



**EASA**  
European Aviation Safety Agency

# RMT 0599 Competency and evidence based training

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# Who is affected??



**AUTHORITY**





# EBT is not mandatory

- The prescriptive training and checking requirements will remain for those who can't to 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...



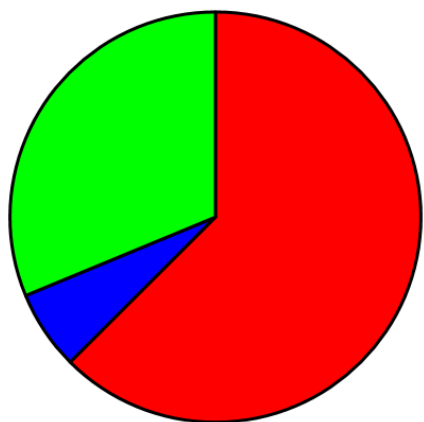
# Summary of EBT (yesterday's EBT presentation)

- 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 1<sup>st</sup> day - Scenario Based training on the 2<sup>nd</sup> day
- Instructors: training – concordance – standardisation

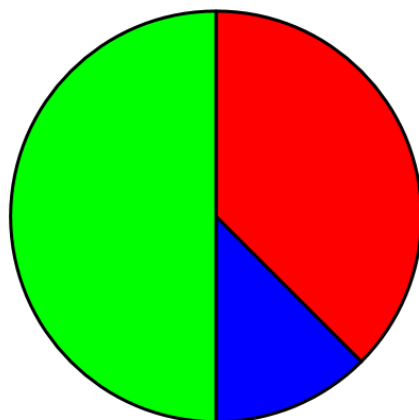


# Evidence based training.

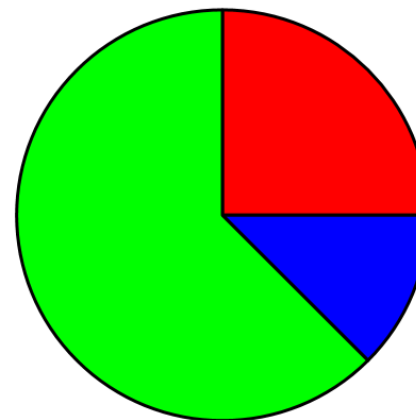
Legacy  
Pre-2008



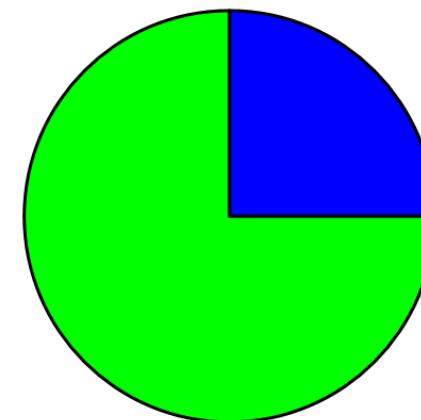
•ATQP  
2008



•Mixed  
2017



•EBT  
2019



•Tests

•Sim hours per pilot per year

• LOFT/LOE/Eval

•Training



# EBT : A global approach to pilot training





# 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)



# EBT helicopter generations list

➤ 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 <b>Analog / digital</b>
<b>Generation 2</b>	Twin turbine, non-FADEC controlled, analogue instrument display, basic AFCS (up to 3 axis)
<b>Generation 3a</b>	Twin turbine, FADEC, digital instrument display, navigation display, <b>full authority AFCS (4 axis)</b> , FMS
<b>Generation 3b</b>	All of Generation 3a characteristics, plus <b>envelope protection</b>

