



EASA
European Aviation Safety Agency

RMT.0599 Review of ORO.FC Evidence-Based Training

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2020

Your safety is our mission.

An agency of the European Union 



Do this aircraft look the same?...

Lockheed C-121C Super Constellation





Do this aircraft look the same?...

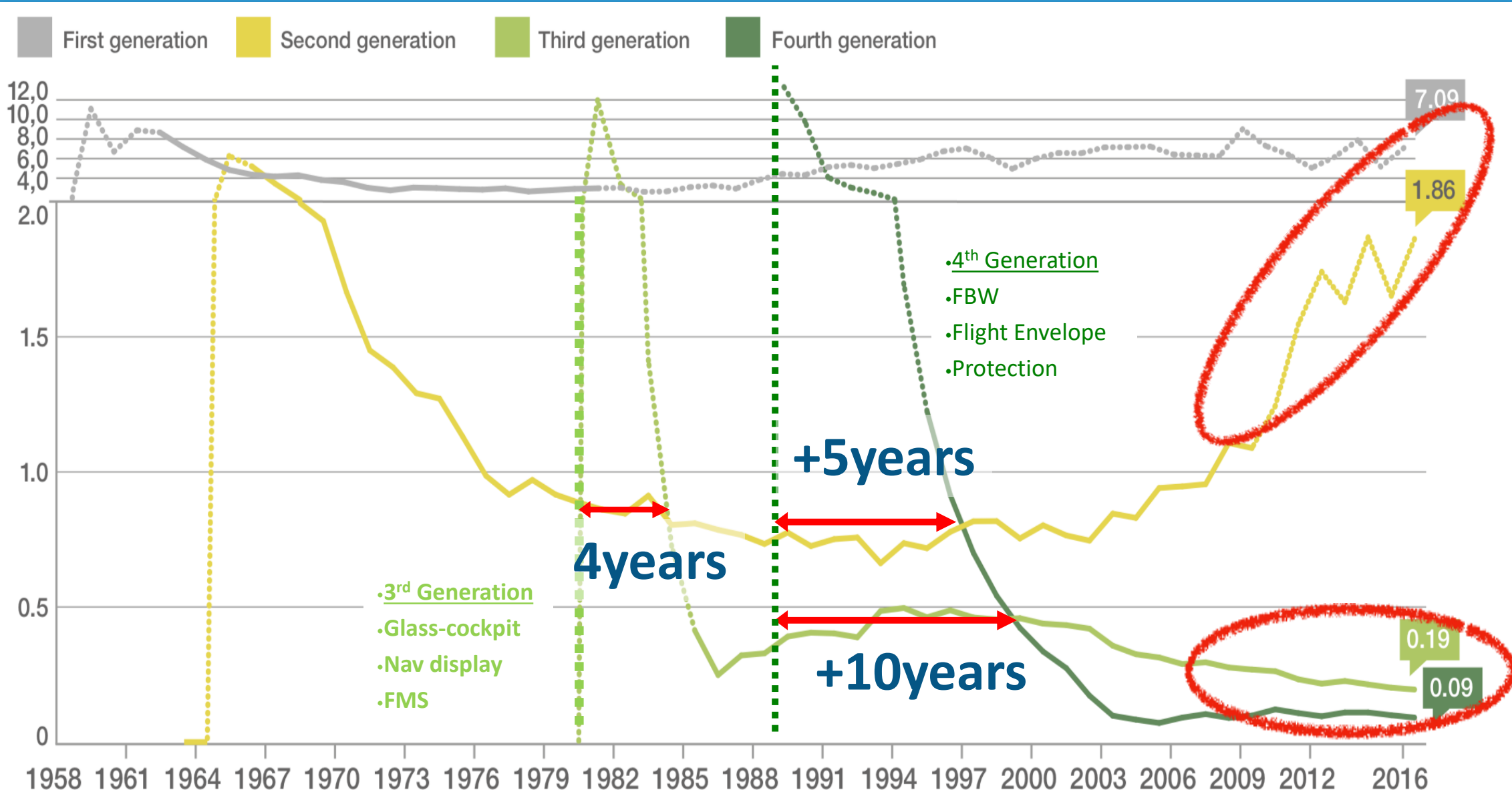


Airbus 350 XWB

So..., why do we train and check our pilots in the same way?

