor Change
- Major Change / STC
- Standard Changes (not subject to an approval process)
  - 21.A.90B
  - aeroplanes <= 5.700 kg MTOM
  - rotorcraft <= 3.175 kg MTOM
  - sailplanes, balloons, and airships as def. in ELA1/2
  - design data in CS-STAN
  - no conflict with TC holder data

CS-STAN Roadmap



Statistics

CS-STAN Initial Issue	# of Standard Changes	# of Standard Repairs
	22	2



Draft CS-STAN Issue 2	# of Standard Changes				# of Standard Repairs			
	Un-changed	amended	new	total	Un-changed	amended	new	total
	6	16	12	34	1	1	2	4

Amendments in CS-STAN Issue 2

SUBPART A - General

- New **VOLUNTARY reporting system** is proposed to support future CS-STAN evolutions. Stakeholders may:
  - submit proposals for new SC/SR or for improvements of the existing ones
  - provide feedback to improve the existing SC/SR
  - voluntary report the utilization of CS-STAN for statistical purposes.

- The Scope has been expanded to provide additional **clarifications regarding the release to service** of aircraft modified or repaired according to CS-STAN

- Additional explanations have been provided to further **clarify the operational limitations and restrictions** to the use of SCs/SRs with regard to installation of equipment.

- **Clarifications** have been added regarding the prevention **of conflict between SCs/SRs provisions and TC holder's data**

Amendments in CS-STAN issue 2

- CS-SC032a — Installation of anti-collision lights
- CS-SC034a — Exchange of existing battery by Lithium Iron Phosphate (LiFePO4) batteries (sailplanes only)
- CS-SC051b — Installation of ‘FLARM’ equipment (evaluation flight - range analysis tool)
- SC-CS058a — Installation of traffic awareness beacon system (TABS) equipment
- CS-SC102a — Installation of DC power supply systems (PSS) for portable electronic devices (PED)

Amendments in CS-STAN issue 2

- CS-SC205a — Installation of fuel low level sensor (FLLS)
- CS-SC403a — Provisions for the installation of lightweight cameras
- CS-SR803a — Temporary repair of canopy cracks by drilling a stopping hole
- CS-SR804a — Use of alternative adhesive for repairs of wood and wooden mixed structures

The CS-STAN Evolution Process

- Reported misuse of CS-STAN,
- Proposals collected during previous NPA consultations
- New proposals submitted by stakeholders

Eligibility evaluation and drafting

Voluntary reporting, feedback from in service experience

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Validation of FAA basic STC's

Dominique ROLAND
Head of GA Department

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Simplified validation of the FAA Basic STCs

- This is a simplification of the EASA validation process for the cases where the US STC Holder of a FAA STC classified as Basic is unwilling or unable to apply for EASA validation.
- The scope is limited to aircraft and installed engines, if applicable, in the following categories:
  - > 2 000 kg ≤ 5 700 kg MTOW
  - ≤ 2 000 kg MTOW
  - Very Light Aeroplane
  - Light Sport Aeroplane
  - Powered Sailplanes
  - Sailplanes
- STCs that involve changes which impact the aircraft's noise characteristics are excluded from this simplified process.
- This process is valid only for aircraft STCs.

What is a FAA Basic STC?

- In accordance with the Technical Implementation Procedure (TIP) for Airworthiness and Environmental Certification between FAA and EASA rev 5, Section 1.6 Definitions:
- *(f) "Basic Supplemental Type Certificate (Basic STC)" means a Supplemental Type Certificate whose validation does not require Validating Authority (VA) technical involvement.*

What does the EU applicant need to do?

- Check against the latest EASA-FAA Technical Implementation Procedures (TIP) provisions that the FAA STC is Basic (in case of doubt, contact EASA at GADadmin@easa.europa.eu), and in this case:
- complete the application form, FO.CERT.00134, “EASA validation of FAA Supplemental Type Certificate classified as Basic and limited to one serial number”,
- submit the application form together with a copy of the FAA STC, applicable documentation, correspondence with the STC Holder (STCH) as well as STCH statement of “no objection for EASA validation”, if available, at STC@easa.europa.eu,
- acknowledge his/her obligations as Holder of the STC in accordance with Part 21, point 21.A.118A and
- sign the declaration of fulfilling those obligations.

What document do I receive?

