



ATR

11th September 2024

SYNTHETIC SOLUTIONS FOR MAINTENANCE PRACTICAL TRAINING

ACCELERATING SUSTAINABLE CONNECTIONS



HOW TO BRING THE AIRCRAFT INTO THE CLASSROOM ?



PRACTICAL TRAINING IN PROGRESS

PLEASE DO NOT DISTURB

EASA REQUIREMENTS

AIRCRAFT PRACTICAL TRAINING



COMPONENTS



SIMULATOR



AIRCRAFT

COMPLY WITH REGULATORY REQUIREMENTS



EASA ANNEX 3 PART 66 – CROSSTABLE ITEMS



Easy Access Rules for Continuing Airworthiness
(Regulation (EU) No 1321/2014)

Annex III (Part-66)

APPENDICES TO ANNEX III (Part-66)

Chapters	B1/B2	B1					B2				
	LOC	FOT	SGH	R/I	MEL	TS	FOT	SGH	R/I	MEL	TS
36A Pneumatic – Monitoring and indicating	X/X	X	X	X	X	X	X	X	X	X	X
21 Air Conditioning	X/X	X	X	—	X	X	X	X	—	X	X

50%



SOME TASKS CANNOT BE DONE ON AIRCRAFT

NEEDING TO DEFINE A SYNTHETIC TRAINING DEVICE SOLUTION

TRAINING NEEDS ANALYSIS (TNA)



REAL AIRCRAFT



SYNTHETIC AIRCRAFT

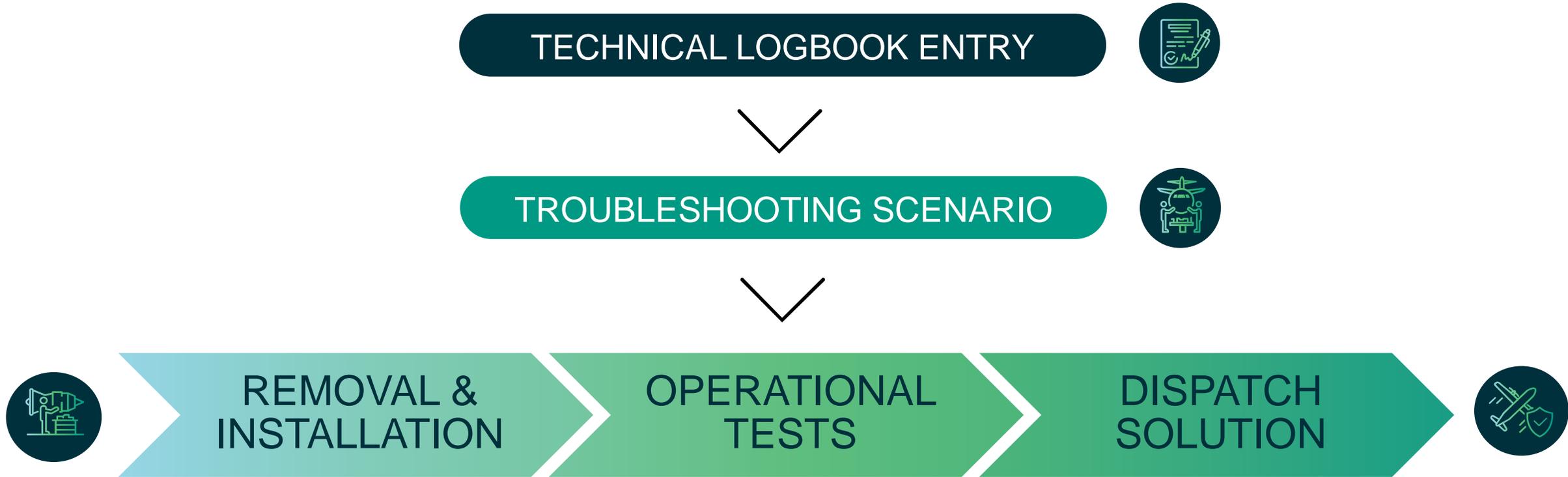
A PRACTICAL TNA FOR THE RIGHT BALANCE BETWEEN A/C & SYNTHETIC A/C



AIRCRAFT	SYNTHETIC A/C
ATA 12: SGH/LOC (50%)	X
X	ATA 21: RAI/FOT/MEL/TS (100%)
X	ATA 24: RAI/FOT/TS (100%)
ATA 45: LOC/FOT/TS (75%)	X
ATA 61: LOC/FOT (50%)	ATA 61: RAI/FOT/MEL/TS (100%)