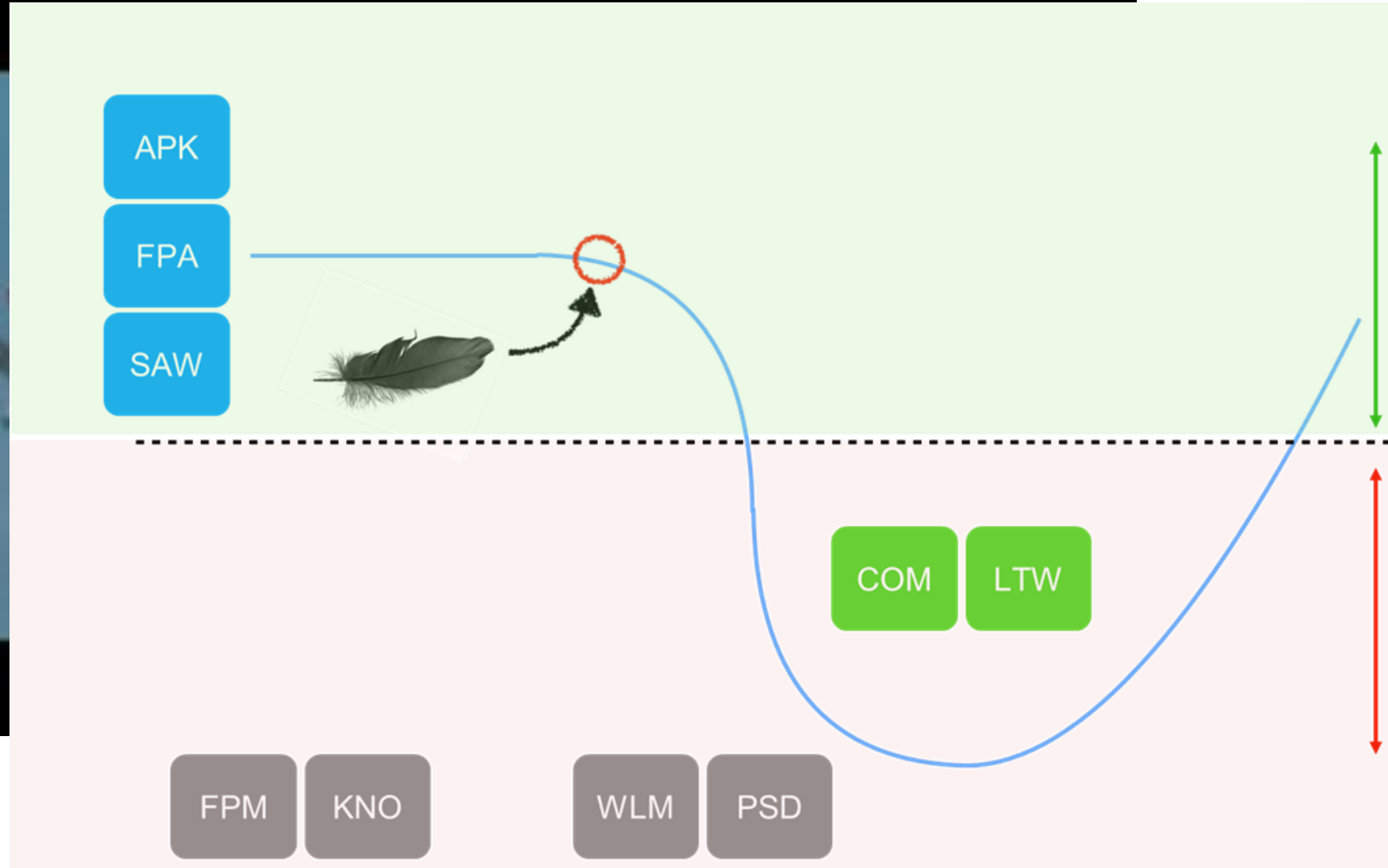


Evidence: Fatal accidents per million hours per generation





What is Resilience?.....





15 January, 2009. Airbus-320-214 DUAL ENG FAILURE

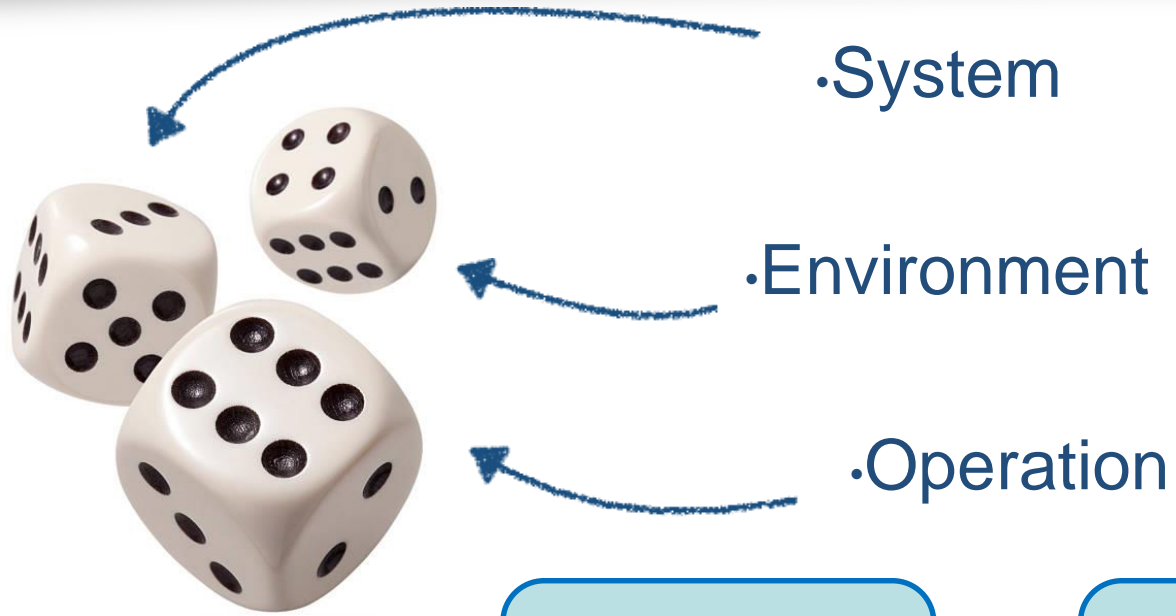


- Experience crew
- 4th day together
- 3rd flight of the day
- Afternoon (day light)
- Good weather conditions
- Domestic flight