- The application form FO.CERT.00134, “EASA validation of FAA Supplemental Type Certificate classified as Basic and limited to one serial number” contains on page 3 the EASA statement and approval number which will be signed, dated and stamped.
- The statement below is proof of EASA validation. Please place this page in the aircraft log.

6. EASA Statement - To be filled in **only** by the European Aviation Safety Agency		
The FAA Supplemental Type Certificate specified in section 3 is classified as Basic and hereby validated for the aircraft identified in section 4. This validation is limited to the serial number under 4.1.		
EASA Approval Number		
Date	Name	EASA Signature

How to apply?

Where can I find the application form for this process?

The application form can be found at the following location:

http://www.easa.europa.eu/document-library/application-forms#certification

With whom in EASA can I speak about this process?

Please use the mailbox below for any queries regarding this process.

GADadmin@easa.europa.eu

What is the fee charged?

The fee to be charged is 1 hour, per Commission Regulation (EU) No 319/2014

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CS-23

Boudewijn DEUSS
Senior Regulations Officer, Certification EASA

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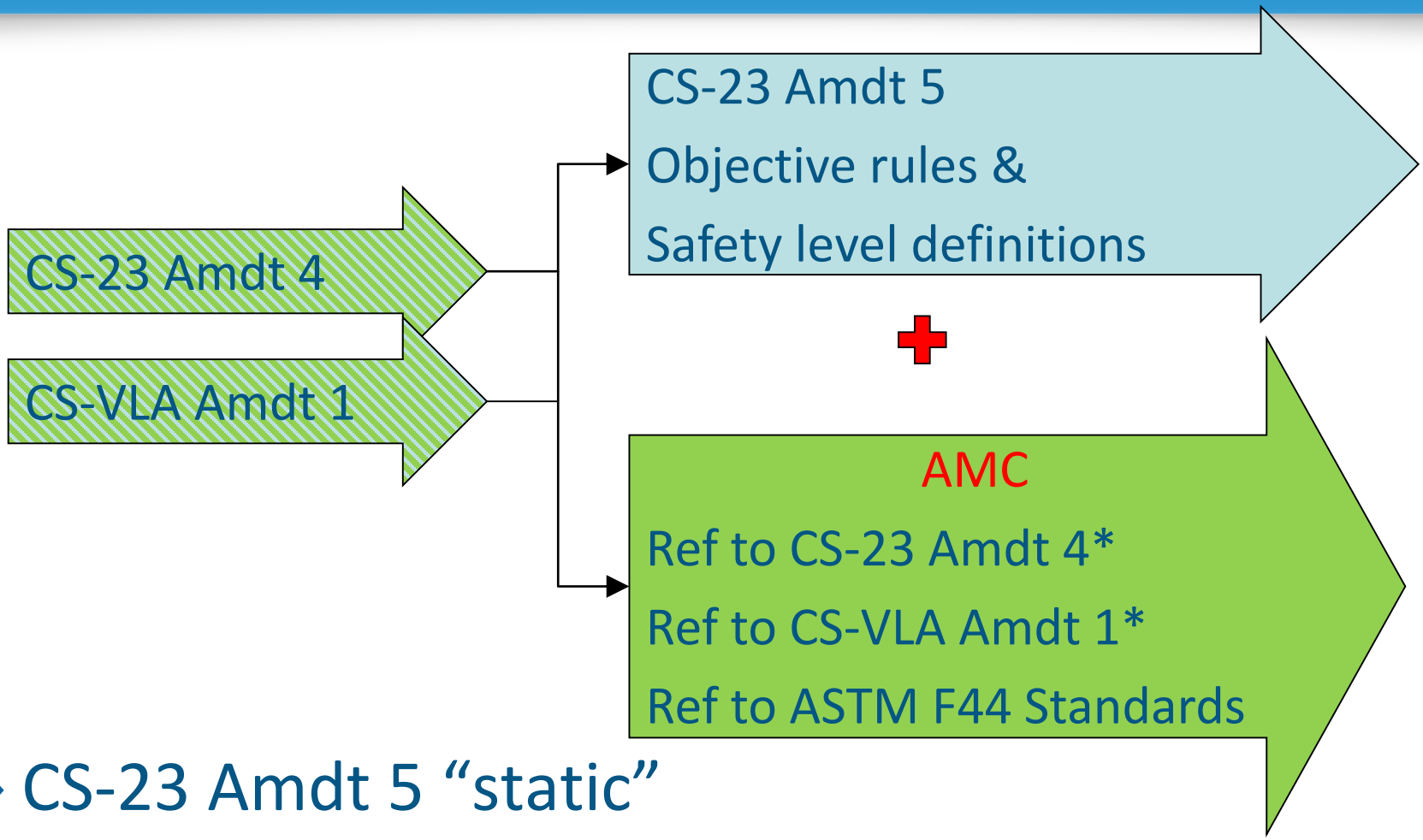
CS-23 Reorganised

