



# *A Journey in EBT*



# The Key to Success



الهيئة العامة للطيران المدني  
Emirates  
GENERAL CIVIL AVIATION AUTHORITY



# The Timeline

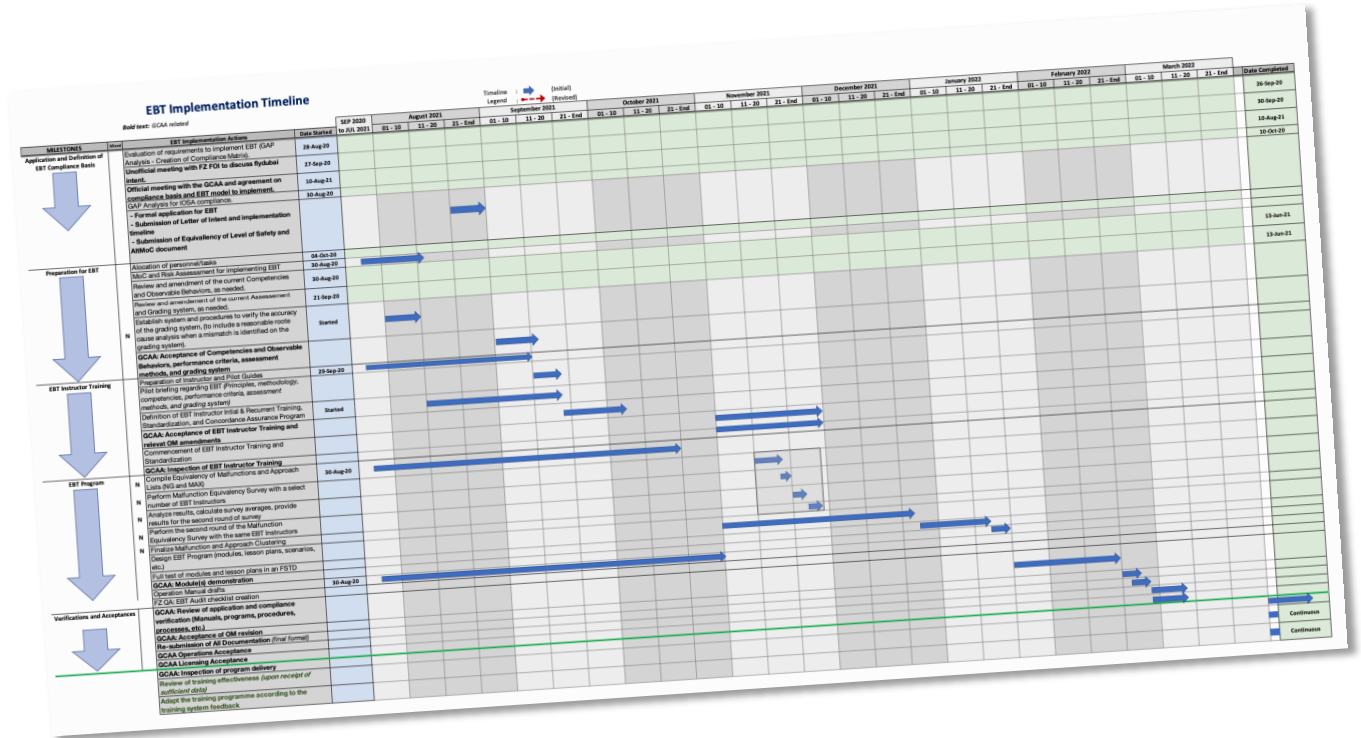
COVID lockdowns  
and MAX Grounding

January 2020

August 2020

April 2022

Eventually, the introduction of EBT was planned to coincide with the completion of the 3-year cycle of the Traditional (Legacy) training system.