In the good old times..... GENERATION 1 & 2



.Repetitive & foreseeable

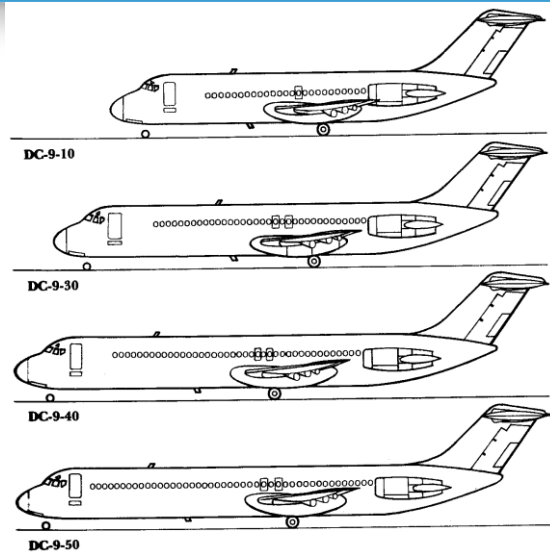
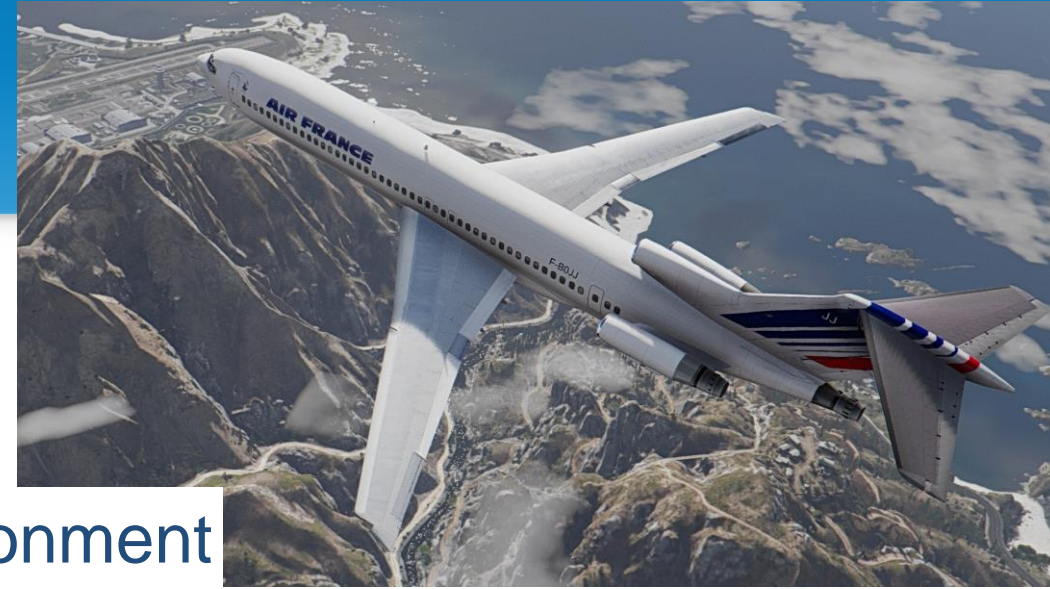
.Evidence