- This AERO marks the publication of the revision of CS-23 (certification specifications for fixed wing aeroplanes)
- Insteadof details (limited to todays technology) we define objectives that provide direction for new developments

NEW CS-23 = CS-VLA + CS-23 (Amdt 4)



- CS-23 Amdt 5 “static”
- AMC Regular updates with innovation

Reorganised CS-23 and CS-VLA Concept

67 NEW objective requirements replace 377 requirements in CS-23 and CS-VLA

Proportionality is created in the AMC taking into account design and operational specific criteria

And if applicable

A proportionate accepted safety level

Objective of the reorganised CS-23

CS-23 provides requirements that:

1. bring safe designs for aeroplanes
2. support innovation
3. proportionate with risks
4. follow technological developments
5. lower administrative burden

CS-23 provides requirements that:

1. bring safe designs for aeroplanes

Todays specifications have been built from lessons learned and show an acceptable safety level.

That is not lost.

Existing requirements do not properly cover new technology and associated risks.

Safety improvement are introduced:

- *23.2150 Stall characteristics, stall warning, and spins* instead of spin recovery for LOC
- Supporting innovation can bring safety enhancing technology

CS-23 provides requirements that:

2. support innovation

Todays specifications are detailed to specific design solutions. (e.g. crashworthy seats) and don't encourage new solutions. New technology could also bring safety benefits.

The new CS-23 objective rules do not rule out any technology.

New AMC needs to be developed with new technology.

CS-23 provides requirements that:

3. are proportionate with risks

Proportionality exists in CS-VLA that allows a proportionate approach for simple low performance VFR operated aeroplanes. The border with CS-23 is however too rigid.

Creating options in the AMC introduces a flexible building block system.

In support of that, 4 new Certification levels are defined based on passenger numbers. When appropriate they can be used to create risk mitigation levels.

CS-23 provides requirements that:

4. can follow technological developments

'Follow' means the ability to go with changes in technology. The number of amendments (and time it takes to complete amendments).

Experience shows we can quickly change AMC.

Cooperation and coordination of new AMC can lead to up-to-date standards that reduce uncertainty in certification processes.

CS-23 provides requirements that:

5. lower administrative burden

Special Conditions that are needed when a CS does not contain adequate safety standards.... this will almost disappear with the objective requirements.

CS-23 was postponed in order to improve harmonisation with Part-23.

EASA and the FAA continue to work on harmonisation both at rule and AMC level.

Introducing more flexibility for new design solution in the AMC does bring the need to record this in the certification plan.

Under development

- AMC developed by ASTM International
- On-line training in coordination with the FAA
- Additional workshops

More detailed information is available at:

http://www.easa.europa.eu/newsroom-and-events/events/cs-23-reorganisation-workshop#group-easa-downloads

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EASA CS-23, new smart flexible rules, prepared with and for a safe innovative GA industry

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Sailplane Regulation

Jan BOETTCHER – EASA Flight Standards
Werner SCHOLZ – European Sailpane Manufacturers
Jannes NEUMANN – EASA Certification

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Basic facts

Gliding in EASA Member States

- More than 25 000 sailplanes
- More than 2 Mio. flights/year
- More than 70 000 pilots
- Safety occurrences 2012 – 2016
  - 109 fatal accidents reported*
  - 122 fatalaties reported*