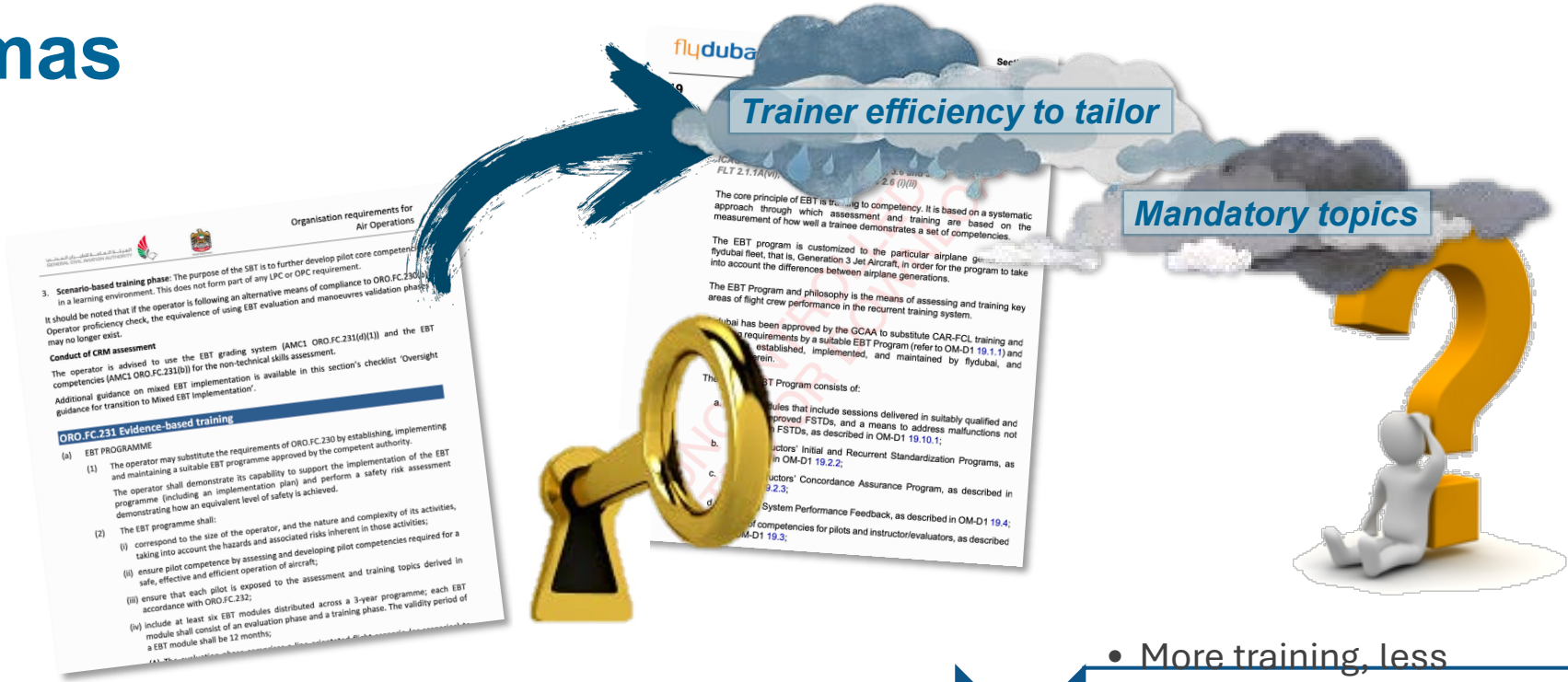
# The Challenges



Pushing the needle to the right

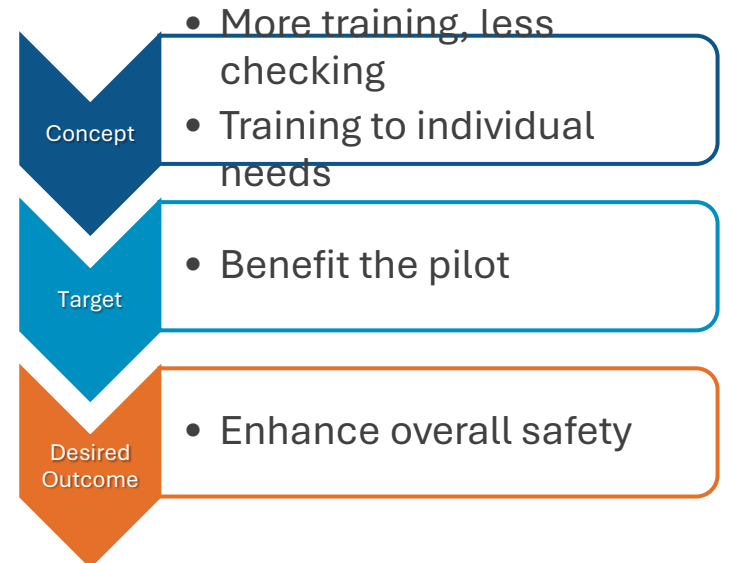


# The Dilemmas



A pilot performs at the minimum acceptable standard for a competency ...

... tailored SBT shall be delivered





# Compliance

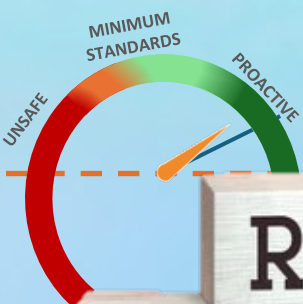
*with Regulations and  
Industry best practices*

MINIMUM ACCEPTABLE STANDARD  
FOR LEOC VALIDITY EXTENSION TO 24 MONTHS  
NOT MORE THAN 3 COMPETENCIES LESS THAN GRADE 4

MINIMUM ACCEPTABLE STANDARD  
FOR LINE ACTIVITIES - ALL COMPETENCIES - GRADE 3

MINIMUM ACCEPTABLE STANDARD  
FOR EBT MODULES - NOT MORE THAN 3 COMPETENCIES AT GRADE 2 - NO GRADE 1  
AND ALL MANEUVERS (IN MT) OBJECTIVE ACHIEVED

MINIMUM ACCEPTABLE STANDARD  
FOR LICENSING - ALL COMPETENCIES - GRADE 2



Right

Wrong

It depends





What  
is the

connection with EBT

# Periodic Table of the Elements

																		Group 18 8A															
																		2 He Helium 4.0026															
1 1A	1 H Hydrogen 1.0078																	10 Ne Neon 20.180															
2 2A	3 Li Lithium 6.938	4 Be Beryllium 9.0122																	18 Ar Argon 39.948														
3 3B	11 Na Sodium 22.990	12 Mg Magnesium 24.305	3 3B	4 4B	5 5B	6 6B	7 7B	8 8B	9 8B	10 8B	11 1B	12 2B	13 Al Aluminum 26.982	14 Si Silicon 28.084	15 P Phosphorus 30.974	16 S Sulfur 32.059	17 Cl Chlorine 35.446	18 Ar Argon 39.948															
4 4B	19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.63	33 As Arsenic 74.922	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798															
