



DLH EBT - COURSE DESIGN

ICAO-IAC-IATA CBTA/EBT WEBINAR – MOSCOW 26.11.2020

CPT Richard Lenz

EBT REGULATIONS

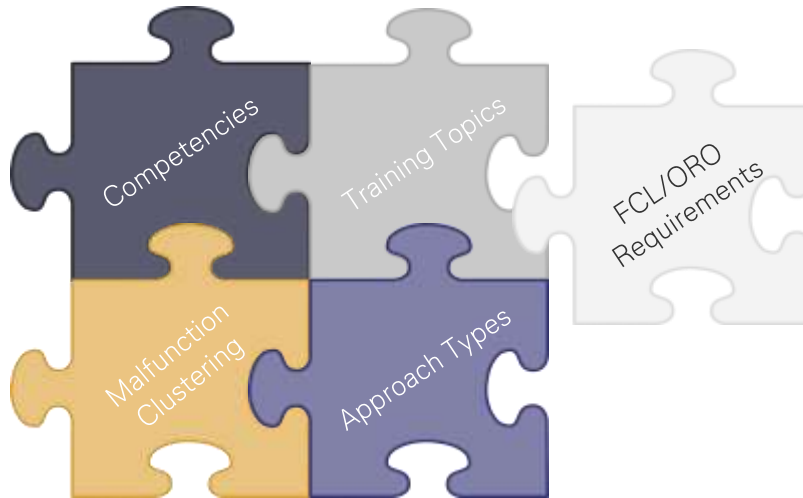


Design of EBT Modules consists the combination of several requirements:

- Competencies
- Training Topics
- Malfunction Clustering
- Approach Types

EBT MIXED IMPLEMENTATION

FCL compliance



Integration of additional topics

DATA COLLECTION

COMPANY EVIDENCE MEETING



Evidences identified by the operator:

- Crew Training
- Fleet Management
- Flight Safety Departement
- Technical Pilot
- Etc.

MATRIX – DESIGN

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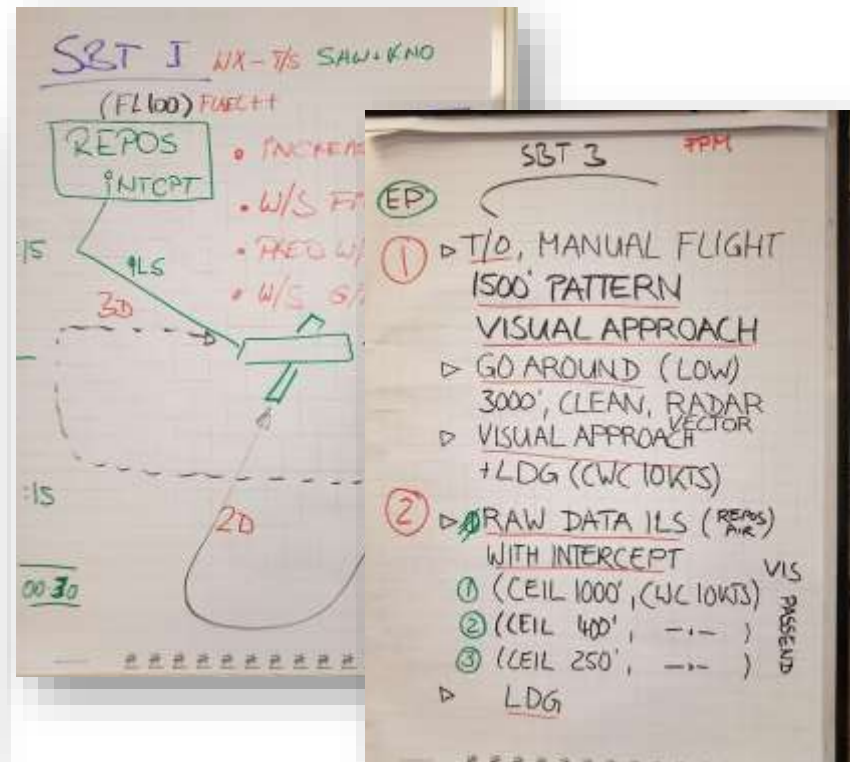
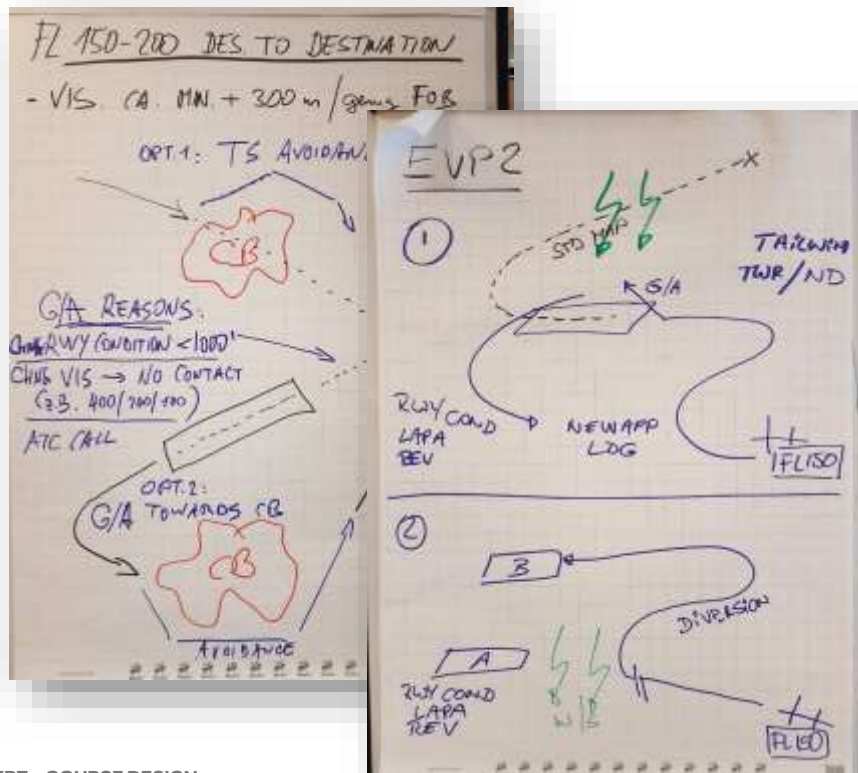
MATRIX – DESIGN