<b>Generation 4</b>	Twin turbine, FADEC, digital cockpit display, FMS, full authority AFCS, envelope protection, <b>fly-by-wire</b>
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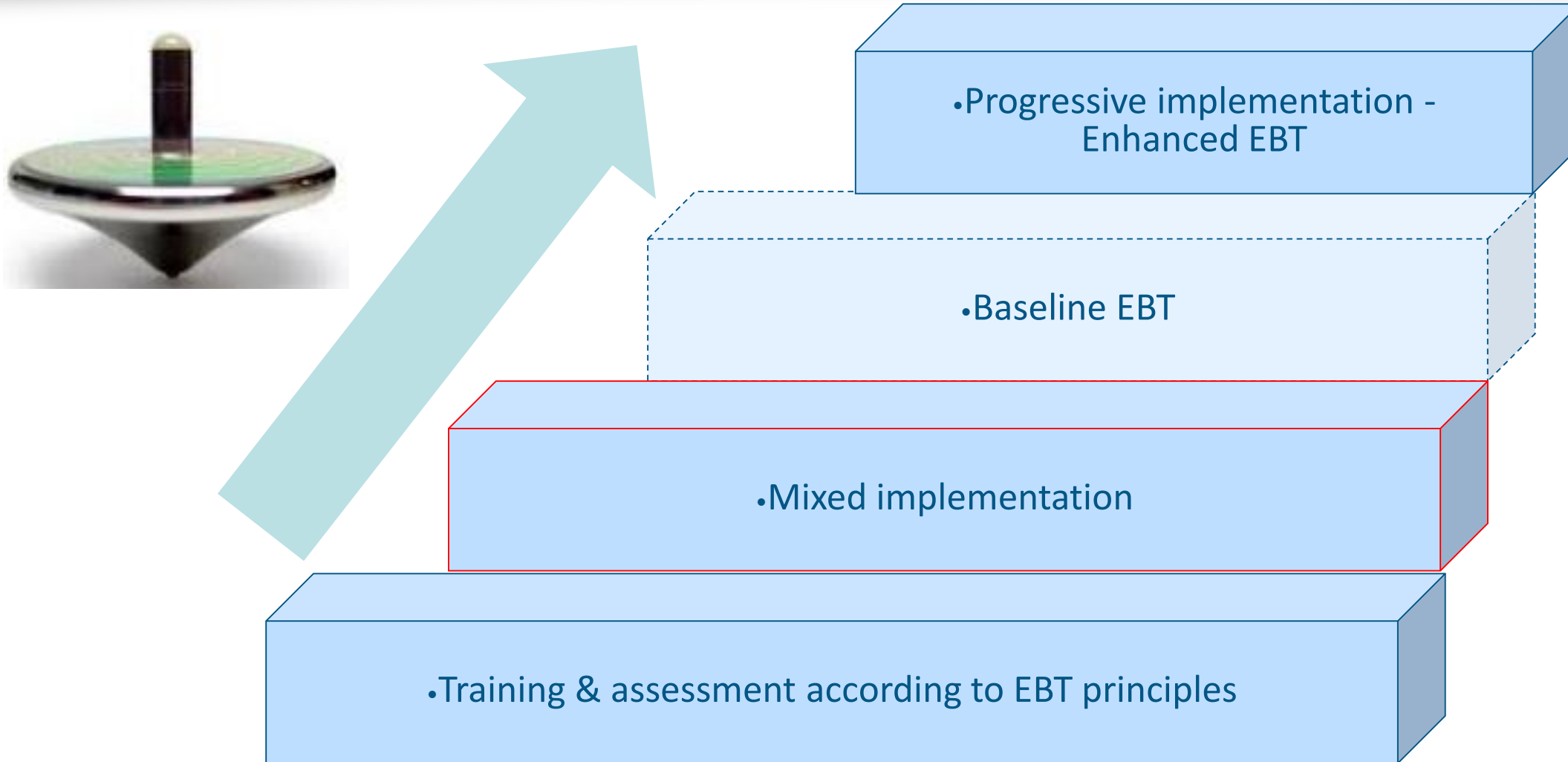


- ToR 0599 (Jan 2016) +
  - Consulted in Dec 2015
- Concept paper (Jan 2016) +
- Group composition (Jan 2016)
  - 32 people: Europe + USA + Middle east.
  - Authority + Airlines + ATO + Pilots + EASA.
  - Aeorplane groups and a Helicopter group