5 5B	37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.96	43 Tc Technetium 98.9062	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.91	46 Pd Palladium 106.42	47 Ag Silver 107.87	48 Cd Cadmium 112.41	49 In Indium 114.82	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.60	53 I Iodine 126.90	54 Xe Xenon 131.29															
6 6B	55 Cs Cesium 132.91	56 Ba Barium 137.33	72 Hf Hafnium 178.49	73 Ta Tantalum 180.95	74 W Tungsten 183.84	75 Re Rhenium 186.21	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.97	80 Hg Mercury 200.59	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)	87 Fr Francium (223)															
7 7B	87 Fr Francium (223)	88 Ra Radium (226)	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (269)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (268)	111 Rg Roentgenium (268)	112 EBT Instructium (ORCA)	113 Uut Ununtrium (268)	114 Fl Flerovium (268)	115 Uup Ununpentium (268)	116 Lv Livermorium (268)	117 Uus Ununseptium (268)	118 Uuo Ununoctium (268)	119 Uuh Ununhennium (268)															
																			Lanthanides														
																			57 La Lanthanum 138.91	58 Ce Cerium 140.12	59 Pr Praseodymium 140.91	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.96	64 Gd Gadolinium 157.25	65 Tb Terbium 158.93	66 Dy Dysprosium 162.50	67 Ho Holmium 164.93	68 Er Erbium 167.26	69 Tm Thulium 168.93	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.97
																			Actinides														
																			89 Ac Actinium (227)	90 Th Thorium 232.04	91 Pa Protactinium 231.04	92 U Uranium 238.03	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