.What we know





GENERATION 2 & 3



.System

.Environment

.Operation

.Repetitive &
foreseeable

.Evidence

.What we know





Regulator Paradox



•System

•Environment

•Operation



•Unique &
unforeseeable



•No Evidence

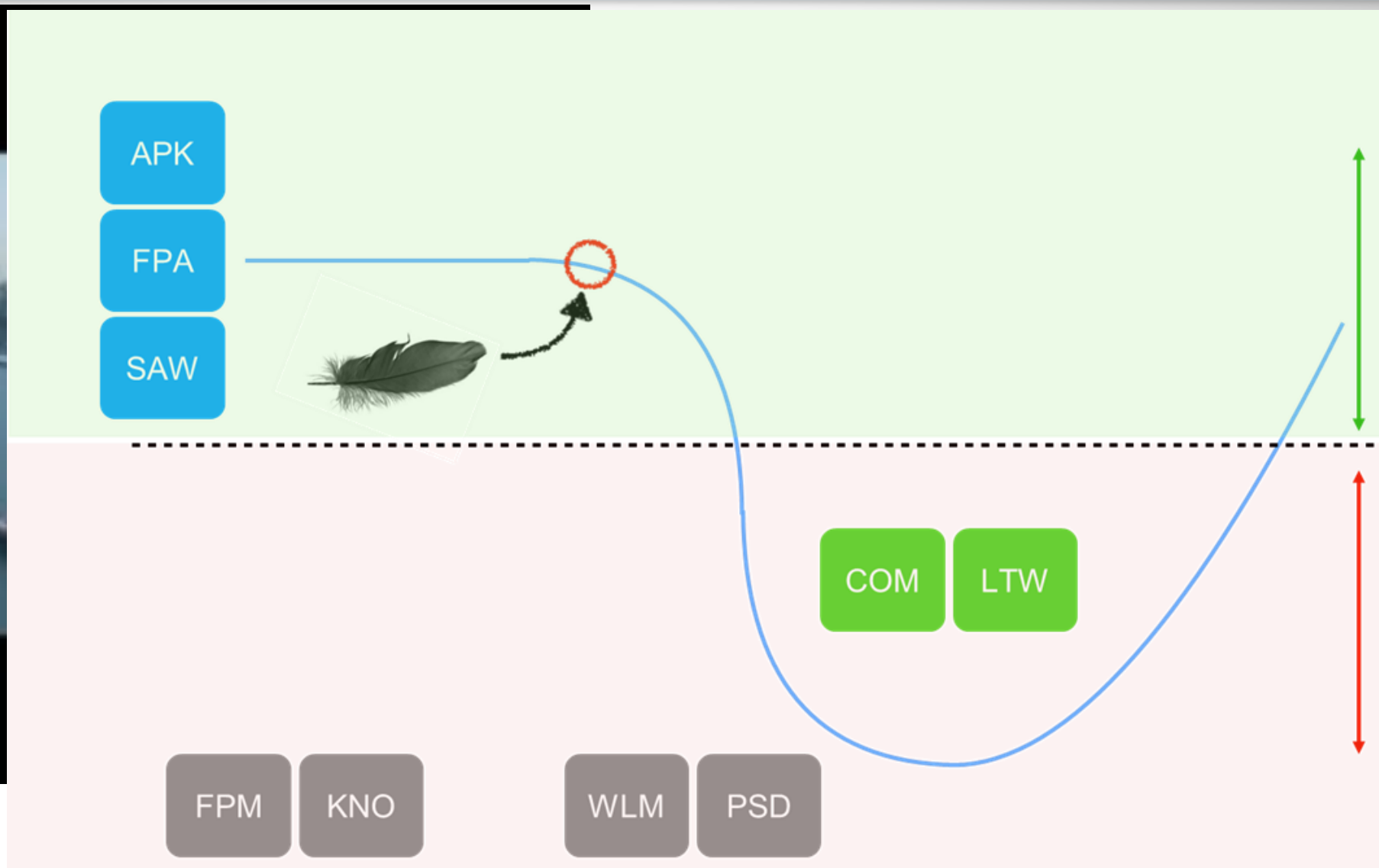


•We don't know





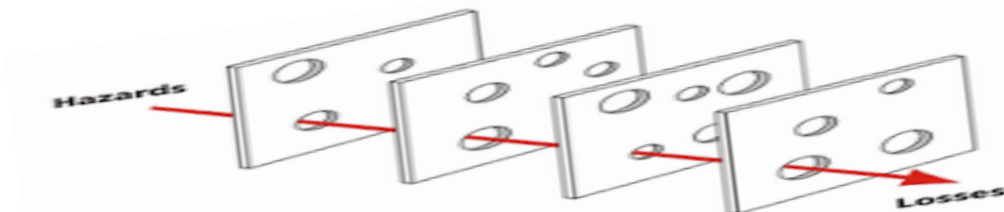
Dual engine failure followed by ditching





Why EASA introduced EBT for Recurrent training?

- Accidents/incidents investigations show that pilots had a valid LPC at the time of the accident.
 - We need to improve – Reduce the wholes
 - One of the contributing factors in most of the accidents nowadays is deficiencies in NON-TECH competencies
 - More than 50 % of fatal aircraft accidents worldwide accidents have a causal factor action of the flight crew
 - flight crew handling skills were a factor in 14 %
 - non-technical skills were a factor in more than twice (32 %)
- Source: (UK, CAA)