Competencies	Year 1			
	Modul 2 (8:00 h FFS)			
	EVAL	MV	SBT	ISI
	APK			
	KNO			
	PSD			
	SAW			

Training Topics	Rejected T/O
	Failure of critical engine between V1 & V2 (until AP ON)
	Engine-out approach & goaround
	Go-around, all engines operative (high energy)
	With a critical engine failed, normal landing
	Adverse Weather
	covered by Competency FPA
	Competencies non-technical (CRM)
	covered by Competency APK
	Go around management
	covered by Competency FPM
	ISI Monitoring, cross checking, error management, mismanaged aircraft state
	Unstable approach



SCENARIO – DESIGN



EBT MANUAL – DESIGN

Matrix shows relevant competencies for different scenarios

Pilot Training Manual
EBT Module 2

Focus Competency Matrix

		EVP		MVP	SBT 1			SBT 2			SBT 3			ISI
		1	2		a	b	c	a	b	c	a	b	c	
1	Flight Path Management, manual (FPM)			X							X			X
2	Flight Path Management, automation (FPA)			X										+
3	Knowledge (KNO)	X	X			+		X	X	X				
4	Application of Procedures (APK)			X		X					+			X
5	Communication (COM)				+	+	+					+	+	
6	Leadership and Teamwork (LTW)				+		+				X	+		
7	Problem Solving & Decision Making (PSD)	X	X				X	X	X	X		+		
8	Situation Awareness (SAW)	X	X					X	X	X				X
9	Workload Management (WLM)				X							X		

Note: "X" indicates the primary, "+" the secondary focus competencies.