11

Na

Sodium

22.990

Atomic number

Element symbol

Element name

Atomic weight

Alkalai metals

Alkaline earth metals

Lanthanides

Actinides

Transition metals

Unknown properties

Post-transition metals

Metalloids

Other nonmetals

Halogens

Noble gases

Period

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3

4

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6

7

Group

1A

2A

3B

4B

5B

6B

7B

8B

9B

10B

11B

12B

3A

4A

5A

6A

7A

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- A lot of data
- A lot of potential information
- If any of it is inaccurate, it could potentially create chaos in the universe, ...or not!
- When we look at it, we act as if we understand it, but do we really?

# EBT Data and EBT-Is

- Strong foundation for EBT Instructors  
Experience in their TRI duties and privileges
- Ensure they can ORCA
- Train concordance  
Agreement and alignment in grading



## New TRI Training Process

### Initial Phase:

New TRIs focus on FCL activities only.

### Monitoring Session:

Conducted after gaining experience.

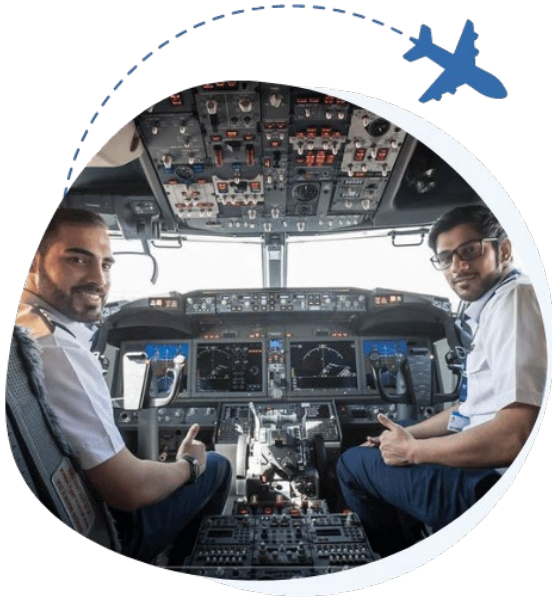
### EBT Training:

Followed by training to become EBT-Is.