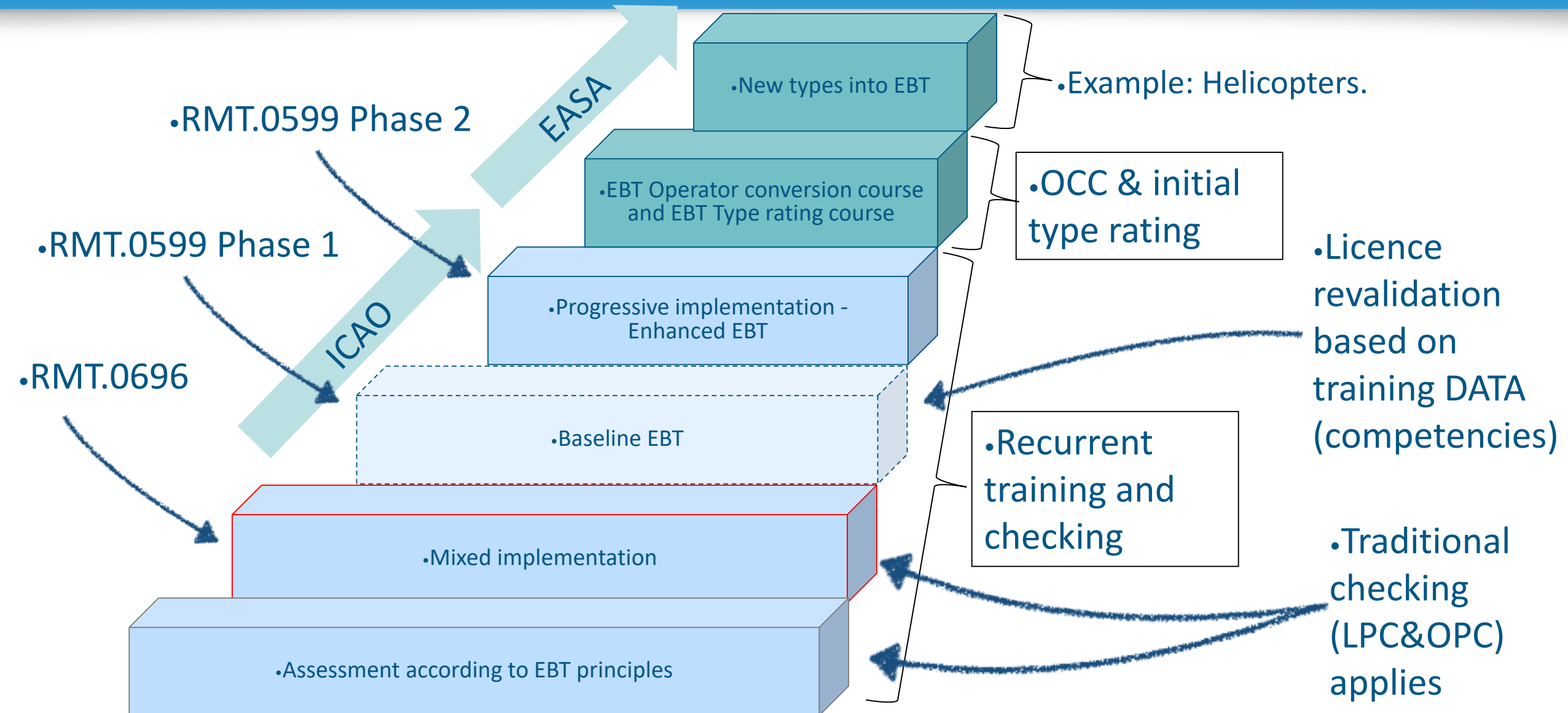


More details of the reasons to move to EBT

- Traditional recurrent training
 - has not kept up with development and new challenges
 - does not reflect the operational risks of today's technology and environment
- Improve efficiency and effectiveness.
- There is the need for a data driven training system
 - Meaningful data! – standardise training data collection.
 - Note: ensuring just culture and data protection.



EBT implementation. (Phases).



Draft Opinion XX/2019

Evidence-Based Training (EBT)

Questions

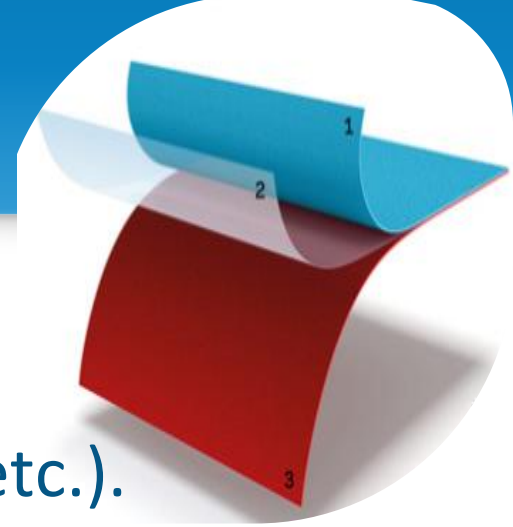
Daan DOUSI – Aircrew & Medical Standards & Implementation Section Manager

Francisco ARENAS ALVARIÑO – Senior Air Operations Expert

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EBT: 3 layers of DATA



1. Regulator: accidents, studies, surveys,...etc.
 - ❑ Data report for Evidence-based training (IATA/ICAO/EASA...etc.).
2. Operator: operators operational data + training data
 - ❑ Recurrent training and checking programme.
3. Instructor: assessment of crew competencies and behaviour indicators
 - ❑ Tailored training

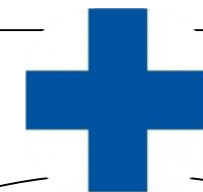




World wide
DATA report

Regulator

Generic program:
Training topics frequency
A,B,C (6months,1,3 years).



Operator's EBT
program
(airline specific)

Operator

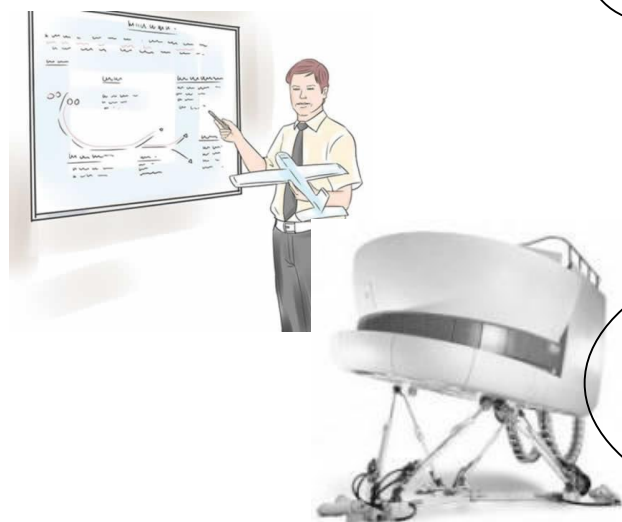
Operator's
data (training,
SMS etc)