FROM TNA TO STORYBOARDING

STORYBOARDING FRAME



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TOWARD IMMERSION

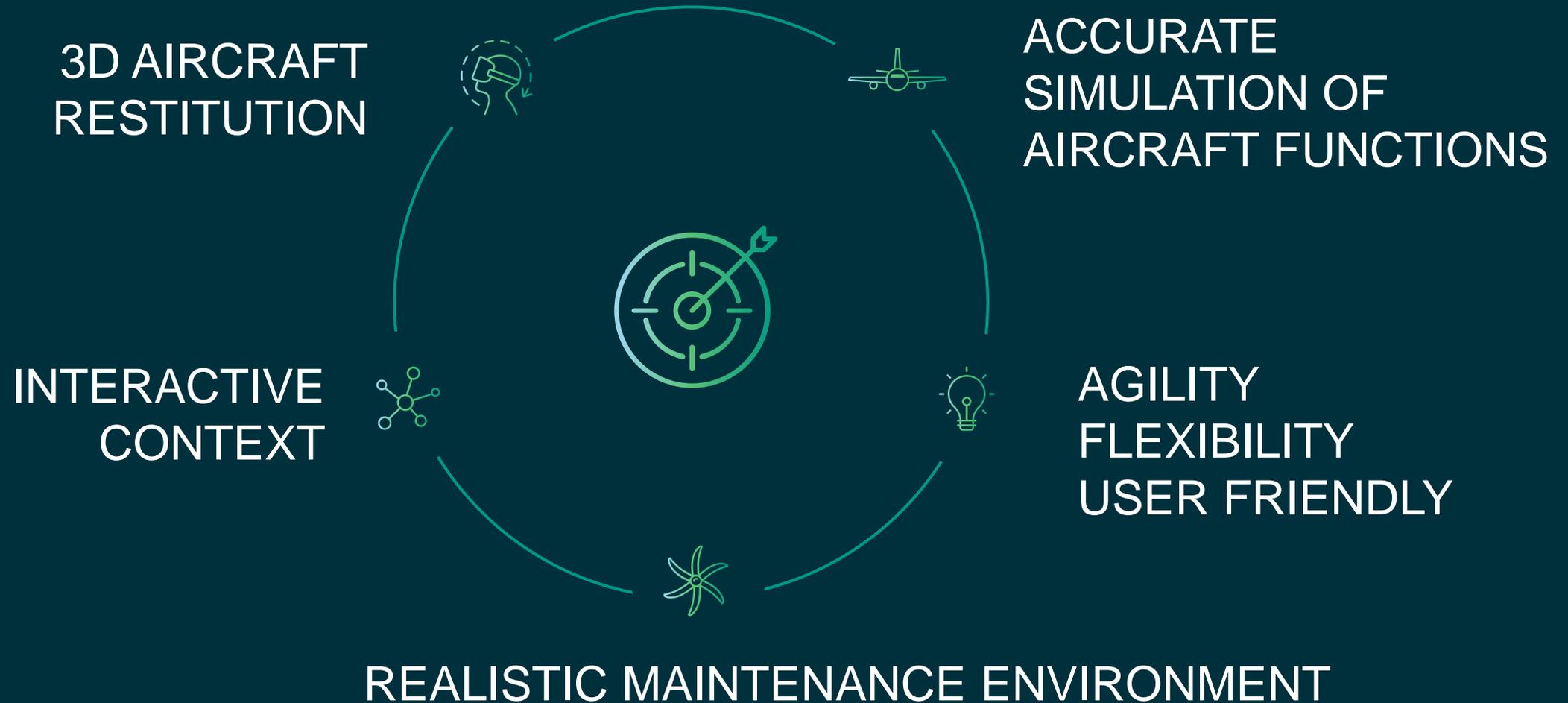
TNA

+

STORYBOARD



SYNTHETIC AIRCRAFT OBJECTIVES?