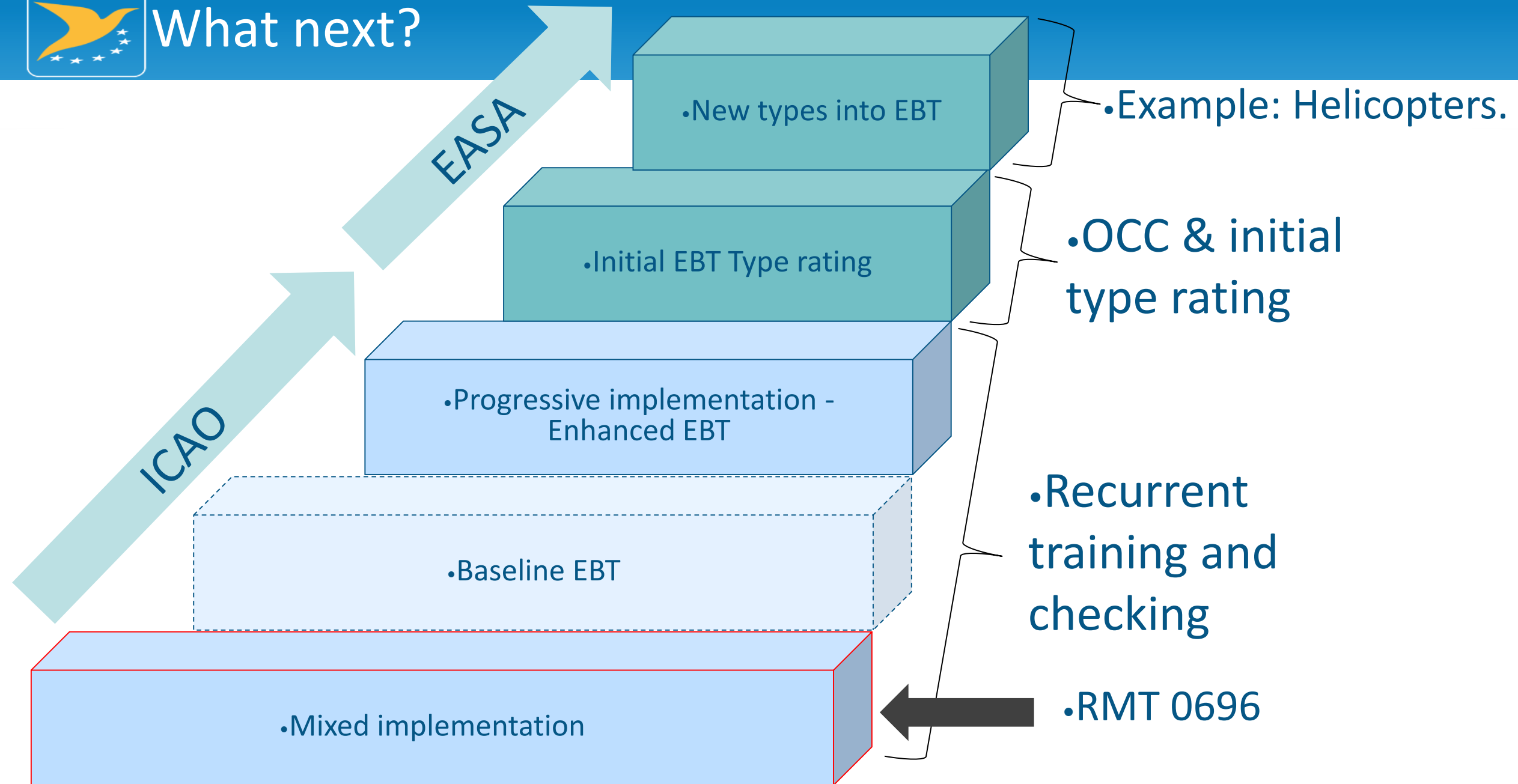


# Transition to EBT. Doc 9995 ICAO.





# What next?





# Blended learning solutions

- Concept paper 1<sup>st</sup> draft available
- Presentation Workshop 01.02.2017
- Final concept paper NPA RMT0599 -1Q2018
- Regulatory road map:
  - Based on the blended learning principle
  - 1<sup>st</sup> Category C Aerodrome recency AMC ORO.FC.105 paragraph (c)
  - 2<sup>nd</sup> Partner selected – Norway NAA + SAS
  - 3<sup>rd</sup> 360 - Virtual reality video recorder in SAS facility 01.12.2017
  - 4<sup>th</sup> Study will be made by NLR until 2Q2018
  - 5<sup>th</sup> Results and possible amendment of AMC ORO.FC.105 (c) late 2018-2019





# Quick project overview - NPA

ToR

PHASE 1 - 2018

PHASE 2 – Mid 2020

PHASE 3 - 2022



EBT: OPC/LPC + SPA

Helicopters EBT:

Concept paper DATA report

Blended learning  
solutions: Concept Paper

NCC:AMC/GM ORO.FC Sec 1

•workshop

EBT: OCC+ Initial type rating

Helicopters EBT:

Data report for EBT (Helicopters)

Blended learning solutions:  
NPA

EBT: new types into EBT  
(Helicopters + Business jets)

Helicopters EBT:

Regulation

Blended learning  
solutions: Regulation

Aeroplanes: other implementation issues

Helicopters: other implementation issues



# When Regulations will be ready to use??

ToR

PHASE 1 - 2020

PHASE 2 – Mid 2022

PHASE 3 - 2023



EBT: OPC/LPC + SPA

Helicopters EBT:

Data report Concept paper

Alt training means &  
methods: Concept Paper

NCC:AMC/GM ORO.FC Sec 1

EBT: OCC+ Initial type rating

Helicopters EBT:

Data report for EBT helicopters

Alt training means &  
methods: NPA

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)



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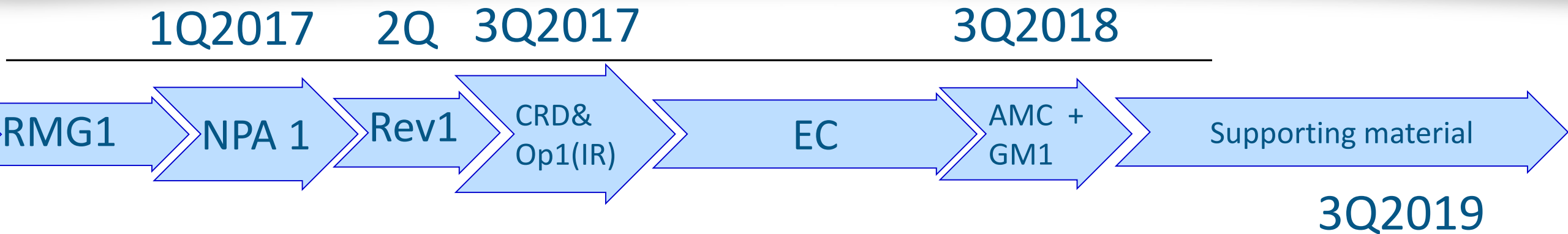


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# RMT0599 Project overview – (Deliverables)