## and more EBT Data



Adequate data  
for new Hires

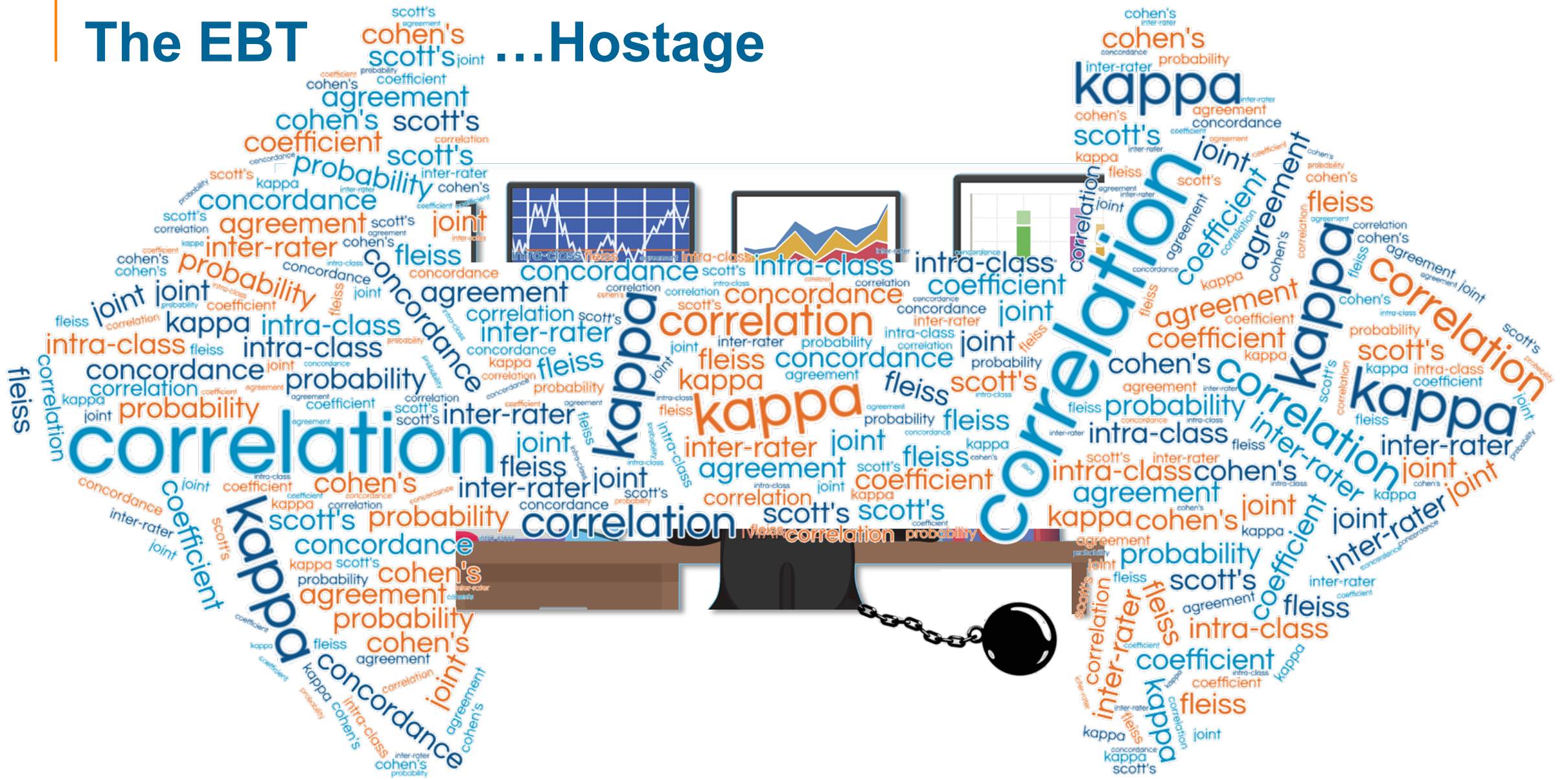
Delay EBT enrollment



So, what do we do with the collected data?