* from 17 EASA Member States

Air operations and licensing

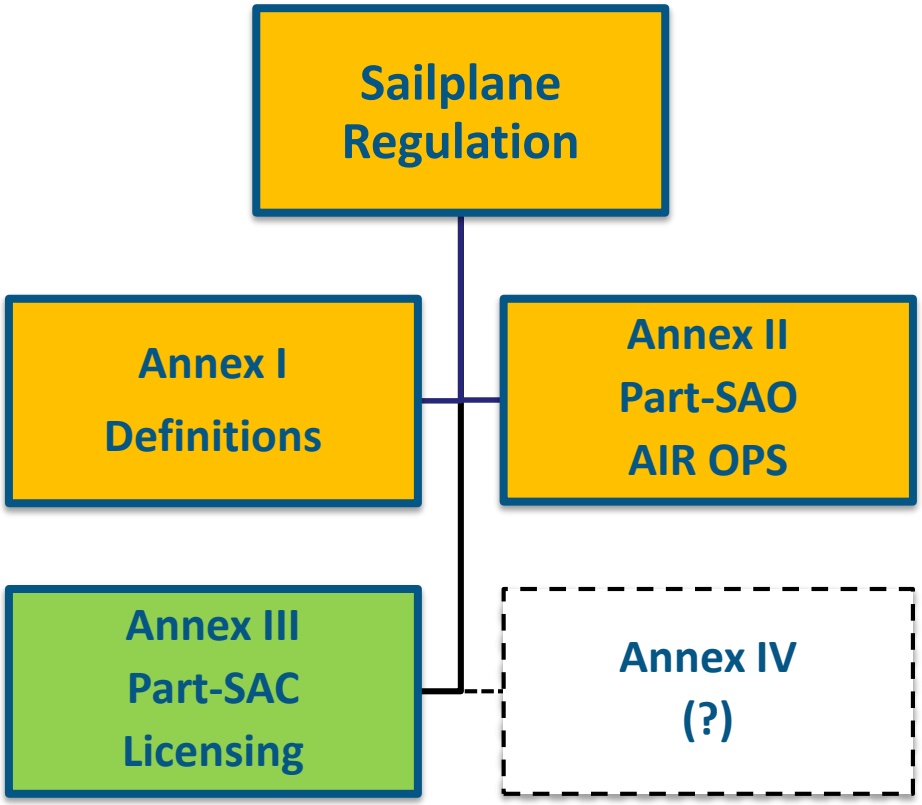
European rules as of today

- **Air operations – Reg. 965/2012**
  - Approx. 100 pages out of 1900 pages apply to sailplanes (in the Regulation and its AMC/GM)
- **Licensing – Reg. 1178/2011**
  - Sailplane licensing rules also embedded in a Regulation applicable to all

Way forward

- GA Road Map – simpler, 'lighter' and proportionate rules
- To extract the rules from Reg. 965/2012 and 1178/2011
- To establish a separate Sailplane Regulation