- 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



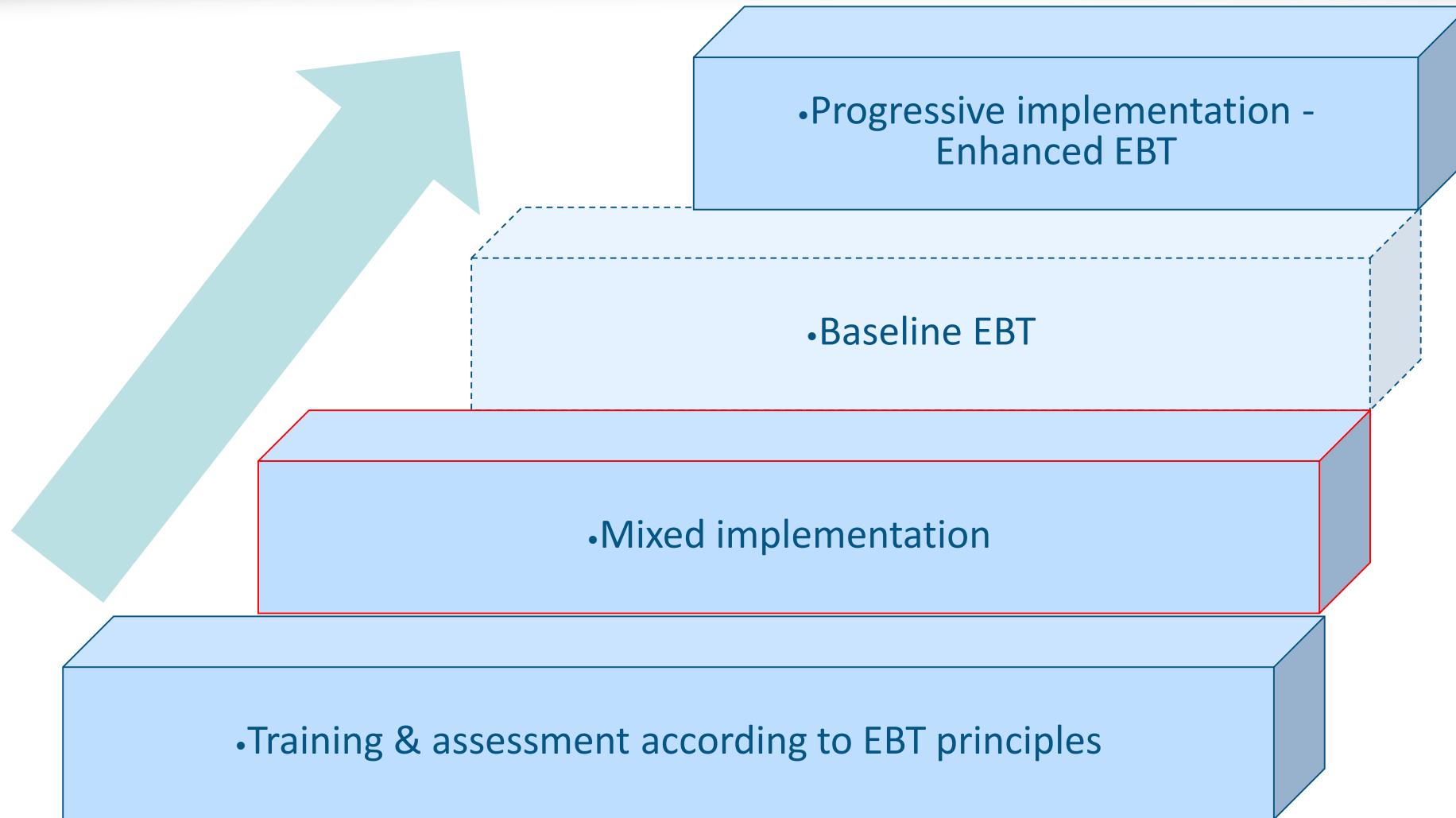
# Alternative training means

- Concept paper 1<sup>st</sup> 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<sup>st</sup> Define the characteristics of each alternative training means
  - 2<sup>nd</sup> Extract all the training requirements in the regulation
  - 3<sup>rd</sup> Define for each training requirements which characteristics are needed
  - 4<sup>th</sup> See which training requirements can be done in alternative training mean