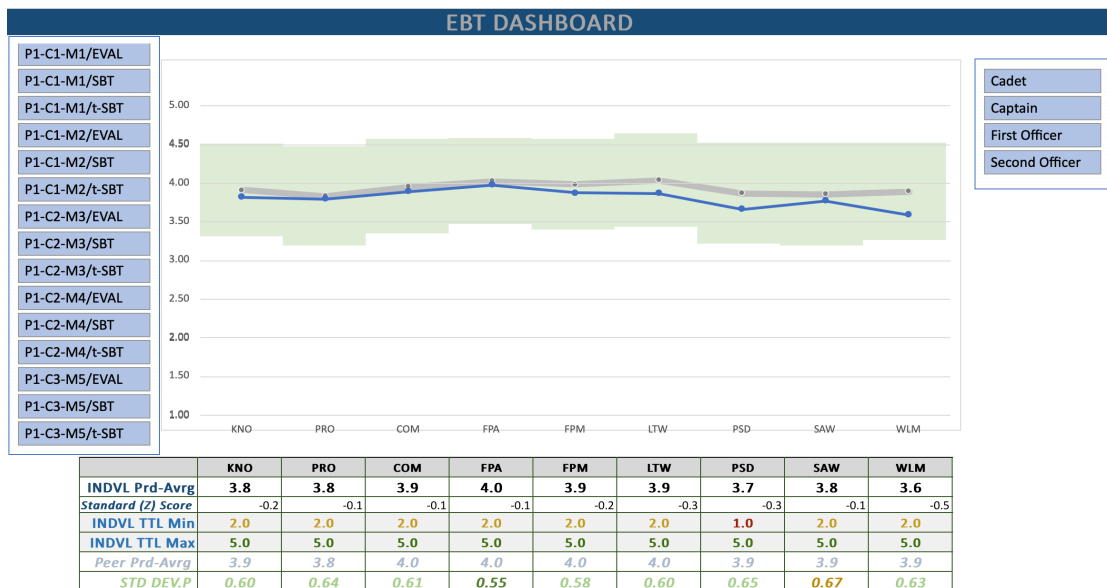


# The EBT ...Hostage



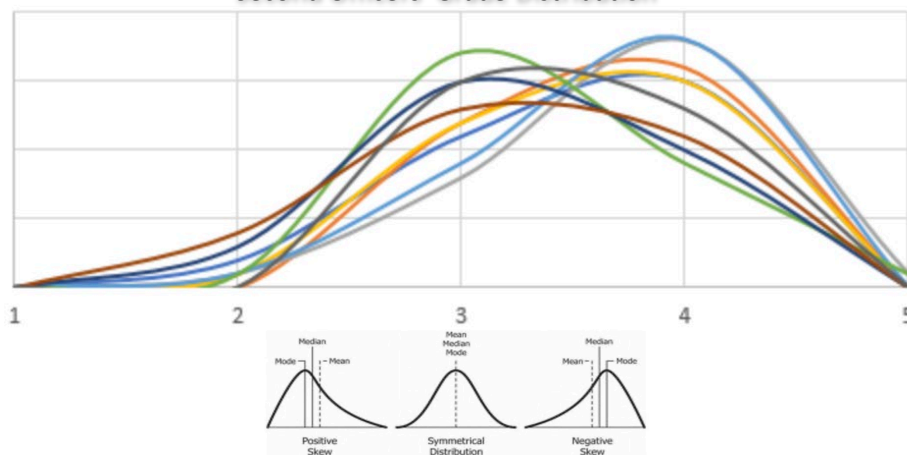


## What do we see?



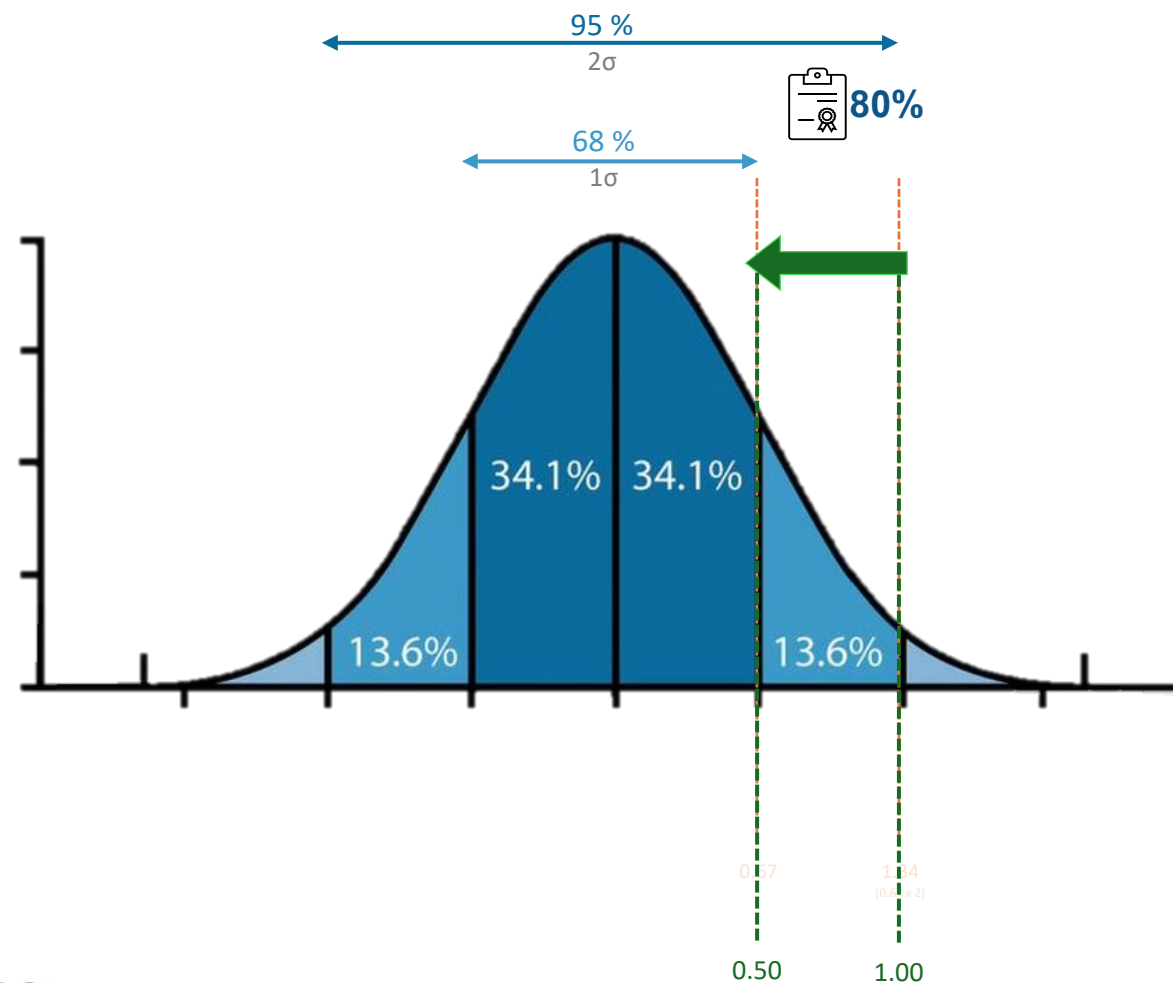
## Does it make sense?