Evaluation
FSTD session

instructor

Training
adapted to a
particular crew



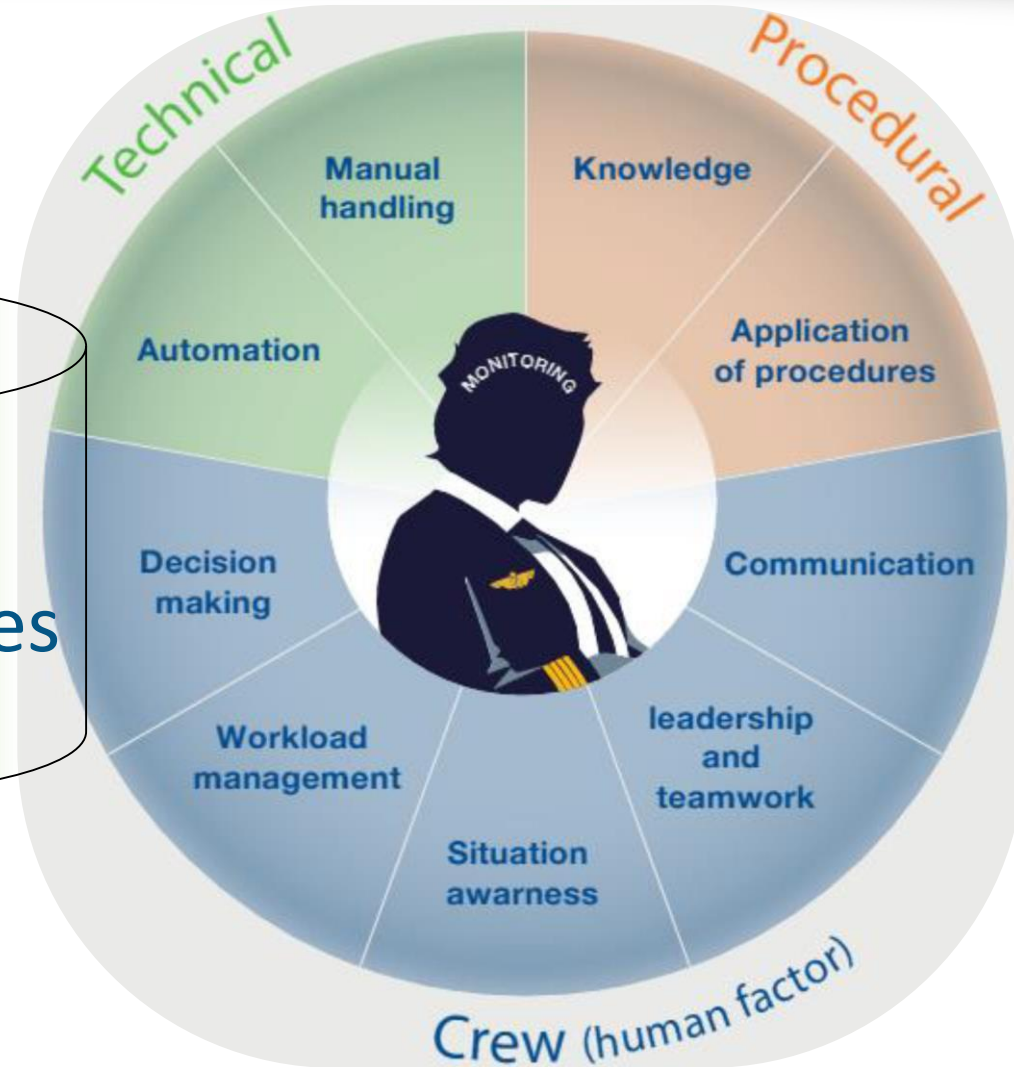


Building blocks. EBT components

EBT
programme

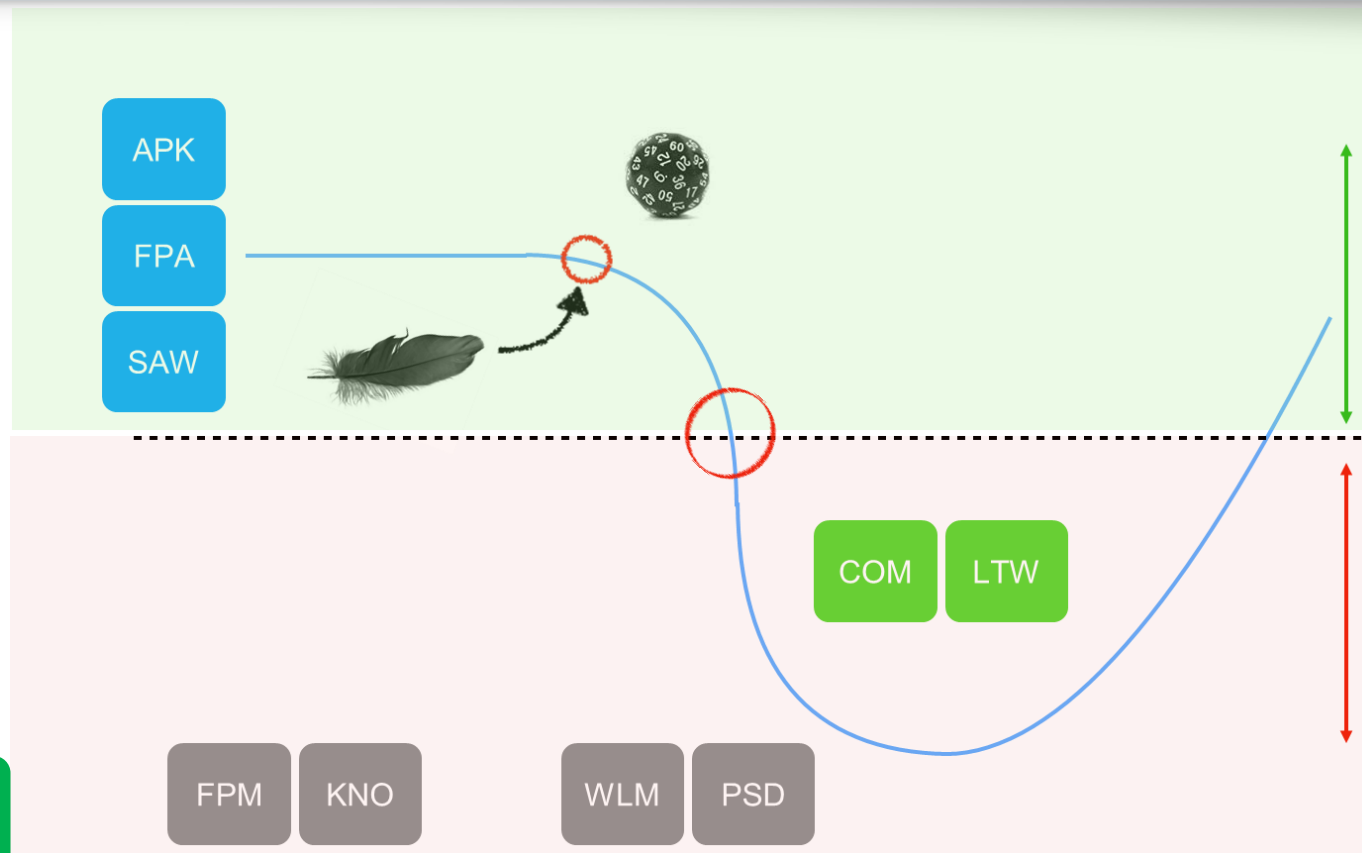


EBT
competencies



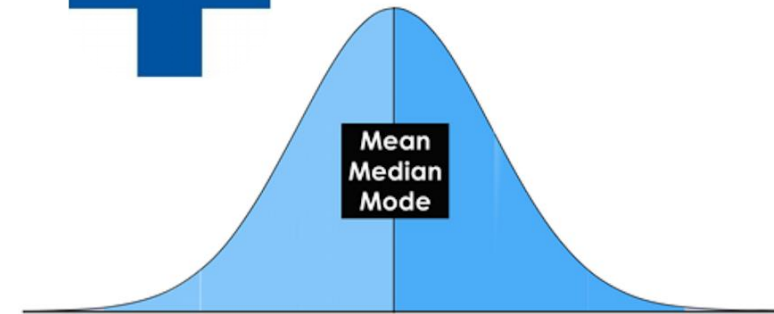
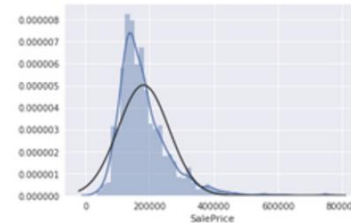
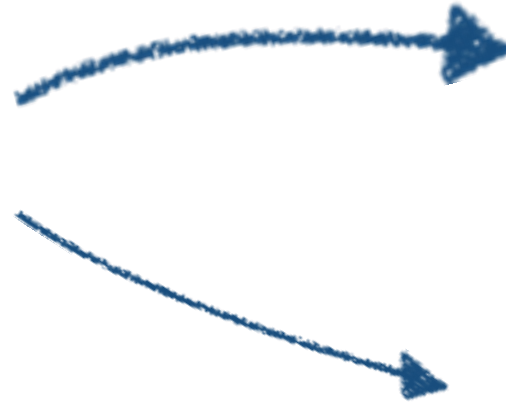
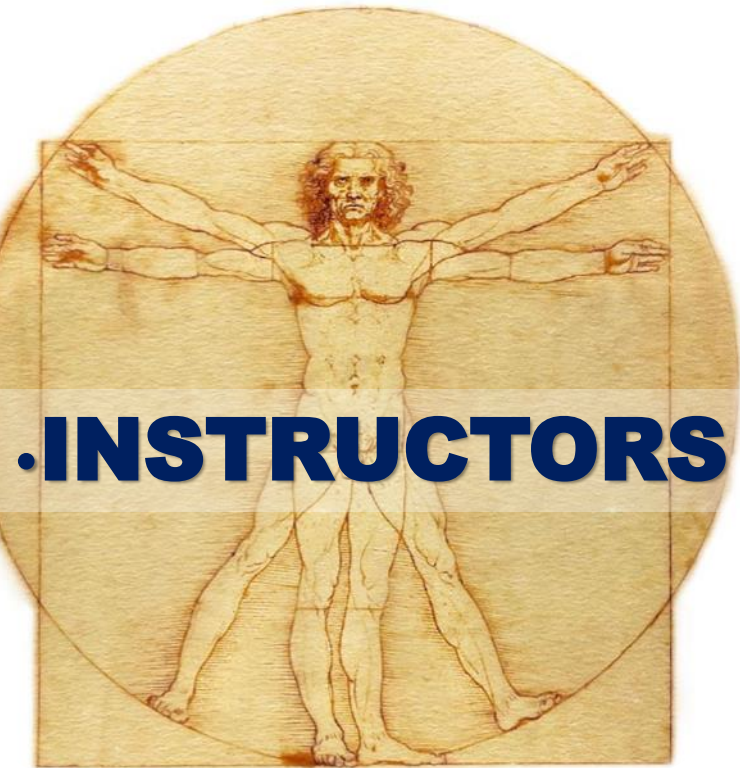


•Resilience Tool Kit





Instructors (ensure facilitation debriefings).



.CONCORDANCE



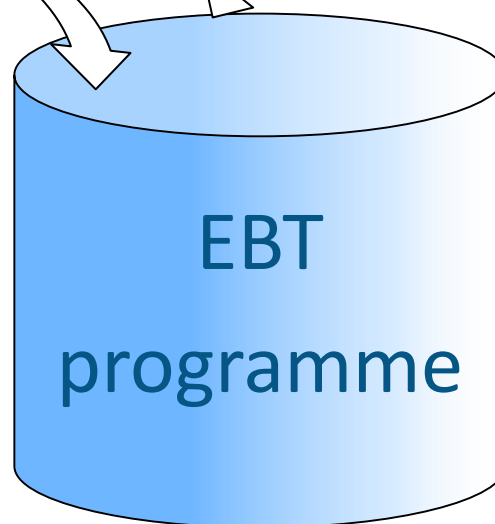
Operator's EBT programme

• Training data:

- 9 competencies
- Grading 1 to 5
- by standardised instructors (concordance)

• Operational data: to contextualised the example scenario elements:

- SMS
- FDM...etc.



• Generic program: Training topics. ICAO Appendix II Doc9995 or EASA Appendix II to Part-ORO





Advice to stakeholders

- Follow the official documentation of your regulator (Colombia CAA), ICAO, and EASA.
- If you use private consultants contact reliable organisations such IATA.
- EBT is a worldwide global initiative that was created and developed by many organisations. No single organisation or person can claim the original idea or ownership of EBT and its principles.
- EBT is long journey: 1-2 years of EBT principles and 2-3 of EBT mixed.
 - Instructor training (emphasis on facilitation).
 - Instructor concordance.
 - Feedback loop.