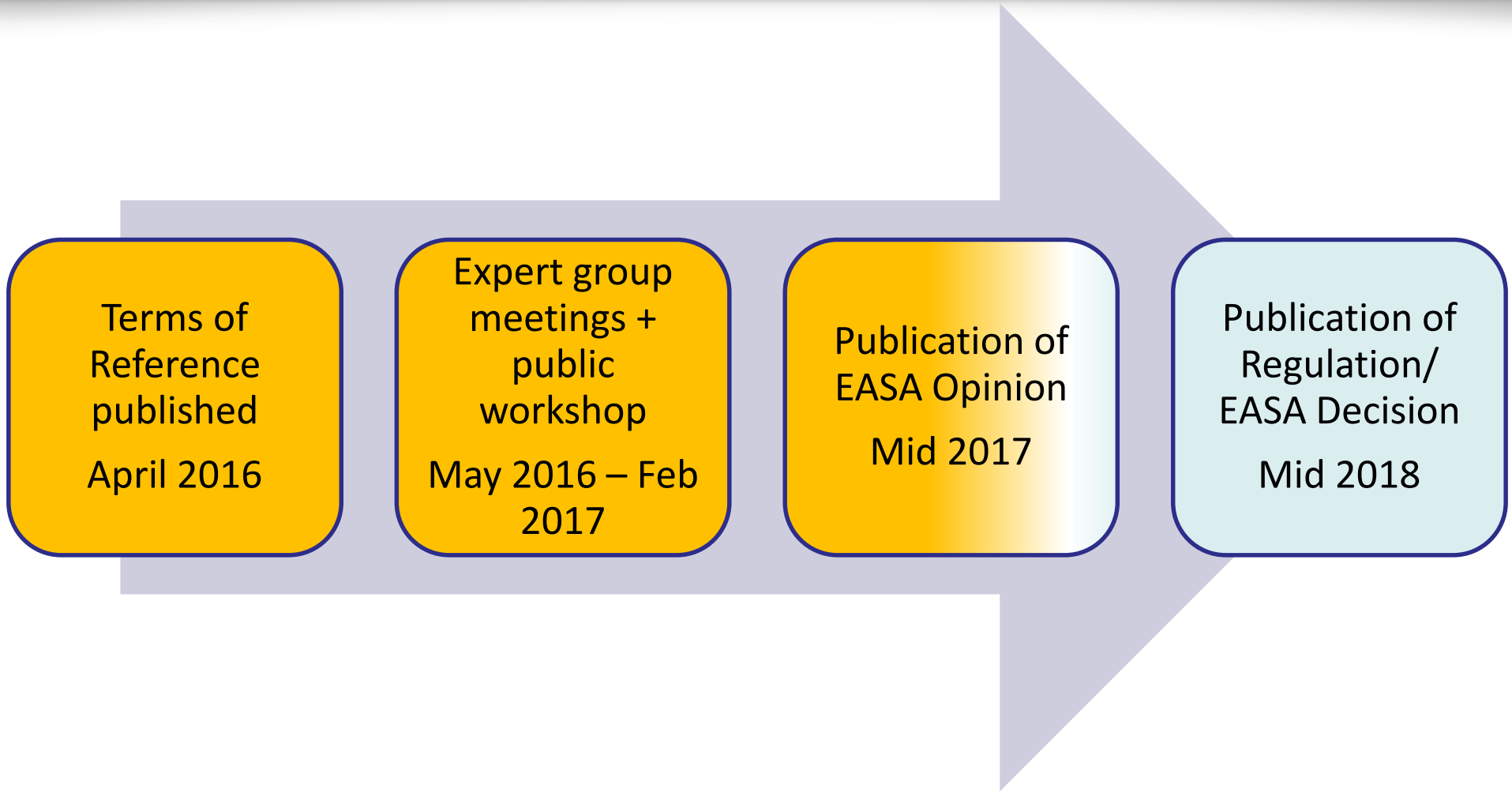
GA Road Map – Sailplane Regulation



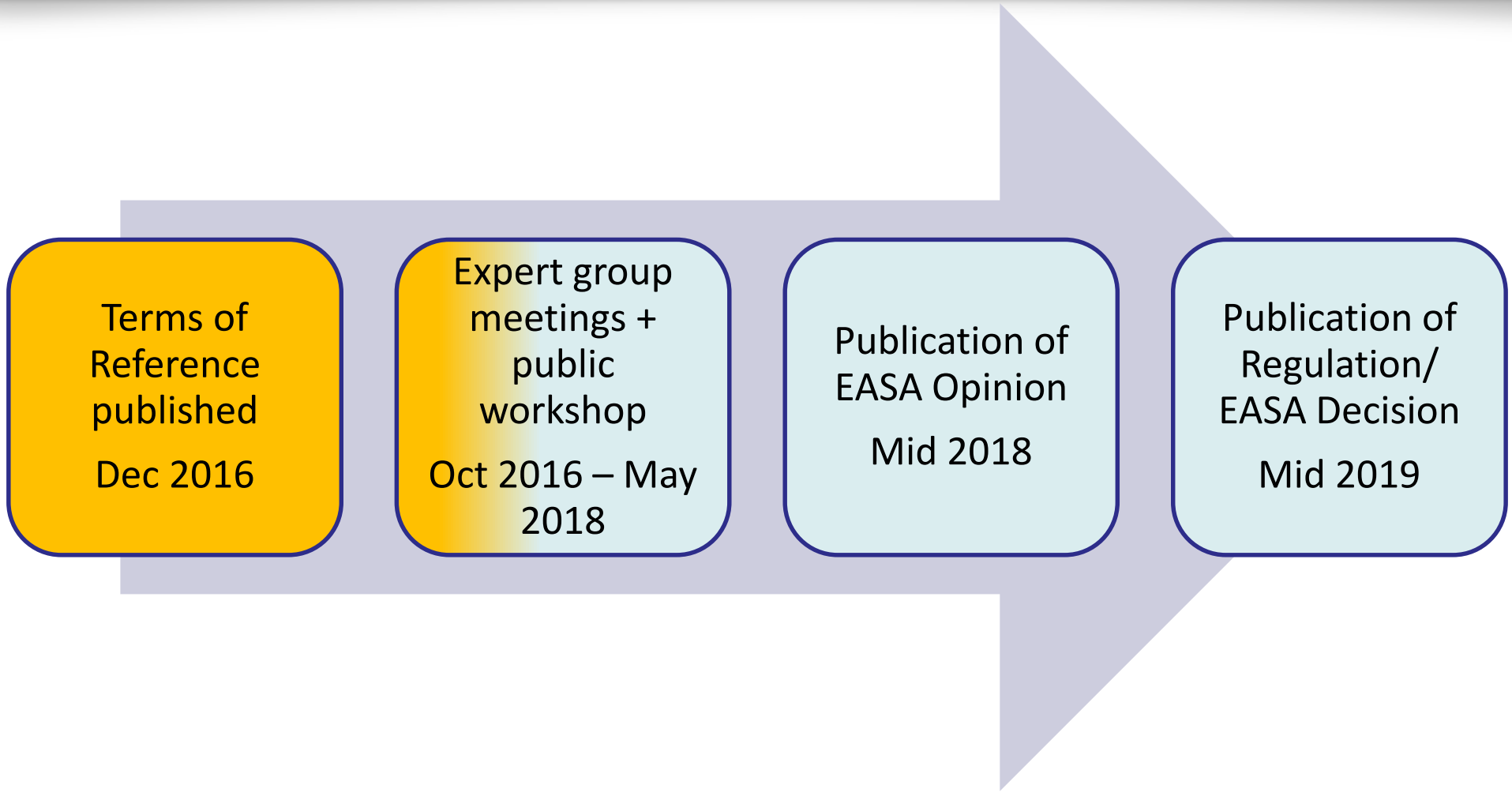
SAO = **S**ailplane **A**ir **O**perations

SAC = **S**ailplane **A**ir**c**rew

RMT.0698 – Air operations sailplanes



RMT.0701 – Licensing sailplanes



Air operations – External experts

- **Member States/competent authorities**
  - France
  - Germany
  - Sweden
  - United Kingdom
- **Associations**
  - European Gliding Union (EGU) *(major support especially appreciated)*
  - Europe Air Sports
- **Manufacturers**
  - European Sailplane Manufacturers

Air operations - To be noted 1

Extensive set of additional rules for commercial operations?

- **No, except for requiring a Declaration**
  - To avoid unnecessary administrative burden
  - No indication that a commercial flight is riskier
  - No commercial flights were reported yet
- **Declaration**
  - To better enable authorities obtaining an overview

Air operations – To be noted 2

Sailplane towing, competition and aerobatic flights assigned as specialised operations?

- Would require risk assessment and checklist

- **No**
  - Sailplane towing is a very common launch method
  - Competition flights are normal part of operations
  - Aerobatic flights are commonly carried out

Structure of Part-SAO (Sailplane Air Operations)

Subparts	
GEN	General requirements
OP	Operating procedures
POL	Performance and operating limitations
IDE	Instruments, data and equipment
DEC	Declaration

Improvement of handling