# Transition to EBT. Doc 9995 ICAO.





# Background: mixed implementation

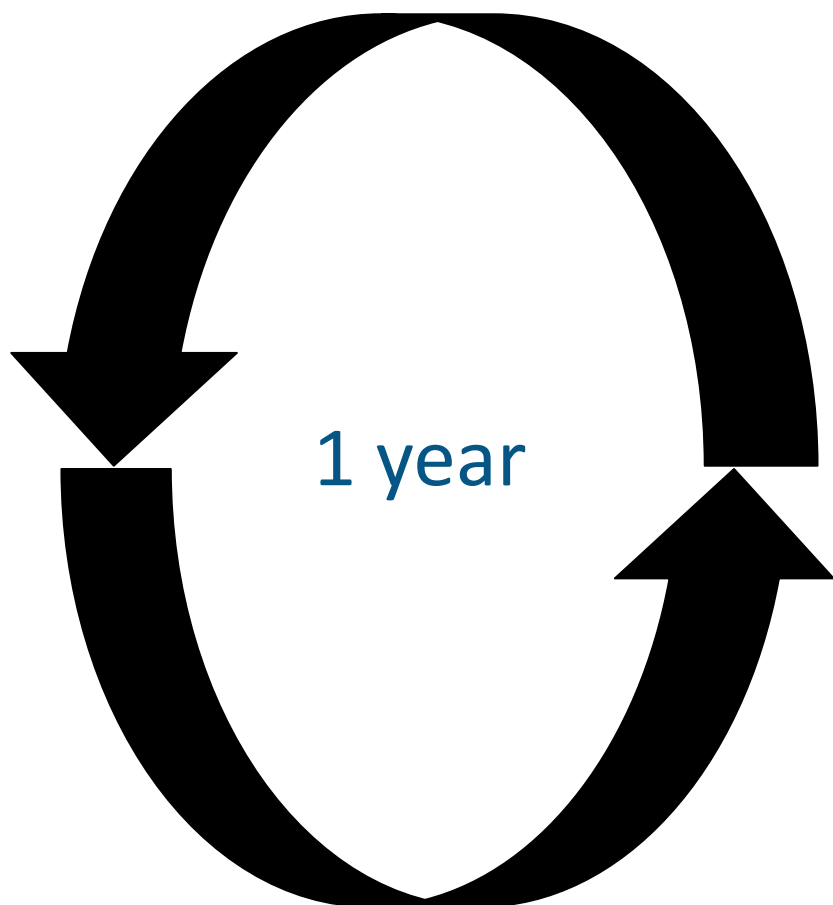
- RMT0696 Implementation of evidence-based training (EBT) within the European regulatory framework.
  - Task force created in July 2015
  - ToR published in Sept 2015
  - Focus consultation in Sept 2015