Second Officers' Grade Distribution



## What is our target?

5-scale Grading System  
Grading Target  $\pm 1$   
FOR AGREEMENT PURPOSES



# Navigating Data Challenges



## The more the Data, the more the Complexity

Increased data leads to more potential uses and interpretations.

## EBT vs Data

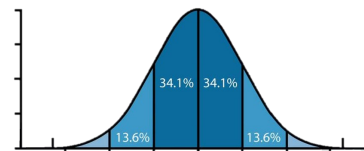
While EBT is a well-recognized training system, the application and interpretation of data to further refine and enhance its effectiveness is an ongoing process.

## Collaborative Improvement

We believe that the next step should be for Regulators and Operators, together, to set specific standards for the interpretation of data.

## Sharing Insights

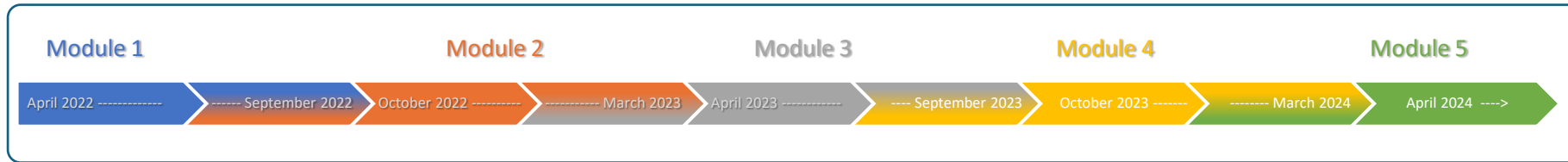
We welcome discussion and feedback. Feel free to reach out to our Training Department for more details.







Offload specific FFS contents  
to Technical Ground Training



Module Start/End dates' flexibility  
to support the Planning Team with their challenges



# Module Customization and Loops

GM3 ORO.FC.231(a)

- Initial skepticism about the concept.
- Scenarios based on loop data have proven highly effective.
- Successfully addressed and resolved internal challenges.

