RMT 0599 Competency and evidence based training

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Your safety is our mission.
Who is affected??

[Images of helicopters and other equipment]
EBT is not mandatory

The prescriptive training and checking requirements will remain for those who can’t do EBT, or don’t want EBT.
NPA to be published Q1 2018

Main features:

- Multi pilot operations of single pilot certified helicopters
- Recurrent checking requirements
- Operations on several helicopter types

Other changes:

- CRM,
- Aerodrome competency,
- Qualification to fly in either pilots seat...
Summary of EBT (yesterday’s EBT presentation)

- EBT is addressing the operational risks – Data report
  - Note: not all the risks can be mitigated through training
- Pilot’s resilience
- Evidence based training means evidences from:
  - Regulator – data report
  - Operator – EBT system + Management system
  - Instructor – Evaluation on 1st day - Scenario Based training on the 2nd day
- Instructors: training – concordance – standardisation
Evidence based training.

Legacy
Pre-2008

• ATQP
2008

• Mixed
2017

• EBT
2019

Sim hours per pilot per year

• Tests

• LOFT/LOE/Eval

• Training
EBT: A global approach to pilot training

- Single philosophy of training across the industry

- Procedure to add new aircrafts

- TRI courses

- Interface RMT0596

- Interface RMT0196 CS-FSTD

- Interface RMT0379 AWO

- Review of subpart J&K

- Single philosophy of training for the operator

- Operator recurrent training

- SPA
EBT is based on Pilot competencies

Pending the conclusions of the data report:

- Application of Procedures
- Communication
- Flight Path Management – Automation
- Flight Path Management – Manual Control
- **Knowledge** (not used in ICAO doc 9995 aeroplanes)
- Leadership and Teamwork
- Problem-solving and Decision-making
- Situation Awareness
- Workload Management
- **Monitoring** (not used in ICAO doc 9995 aeroplanes or in EASA aeroplane EBT)
Helicopter generations have been defined for the purpose of EBT.

- with only crew training in mind
- For existing and future helicopters

| Generation 1a / 1b | Current single piston or turbine engine
| Generation 2 | Twin turbine, non-FADEC controlled, analogue instrument display, basic AFCS (up to 3 axis) |
| Generation 3a | Twin turbine, FADEC, digital instrument display, navigation display, full authority AFCS (4 axis), FMS |
| Generation 3b | All of Generation 3a characteristics, plus envelope protection |
| Generation 4 | Twin turbine, FADEC, digital cockpit display, FMS, full authority AFCS, envelope protection, fly-by-wire |
RMT0599 Evidence-based and competency-based training

- ToR 0599 (Jan 2016) +
  - Consulted in Dec 2015
- Concept paper (Jan 2016) +
- Group composition (Jan 2016)
  - 32 people: Europe + USA + Middle east.
  - Authority + Airlines + ATO + Pilots + EASA.
  - Aeroplane groups and a Helicopter group
Transition to EBT. Doc 9995 ICAO.

- Progressive implementation - Enhanced EBT
- Baseline EBT
- Mixed implementation
- Training & assessment according to EBT principles
What next?

- Baseline EBT
- Mixed implementation
- Progressive implementation - Enhanced EBT
- Initial EBT Type rating
- New types into EBT
- OCC & initial type rating
- Recurrent training and checking
- Example: Helicopters.
- RMT 0696
Blended learning solutions

» Concept paper 1st draft available
» Presentation Workshop 01.02.2017
» Final concept paper NPA RMT0599 -1Q2018

» Regulatory road map:
  » Based on the blended learning principle
  » 1st Category C Aerodrome recency AMC ORO.FC.105 paragraph (c)
  » 2nd Partner selected – Norway NAA + SAS
  » 3rd 360 - Virtual reality video recorder in SAS facility 01.12.2017
  » 4th Study will be made by NLR until 2Q2018
  » 5th Results and possible amendment of AMC ORO.FC.105 (c) late 2018-2019
Quick project overview - **NPA**

**EBT:** OPC/LPC + SPA

- Helicopters EBT: Concept paper DATA report
- Workshop
- Blended learning solutions: Concept Paper

**NCC:** AMC/GM ORO.FC Sec 1

**Aeroplanes:** other implementation issues

**Helicopters:** other implementation issues

**PHASE 1** - 2018

**PHASE 2** - Mid 2020

- EBT: OCC+ Initial type rating
- Helicopters EBT: Data report for EBT (Helicopters)
- Blended learning solutions: NPA

**PHASE 3** - 2022

- EBT: new types into EBT (Helicopters + Business jets)
- Helicopters EBT: Regulation
- Blended learning solutions: Regulation
When Regulations will be ready to use??