- Approx. 10 pages of Implementing Rules + 14 pages AMC/GM

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Part-21 Proportionality

Oliver REINHARDT
GAMA Task Force member

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RMT.0689 Part-21 proportionality

Status

RMT.0689 was started to pursue three initiatives:

1. Develop alternatives to Part-21 AMC/GM for smaller companies for:
   - Subpart G – POA
   - Subpart J – DOA
2. Test the new AMC in pilot cases
3. Develop a new approach for Part-21 (Light)
   - Implementing Basic Regulation updates

Step 1 – Developing (draft) AMC-ELA to Part-21

Today there are three main problem areas:

- Existing AMC/GM to Part-21 is written for large aircraft and companies; especially POA is lacking alternatives
- Non-natural split between approvals for DOA & POA (and Maintenance) of small, consolidated teams
- Part-21 Section B (Procedures for competent authorities) mandate a process-oriented approach

21.G – Spirit of AMC-ELA for small POA (Step 1)

- Apply product-oriented surveillance instead of process-oriented
- Significantly tailor the extent of documentation of the Quality System
- Make use of “practiced methods” in many areas - demonstration of repeatable procedures by evidence of work results is enough
- The competent authority oversight will focus on work results instead of process overhead verification

Step 1 – Developing (draft) AMC-ELA to Part-21

Besides rulemaking this requires…:

→ A Cultural Change!!