  - Decision 2015/027/R published in Dec 2015.
    - Competency – Knowledge can be found in the explanatory note
  
- Mixed EBT implementation



# Supporting material to RMT0696

- 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.

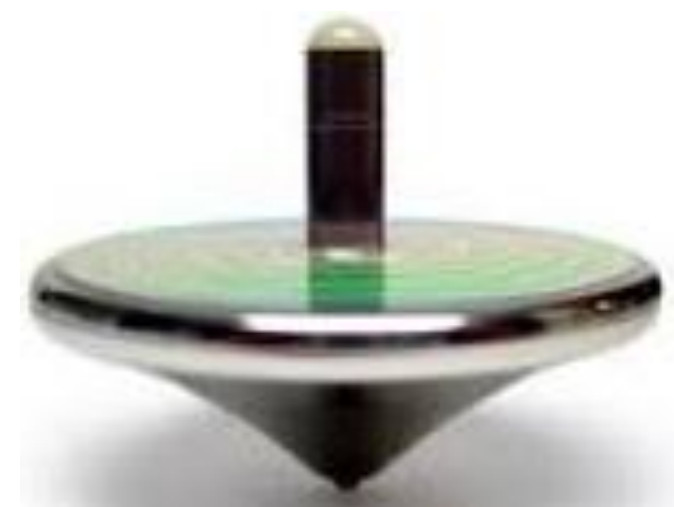
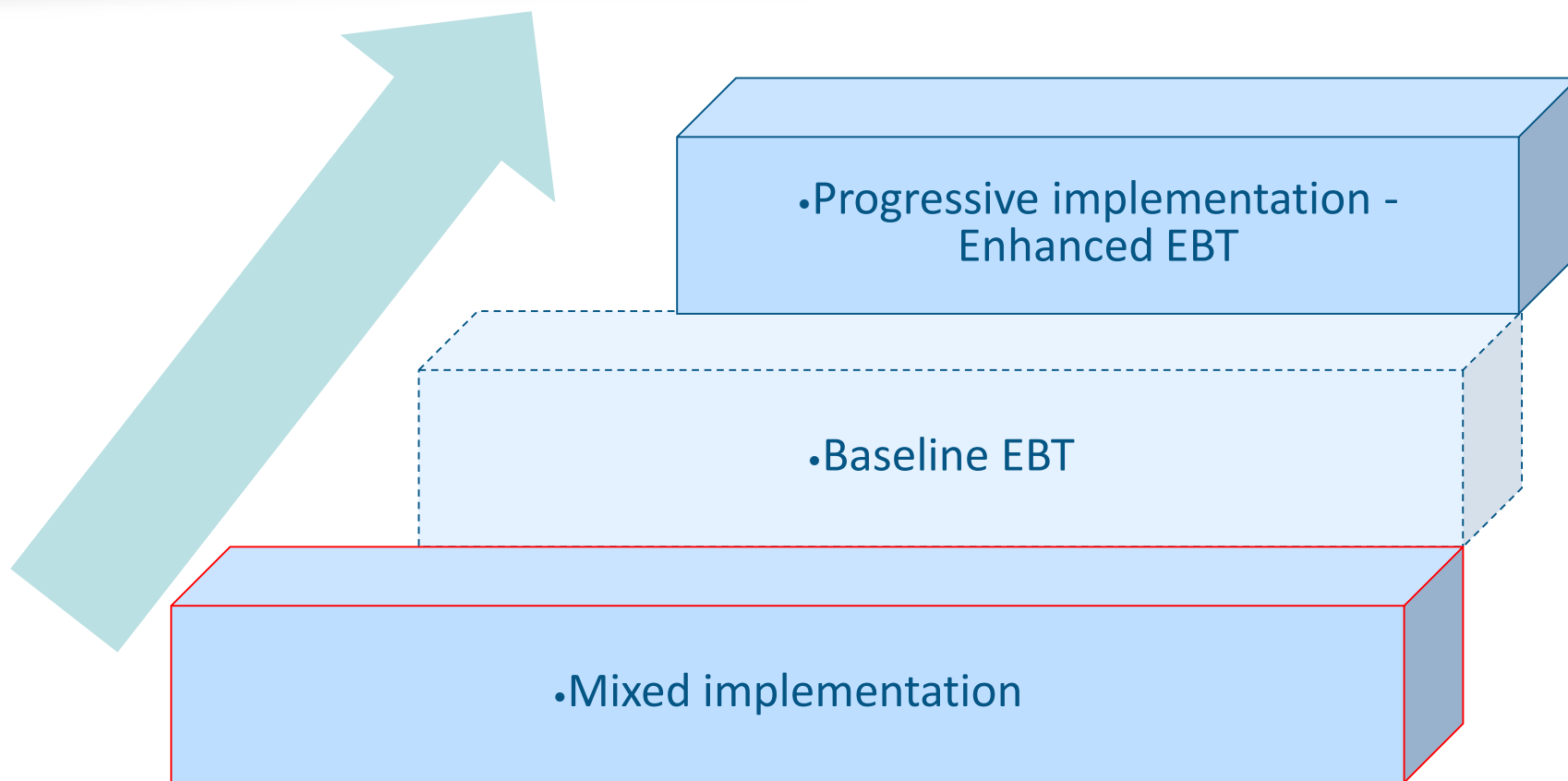