EBT MANUAL – DESIGN

Phase Durations and Options

DAY 1

Evaluation Phase (EVP)

- Focus: 2-3 competencies
- Line oriented evaluation
- First look concept

Manoeuvre Validation (MVP)

- Psychomotoric skills
- Several repositions

Scenario 1
(1:00)

Scenario 2
(0:50)

CM 1 PF (1:05)
CM 2 PF (0:45)

Option 1a

Option 2a

Basic Flying

Option 1b

Option 2b

Engine Out Ops

Option 1c

Option 2c

LVO



EBT MANUAL – DESIGN

Phase Durations and Options

DAY 1

Evaluation Phase (EVP)

- Focus: 2-3 competencies
- Line oriented evaluation
- First look concept

Scenario 1
(1:00)

Option 1a

Option 1b

Option 1c

Scenario 2
(0:50)

Option 2a

Option 2b

Option 2c

Manoeuvre Validation (MVP)

- Psychomotoric skills
- Several repetitions

CM 1 PF (1:05)
CM 2 PF (0:45)

Basic Flying

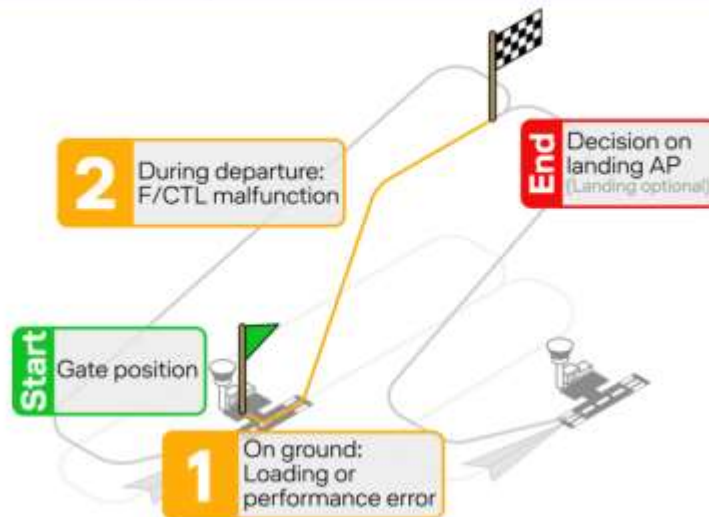
Engine Out Ops

LVO

Multiple options to choose from

Details EVP1

Focus Competencies: SAW, PSD, KNO



EBT MANUAL – DESIGN

Phase Durations and Options

DAY 1

Evaluation Phase (EVP)

- Focus: 2-3 competencies
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Scenario 1
(1:00)

Scenario 2
(0:50)

Option 1a

Option 2a

Option 1b

Option 2b

Option 1c

Option 2c

Manoeuvre Validation (MVP)

- Psychomotoric skills
- Several repetitions

CM 1 PF (1:05)
CM 2 PF (0:45)

Basic Flying

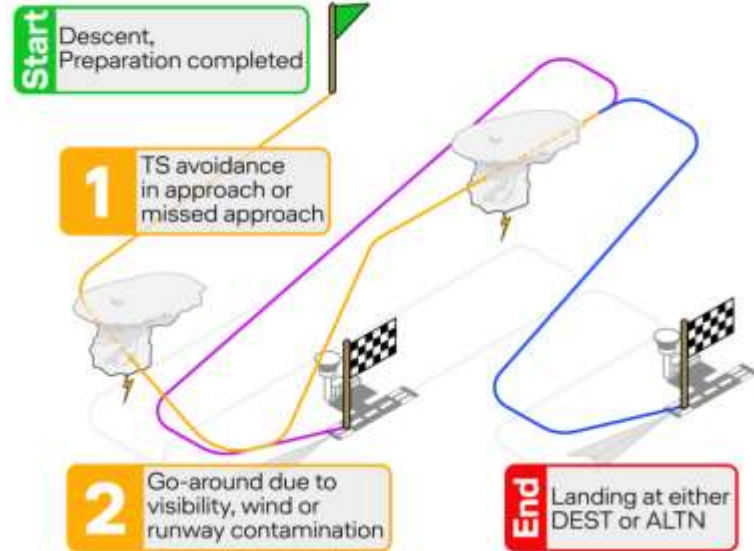
Engine Out Ops

LVO

Multiple options to choose from

Details EVP 2

Focus Competencies: SAW, PSD, KNO



EBT MANUAL – DESIGN

Phase Durations and Options

DAY 1

Evaluation Phase (EVP)

- Focus: 2-3 competencies
- Line oriented evaluation
- First look concept

Scenario 1
(1:00)

Scenario 2
(0:50)