ToR

PHASE 1 - 2020

EBT: OPC/LPC + SPA
Helicopters EBT: Data report Concept paper
Alt training means & methods: Concept Paper

NCC: AMC/GM ORO.FC Sec 1

PHASE 2 – Mid 2022

EBT: OCC+ Initial type rating
Helicopters EBT: Data report for EBT helicopters
Alt training means & methods: NPA

PHASE 3 - 2023

EBT: new types into EBT (Helicopters + Business jets)
Helicopters EBT: Regulation
Alt training means & methods: Regulation

Aeroplanes: other implementation issues (see master task list)

Helicopters: other implementation issues (see master task list)
Your safety is our mission.
• EBT baseline implementation: First draft Sept 2016 – NPA planned 1Q2017.
• Concept paper on “Alternative training means” – 1Q 2017.
• EBT Mixed implementation. Checklist for operators & authority – 1Q2017.
• Workshop EBT & RMT0599 – February 2017.
• AMC/GM to ORO.FC section 1 NCC operators – 1Q2017.
• Helicopters – Data report for EBT helicopters – 1Q2017.
• Helicopters – Improvement of the regulation – 1Q2017.
Why we are discussing Alternative training means

- AMC1 ORO.FC.230 (a)(4)(i)(A) [training in FSTD all major failures of aircraft systems].
- New technologies available in the industry
- New training methodologies available
- Provide guidance below the ICAO doc 9625
Alternative training means

- Concept paper 1\textsuperscript{st} draft available
- Presentation on the 19.10.2016
- Workshop 20.10.2016 and 01.02.2017

Regulatory road map:
- Based on the blended learning principle
- 1\textsuperscript{st} Define the characteristics of each alternative training means
- 2\textsuperscript{nd} Extract all the training requirements in the regulation
- 3\textsuperscript{rd} Define for each training requirements which characteristics are needed
- 4\textsuperscript{th} See which training requirements can be done in alternative training mean
Transition to EBT. Doc 9995 ICAO.

- Mixed implementation
- Baseline EBT
- Progressive implementation - Enhanced EBT
- Training & assessment according to EBT principles
Background: mixed implementation

- RMT0696 Implementation of evidence-based training (EBT) within the European regulatory framework.
  - Task force created in July 2015
  - ToR published in Sept 2015
  - Focus consultation in Sept 2015
    - Competency – Knowledge can be found in the explanatory note

- Mixed EBT implementation
1- Explanatory note to ED Decision 2015/027/R (Dec 2016)
2- ICAO Doc 9995
3- IATA EBT implementation guide
4- Transition to EBT EASA checklist (To be published in 3Q2016) currently under consultation in Standardisation network.
1 year

- ToR: Sept 2015
- ED decision: Dec 2015
- Supporting material
  - Explanatory note to the ED decision
What next?

- Baseline EBT
- Mixed implementation
- Progressive implementation - Enhanced EBT
RMT 0599: Review of ORO.FC

- RMT0696
Complex task: full review of ORO.FC
   The review will include direct and indirect impact

ToR 0599 (Jan 2016) +
   Consulted in Dec 2015

Concept paper (Jan 2016) +

Group composition (Jan 2016)
   32 people: Europe + USA + Middle east.
   Authority + Airlines + ATO + Pilots + EASA.
What next?

- Baseline EBT
- Mixed implementation
- Progressive implementation - Enhanced EBT
- Initial EBT Type rating
- Methodology to add new types into EBT

- Recurrent training and checking
- OCC & initial type rating
- Example: Helicopters.

-- Methodology to add new types into EBT

--- Example: Helicopters.

--- Recurrent training and checking

--- OCC & initial type rating

--- Initial EBT Type rating

--- Progressive implementation - Enhanced EBT

--- Baseline EBT

--- Mixed implementation
Operator centric: Review of ORO.FC

- Add new types to EBT
- Type rating
- TRI courses
- Interface RMT0596
- Review of subpart J&K

- OCC
- Operator Recurrent training
- SPA
- LVO
- Interface RMT0196 CS-FSTD
- Interface RMT0379 AWO
Who is affected??

ADIC

ORGANISATIONS

ATO

AUTHORITY

08/12/2017
Quick project overview - NPA -

**ToR**

**PHASE 1 - 2018**

**EBT:** OPC/LPC + SPA

**EBT:** instructor training

**Concept paper CB Training**

**NCC:** AMC & GM

**ORO.FC section 1**

**PHASE 2 - 2020**

**EBT:** OCC+ Initial type rating

**EBT TRI/TRE qualification**

**Concept paper CB Training**

**PHASE 3 - 2022**

**EBT:** Methodology to add new types into EBT (Helicopters + Business jets)

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**Interoperability**

**Aeroplanes:** implementation issues (see master task list)

**Helicopters:** implementation issues (see master task list)

**Helicopters:** EBT
The RMG.0599 is composed of:

As described in the ToR, RMG is composed of 3 groups:

1. a main subgroup:
   - addressing issues described in this ToR, not related to EBT or helicopters;
   - Un bias EBT subgroup related material;

2. a EBT subgroup: EBT-related issues; and

3. a Helicopter subgroup: helicopter training-related issues, including EBT and extension of ATQP to helicopters.
EBT regulatory draft overview

- Annex I definitions
  - Both IR and GM to definitions
- ORO.FC.A.2XX Leading statement plus list of alleviations from other provisions (SPA.LVO.120 + ORO.FC.230 ...etc)
  - ORO.FC.2XX Competencies, Grading system
  - ORO.FC.2XX Baseline program
  - ORO.FC.2XX Equivalence of malfunctions and approach types
  - AMC ORO.FC.145? Instructor training
- FCL.740.A Revalidation of type rating
- AMC SPA.LVO.120 (approach clustering AWO-LVO)
Your safety is our mission.