- ToR : Sept 2015
- ED decision : Dec 2015
- Supporting material
  - Explanatory note to the ED decision
  - EBT Checklist: Sept 2016.

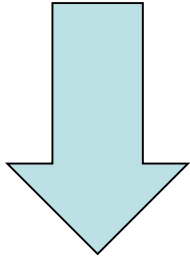


# What next?

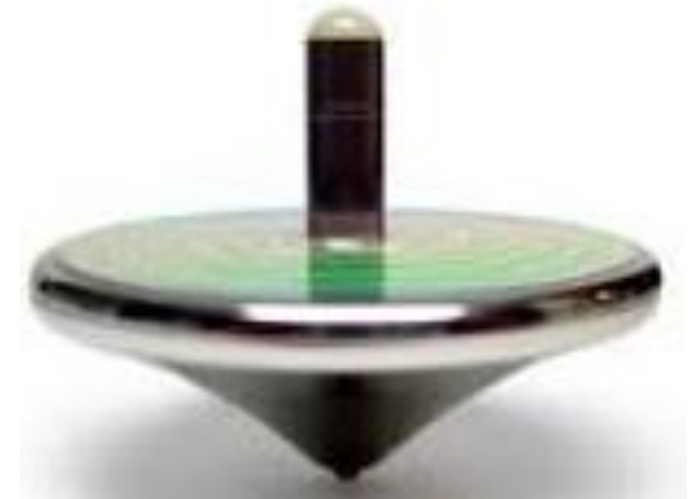




## RMT 0599: Review of ORO.FC



•RMT0696



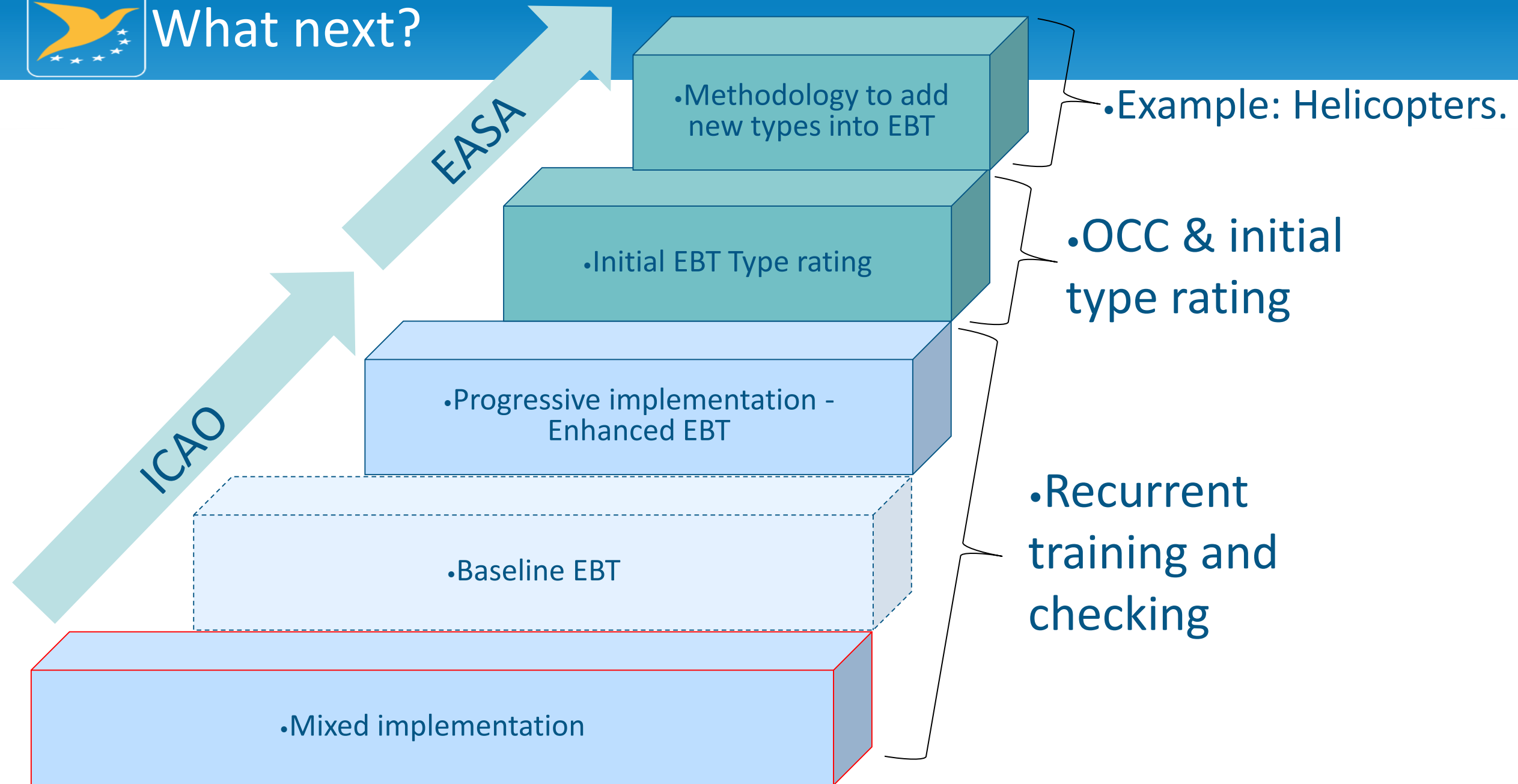


- Complex task: full review of ORO.FC
  - The review will include direct and indirect impact
- ToR 0599 (Jan 2016) +
  - Consulted in Dec 2015
- Concept paper (Jan 2016) +
- Group composition (Jan 2016)
  - 32 people: Europe + USA + Middle east.
  - Authority + Airlines + ATO + Pilots + EASA.