Option 1a

Option 2a

Option 1b

Option 2b

Option 1c

Option 2c

Manoeuvre Validation (MVP)

- Psychomotoric skills
- Several repetitions

CM 1 PF (1:05)
CM 2 PF (0:45)

Basic Flying

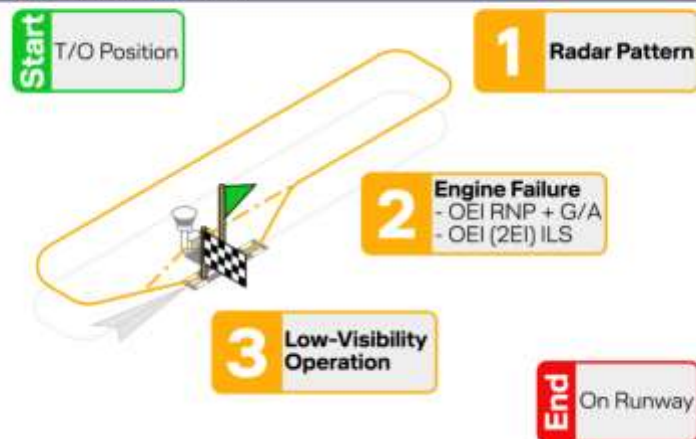
Engine Out Ops

LVO

MVP design to satisfy FCL requirements

Details MVP

Focus Competencies: APK, FPM, FPA



EVALUATION – DAY 1

FPM - Flight Path Management, Manual Control

FPA - Flight Path Management, Automation

KNO - Knowledge

APK - Application of Procedures

COM - Communication

LTW - Leadership and Teamwork

PSD - Problem Solving and Decision Making

SAW - Situation Awareness

WLM - Workload Management

NO

1

2

3

4

5

NO

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NO

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3

4

5

All nine
competencies
must be graded.

Grading scale
from 1 - 5

EVALUATION – DAY 1

For more detailed assessment, OB may be marked (+/o/-)

CMT ? APK - Application of Procedures	NO	1	2	3	4	5
a) Adherence to Procedures Follows SOPs unless a higher degree of safety dictates otherwise	-		o		+	
b) Operating Instructions Identifies and applies all operating instructions in timely manner	-		o		+	
c) Use of A/C systems Correctly uses aircraft systems, controls and instruments	-		o		+	
d) Operational Priorities Safely manages the aircraft to achieve best value for the operation, including fuel, the environment, passenger comfort and punctuality	-		o		+	
e) Source of Information Identifies the source of operating instructions	-		o		+	