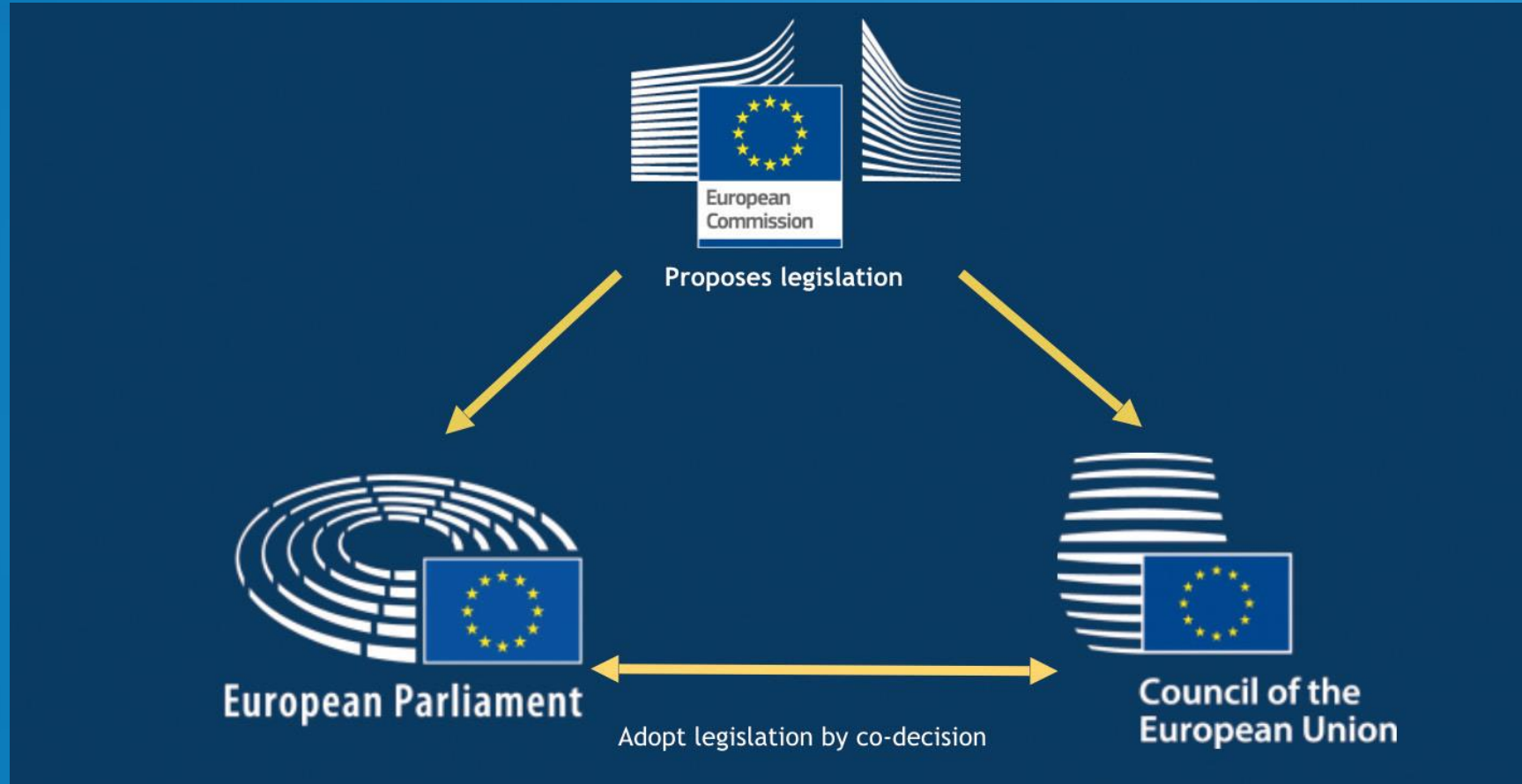
► Primary documentation

- EASA EBT checklist: <https://www.easa.europa.eu/sites/default/files/dfu/EBT%20Checklist%20V2.0.pdf>
 - ED Decision 2015/027/R Implementation of evidence-based training (EBT) within the European regulatory framework <https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2015027r>. It includes:
 - [EASA Notice of proposed of Amendment 2018-07\(B\)](https://www.easa.europa.eu/sites/default/files/dfu/NPA%202018-07%28B%29.pdf): <https://www.easa.europa.eu/sites/default/files/dfu/NPA%202018-07%28B%29.pdf>
 - EASA OPINION EBT (3 documents):
 - 1- [Annex to Opinion Reg. 965/2012 Air OPS](#)
 - 2- [Annex to Opinion Reg.1178/2011 Air CREW](#).
 - 3- [Appendix to Opinion](#) (Acceptable means of compliance, Guidance Material and Explanatory note).
 - ICAO Doc 9995 AN/497 Manual of Evidence-based Training First Edition – 2013.
- ## ► For info:
- ToR RMT.0696 Implementation of Evidence-Based Training within the European regulatory framework <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0696>.
 - ToR (+ Concept Paper) RMT.0599 Evidence-based and competency-based training <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-concept-paper-rmt0599>.
 - IATA Data Report for Evidence-Based Training August 2014 1st edition.
 - ICAO PANS Training DOC 9868.
 - IATA Evidence-Based Training Implementation Guide July 2013.



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End slide



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