Inner Loop			MOD	Outer Loop		
SMS Evidence	FDM Trends	Internal Feedback		Industry Incidents	IATA FDX	GCAA Safety Alerts
GND OPS e.g., T/O attempt from wrong intersection or with F-UP			1	Passenger Led Evacuations		
Taxiway Incursions	Flap Overspeed	RNP APCH to VNAV Minima	2			
Low Fuel and Management of Consequences			3		GPS Signal Loss	
Wake Turbulence Awareness and Prevention			4			GPS Signal Interference
GPS Signal Interference			5	Comm Difficulties During Em.Descent		

YES

NO

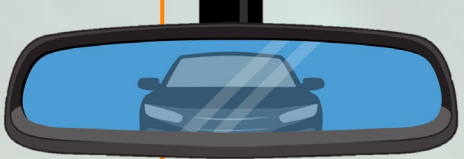
MAYBE

NOT SURE

POSSIBLE







# On Hindsight

## What was under/over-estimated

Alignment and agreement of internal stakeholders was taken as granted while, in reality, there was a strong need to **'win'** all stakeholders and **'sell'** EBT.

## What proved to be important

The support of the pilot community and the Trainers





## CAUGHT BETWEEN

LEGACY  
TRADITIONAL  
TRAINING



### A New Approach

- » Fundamental changes in how we think and solve problems.
- » Success achieved through flexibility, openness, and collaboration.

### Challenges Faced

- » Experienced trainers were less receptive to change.
- » New -inexperienced- trainers adapted quickly, and much easier.

### Objective

- » Achieving common understanding, standardization, and concordance in this new context.

### Success

- » With fostering innovative thinking and introducing new training practices.
- » With focusing on promoting EBT and its principles, offering instructors different perspectives, being open to questions, remaining flexible to suggestions, and exposing them to different training contents.

# EBT: Program 2

LOOKING AHEAD TO ENHANCE THE PROGRAM

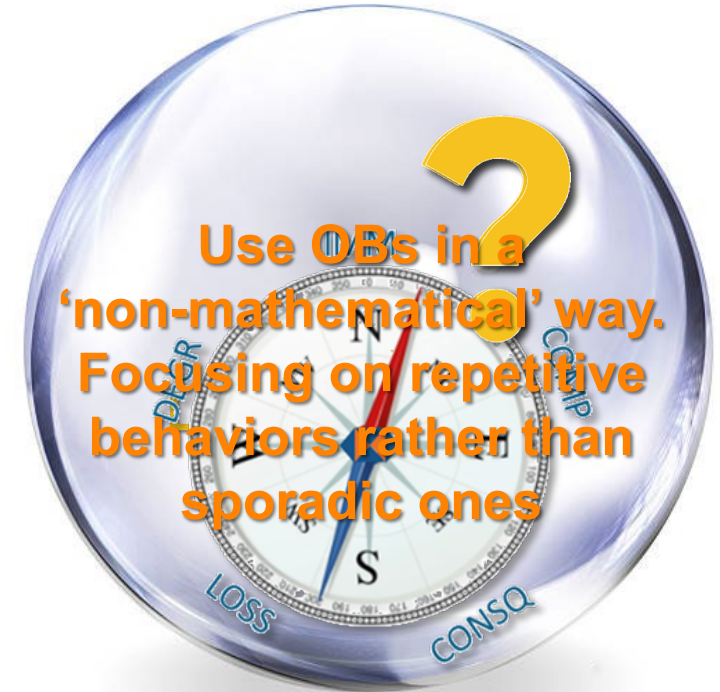


## Looking Ahead

- Gained valuable experience over the past 3 years.
- Confident in discussing future steps and enhancements for Program 2.

## Key Areas Under Focus

- Focus on qualitative performance over quantitative metrics.
- Addressing Program 1 identified areas of weak performance with targeted training scenarios.
- Enhancing Malfunction Characteristics management at the training level.
- Revisiting training methods and duration for better outcomes.







# Upcoming Challenges

## LEoC Validity

Extending to 24 months

- » *Maintaining same safety standards*
- » *SFI/SFEs Planning*

## CBTA Implementation

Principles to be applied in

- » *Command Upgrade, and*
- » *Initial Type Rating Programs*

*Planning in progress.*

## Company Expansion

- » *Managing and reflecting the expansion in the EBT Program.*

*Including updates in Airport/Approaches Equivalency.*

## New Type

- » *Introducing and developing EBT Program for the B787; a significant challenge, yet ready to face.*

*Lack of experience on the new type.*







Thank you