- A change towards *product* oriented surveillance, instead of today's *process* oriented approach.
- A change towards *utilisation* of other influences to companies, instead of *duplicating aspects*
- A change towards *integrated* assessments, instead of *individual certificates*
- A change towards *partnership and trust*, instead of *hierarchy and suspicion*

Step 1 – Accelerated rulemaking procedure

Fast implementation of Step 1 by:

- Dedicated meeting at AERO to explain:
  - This is Step 1 in the Part-21 proportionality RMT
  - Scope and principles used for this AMC; and
  - What is Step 2 of the RMT about to offer
- Focussed consultation (Workshop @ EASA in May 2017)
- Consultation with stakeholders and Competent Authorities via the advisory bodies (STeB and GA Sectorial team) – May / June 2017.
- Direct publication of a Decision - Summer 2017

Friday 7 April- EASA sessions

- EASA Part 21-Proportionality Session, 11:00-12:15, Room Rome

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Review of GA Roadmap

Julian SCARFE (Europe Air Sports)
Michael ERB (IAOPA)

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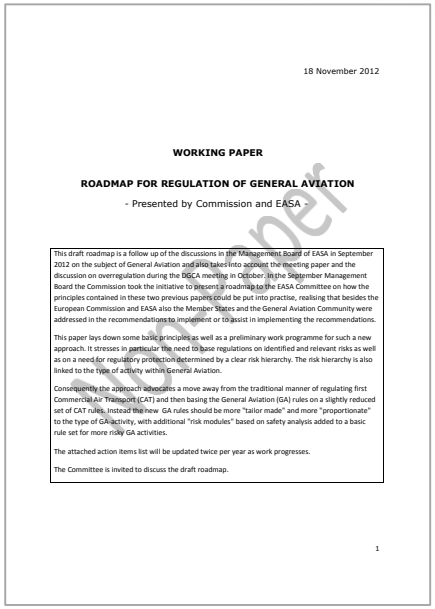
Background and Purpose

- GA Roadmap adopted more than four years ago
- Much has happened, overall very positive
- Time to reflect and learn on themes?
  - Some positives – exploit them
  - Some negatives – learn from them



18 November 2012

WORKING PAPER

ROADMAP FOR REGULATION OF GENERAL AVIATION

- Presented by Commission and EASA -

This draft roadmap is a follow up of the discussions in the Management Board of EASA in September 2012 on the subject of General Aviation and also takes into account the meeting paper and the discussion on overregulation during the DGCA meeting in October. In the September Management Board the Commission took the initiative to present a roadmap to the EASA Committee on how the principles contained in these two previous papers could be put into practise, realising that besides the European Commission and EASA also the Member States and the General Aviation Community were addressed in the recommendations to implement or to assist in implementing the recommendations.

This paper lays down some basic principles as well as a preliminary work programme for such a new approach. It stresses in particular the need to base regulations on identified and relevant risks as well as on a need for regulatory protection determined by a clear risk hierarchy. The risk hierarchy is also linked to the type of activity within General Aviation.

Consequently the approach advocates a move away from the traditional manner of regulating first Commercial Air Transport (CAT) and then basing the General Aviation (GA) rules on a slightly reduced set of CAT rules. Instead the new GA rules should be more "tailor made" and more "proportionate" to the type of GA activity, with additional "risk modules" based on safety analysis added to a basic rule set for more risky GA activities.

The attached action items list will be updated twice per year as work progresses.

The Committee is invited to discuss the draft roadmap.

1

Themes to consider

- Principles for regulation
- Risk-based rulemaking
- EASA understanding of GA
- Buy-in of Member States
- Embracing technology
- EU competence for GA
- Hard vs Soft law
- Legal obstacles
- Taming complexity
- Representation
- Interpretation and Standardisation

Summary

- Lots of good outcomes
- Starting to become self-sustaining
- The spirit of partnership has endured (I hope!)

but

- Some persistent hurdles with horizontal issues