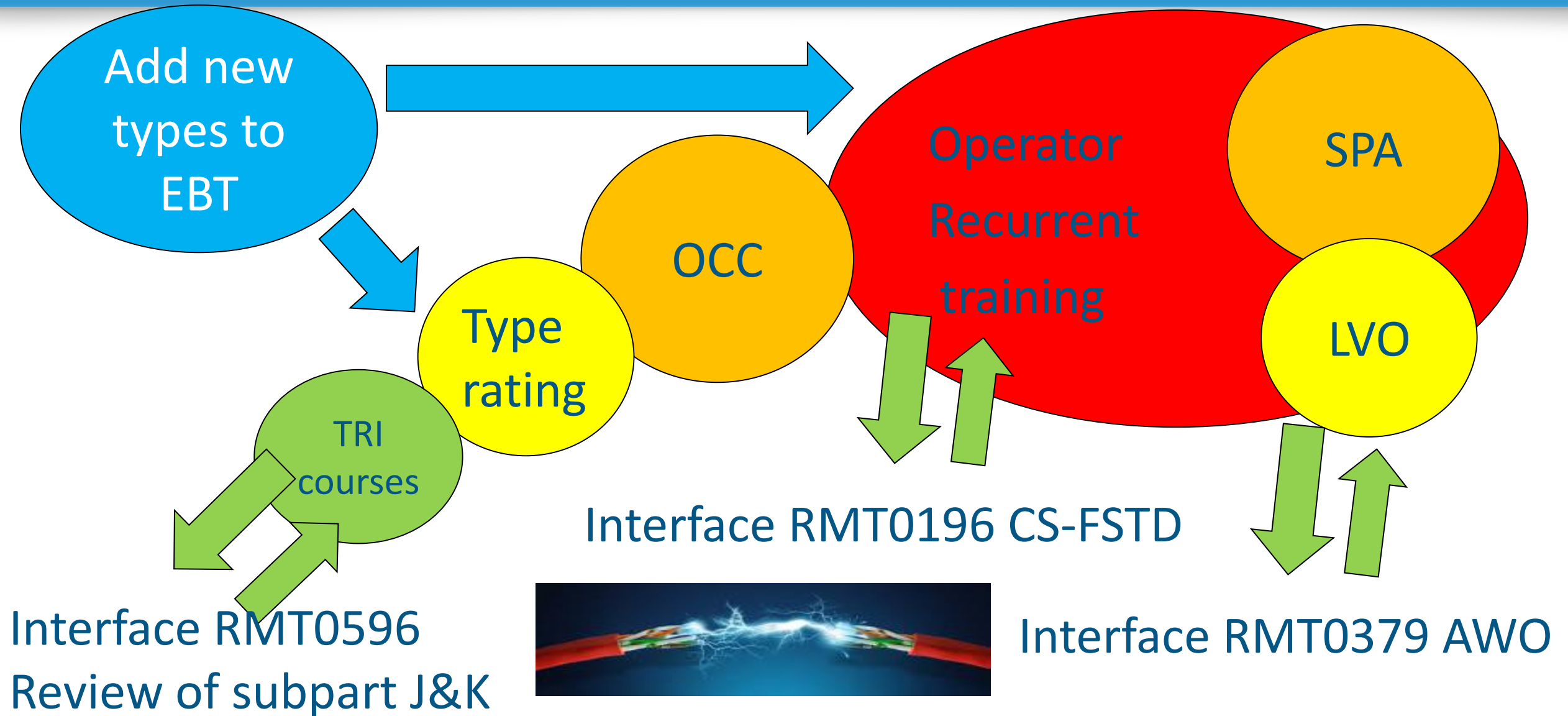


# What next?





# Operator centric: Review of ORO.FC





# Who is affected??



AOC

ORGANISATIONS

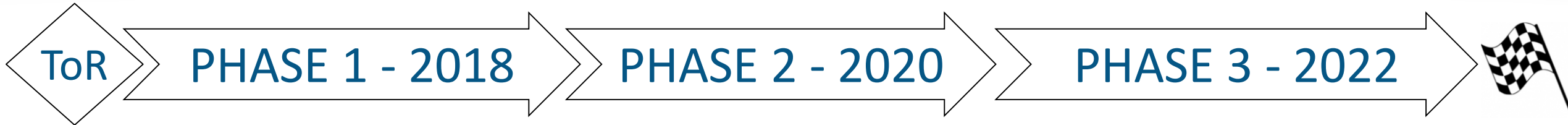
ATO



**AUTHORITY**



# Quick project overview - NPA -



EBT: OPC/LPC + SPA

EBT: instructor training

Concept paper CB Training

NCC: AMC & GM

ORO.FC section 1

EBT: OCC+ Initial type rating

EBT TRI/TRE qualification

Concept paper CB Training

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

## 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:

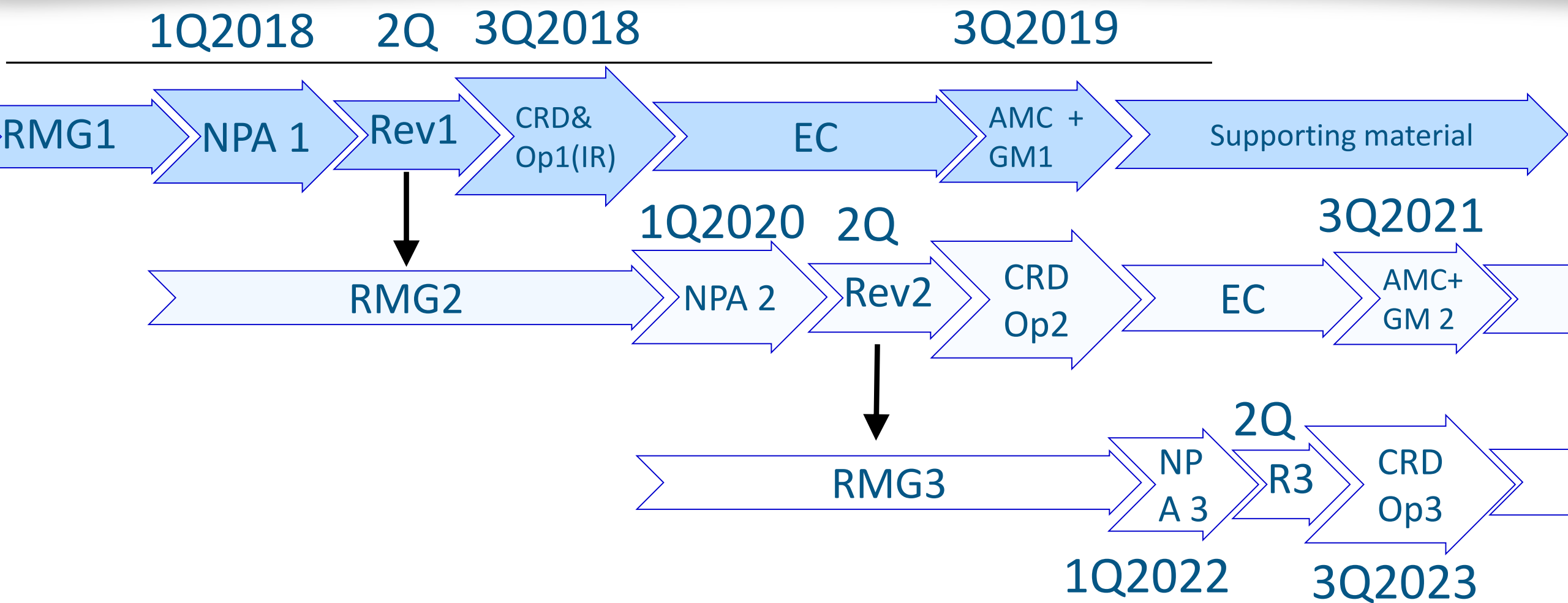
- addressing issues described in this ToR, not related to EBT or helicopters;
- Un bias EBT subgroup related material;

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

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



# RMT0599 Project overview





# 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)



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**END**



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