ATR AIRCRAFT TECHNICAL LOG		MEL/CDL ITEMS ACCEPTANCE	LEGS	DL	FLIGHT TIME	OIL UPLIFT 1	OIL UPLIFT 2	NAME	SIGN.
CAPTAIN NAME/SIGN. DUPOND			O R Y		0060				
F/O NAME/SIGN. DURAND			T L S						
F-GATC	240720	00019	AIRCRAFT ACCEPTANCE						
A/C REGISTRATION	DATE	LOG PAGE NUMBER							
IDENTIFICATION		DEFECT / REMARKS			ACTION			STATUS	
ITEM 1	MAREP	Pack 1 FAULT in Flight. No bleed FAULT						STA	
FLT Nbr.	001							DATE	
LEG	O R Y T L S							UTC	
ATA CODE	2111							PART 14SA50.....APRS	
LOG REF.								IDNbr	
OPE	<input type="checkbox"/>							SIGN.	
								P/N OFF:	
								P/N ON:	
								S/N OFF:	
								S/N ON:	
ITEM 2	MAREP							STA	
FLT Nbr.								DATE	
LEG								UTC	
ATA CODE								PART 14SA50.....APRS	
LOG REF.								IDNbr	
OPE	<input type="checkbox"/>							SIGN.	
								P/N OFF:	
								P/N ON:	
								S/N OFF:	
								S/N ON:	
ITEM 3	MAREP							STA	
FLT Nbr.								DATE	
LEG								UTC	
ATA CODE								PART 14SA50.....APRS	
LOG REF.								IDNbr	
OPE	<input type="checkbox"/>							SIGN.	
								P/N OFF:	
								P/N ON:	
								S/N OFF:	
								S/N ON:	
ITEM 4	MAREP							STA	
FLT Nbr.								DATE	
LEG								UTC	
ATA CODE								PART 14SA50.....APRS	
LOG REF.								IDNbr	
OPE	<input type="checkbox"/>							SIGN.	
								P/N OFF:	
								P/N ON:	
								S/N OFF:	
								S/N ON:	
CAPTAIN REMARKS		ITEM 5	BASE MAINT. CHECK	LINE MAINT. CHECK	DOC. REF.	REV.			
		STA	PART 14SA50.....APRS	<input type="checkbox"/> ETOPS	<input checked="" type="checkbox"/> NOT ETOPS				
		DATE	IDNbr						
		UTC	SIGN.						
		REPORT							

FAULT CHECK

AIRCRAFT TECHNICAL LOG BOOK

CHECK PACK FAULT ON MCDU
ENTER IN ACMS MENU.

ENTER ON CMC MENU

ENTER ON THE LAST FLIGHT REPORT
MENU

CHECK THE FAULT ON THE MCDU

FAULT ISOLATION

CHECK MAGNETIC INDICATOR ON RIGHT
HAND MAINTENANCE PANEL

ON MCDU, SELECT RETURN

ON MCDU, SELECT RETURN AGAIN

ON MCDU, SELECT MFC

ON MCDU, SELECT BASIC MEMORY

ON MCDU, SELECT NAVIGATION MENU

MFC HAS RECORDED A BITE CODE
COMING FROM IASC.
USE SMA TOOL TO TROUBLE SHOOT.

CONNECT SMA TOOL ON LEFT HAND
MAINTENANCE PANEL

START SMA TOOL



PRACTICAL COMPETENCIES ASSESSMENT



AIRCRAFT SYSTEMS KNOWLEDGE



SYNTHETIC AIRCRAFT BENEFITS?



DIGITAL TRANSFORMATION IN PROGRESS...

Extended Reality (XR)

Augmented Reality
(AR)

Mixed Reality (MR)

Virtual Reality (VR)

Low Immersion

High Immersion

DIGITAL, WHAT FOR?



LEARNING
BY DOING

TRUST
VECTOR

IMMERSIVE
LEARNING



COST SAVING \$\$

DIGITAL UP TO...