DEBRIEFING – DAY 1

- Competency Based



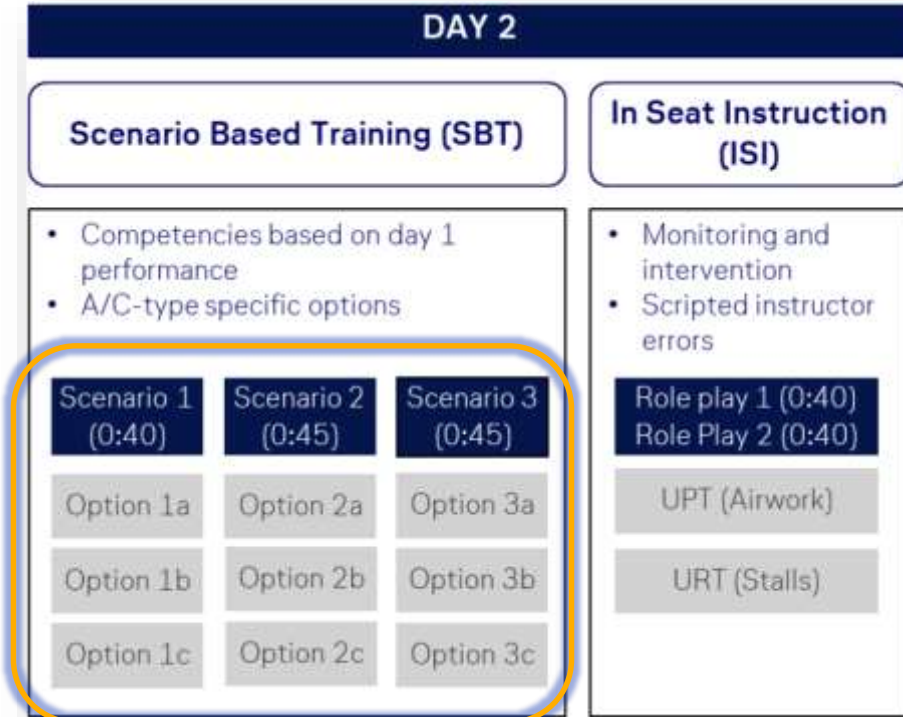
DEBRIEFING – DAY 1

- Competency Based
- **Facilitated**



DEBRIEFING – DAY 1

- Competency Based
- Facilitated
- **Root Cause analysis**
- **Scenarios DAY 2**



SCENARIO SELECTION – DAY 2



Matrix shows relevant competencies

Pilot Training Manual
EBT Module 2

Focus Competency Matrix

		EVP		MVP	SBT 1			SBT 2			SBT 3			ISI
		1	2		a	b	c	a	b	c	a	b	c	
1	Flight Path Management, manual (FPM)			X							X			X
2	Flight Path Management, automation (FPA)			X										+
3	Knowledge (KNO)	X	X		+			X	X	X				
4	Application of Procedures (APK)			X	X						+			X
5	Communication (COM)				+	+	+					+	+	
6	Leadership and Teamwork (LTW)				+		+					X	+	
7	Problem Solving & Decision Making (PSD)	X	X				X	X	X	X		+		
8	Situation Awareness (SAW)	X	X					X	X	X				X
9	Workload Management (WLM)				X								X	

Note: "X" indicates the primary, "+" the secondary focus competencies.



SCENARIO SELECTION – DAY 2

Option SBT 1b

Main Focus Competency: APK

Secondary Focus Competencies:

Details SBT 2

Focus Competencies: SAW, PSD, KNO

Start

Cruise F
L888

Start

Descent,
Preparation com

Scenario

Pressurisa
Slow deco



Option SBT 3a

Main Focus Competency: FPM

Secondary Focus Competency: APK

Start

T/O Position

4

Go around

- during flare
- Engine out

2

Climbout / Airwork

- Instrument Failure
- Steep turns
- Coordinated turns

1

Takeoff

- Med/max CWC
- Low Vis
- Engine Out

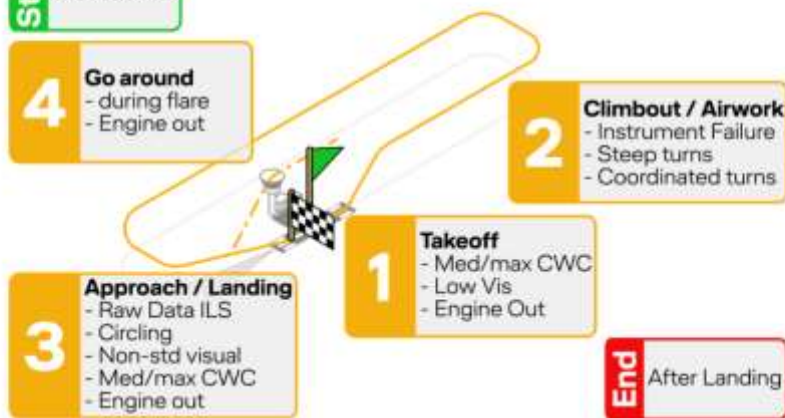
3

Approach / Landing

- Raw Data ILS
- Circling
- Non-std visual
- Med/max CWC
- Engine out

End

After Landing



EVALUATION – DAY 2

FPM - Flight Path Management, Manual Control

FPA - Flight Path Management, Automation

KNO - Knowledge

APK - Application of Procedures

COM - Communication

LTW - Leadership and Teamwork

PSD - Problem Solving and Decision Making

SAW - Situation Awareness

WLM - Workload Management

NO

1

2

3

4

5

NO

1

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3

4

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NO

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NO

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NO

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All nine
competencies
must be graded.

Grading scale
from 1 - 5

DEBRIEFING – DAY 2

COMPETENCY FRAMEWORK – DLH

- Competency Based
- Facilitated
- Consequences of grading



Thank you for your attention!

Any questions?