source: simbott.com

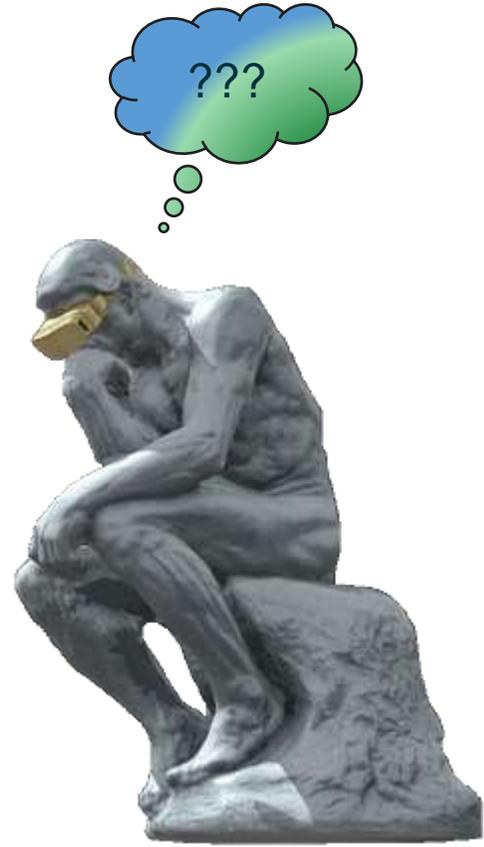
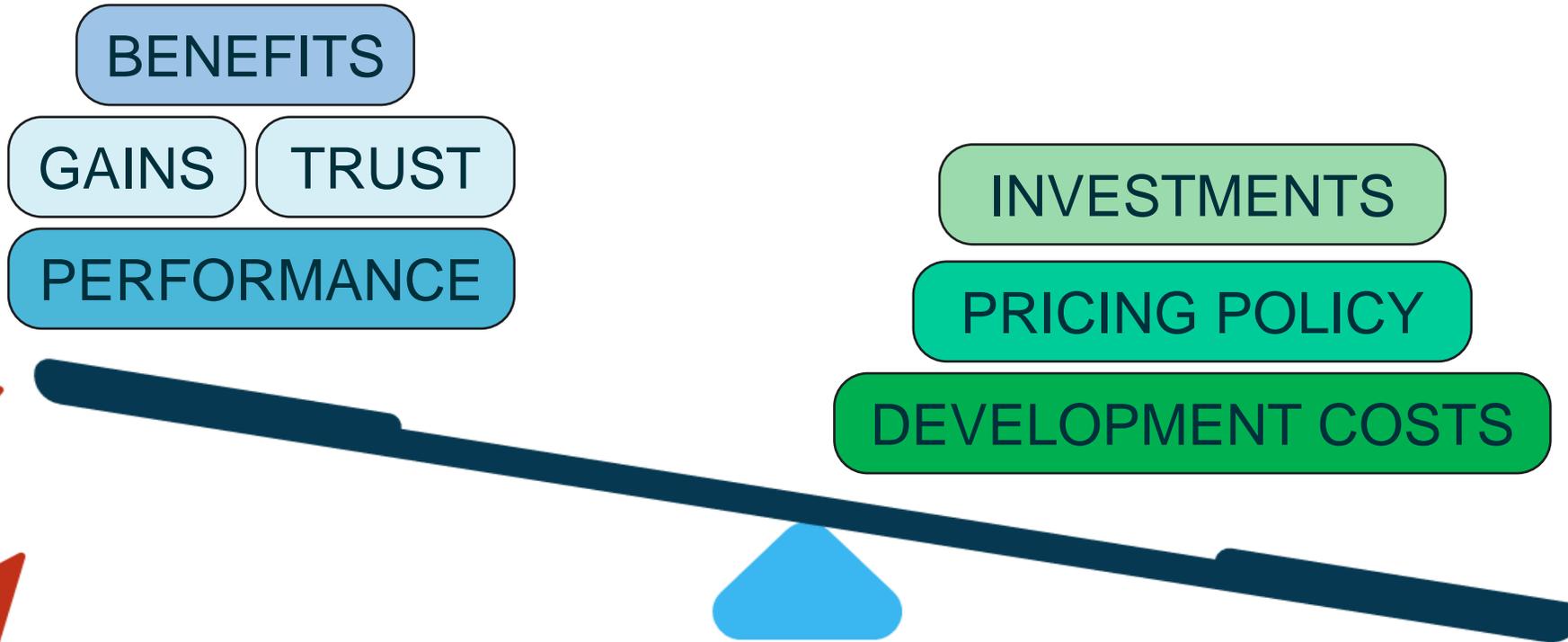


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source: NLR Netherlands Aerospace Centre

...AND FINDING THE RIGHT BALANCE





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ACCELERATING SUSTAINABLE CONNECTIONS

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Q & A

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