



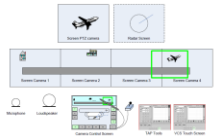
FREQUENTIS
FOR A SAFER WORLD

SESAR2020 PJ05 SOL2

Multi Remote Tower

Open House – V3 Validation

Frequentis & Remote TWR - more than eight years of experience



2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Early concept definition	Technology research, SESAR		Operational validation Germany, Austria		DFS RTC Project	Jersey, Island Vienna, Military		SESAR 2020 Multi Airport	Live Validation

Research & development

Single Remote Tower

Multi Remote Tower

Driving Innovations from a Concept to the Solution

smartVISION – Around the world

DFS

Advanced
Remote Tower



Jersey

Contingency
Solution



VIE

Apron
Management



Iceland

Basic Remote
Tower



NZ

Demonstrator



Different flavours of Digital Tower – Flexible Controller Working Position

Single Operator - Single Airport



Single Operator - Multi Airport



Multiple Operator – Single Airport (Shared View)

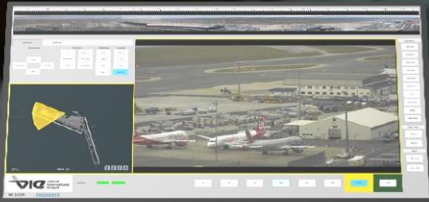


Multiple Operator – Multi Airport (Shared View)

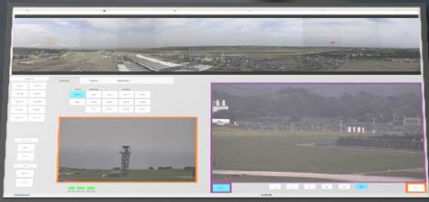


Individualization of the HMI

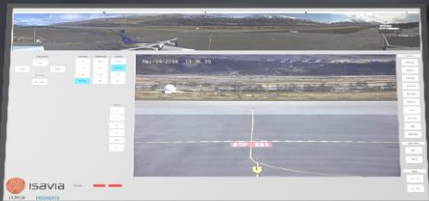
“Controller takes care of the airspace – not of the system”



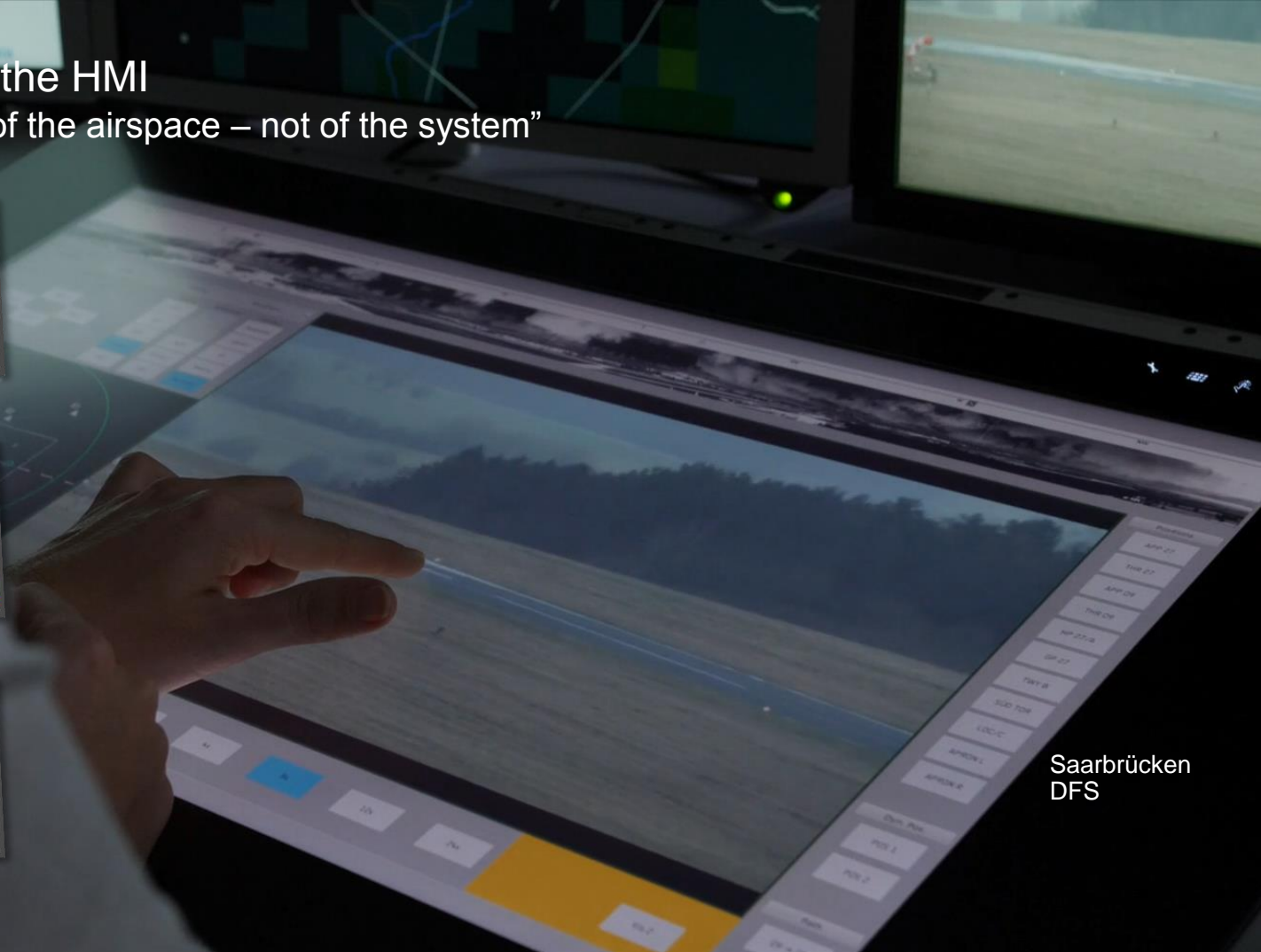
Vienna



Jersey

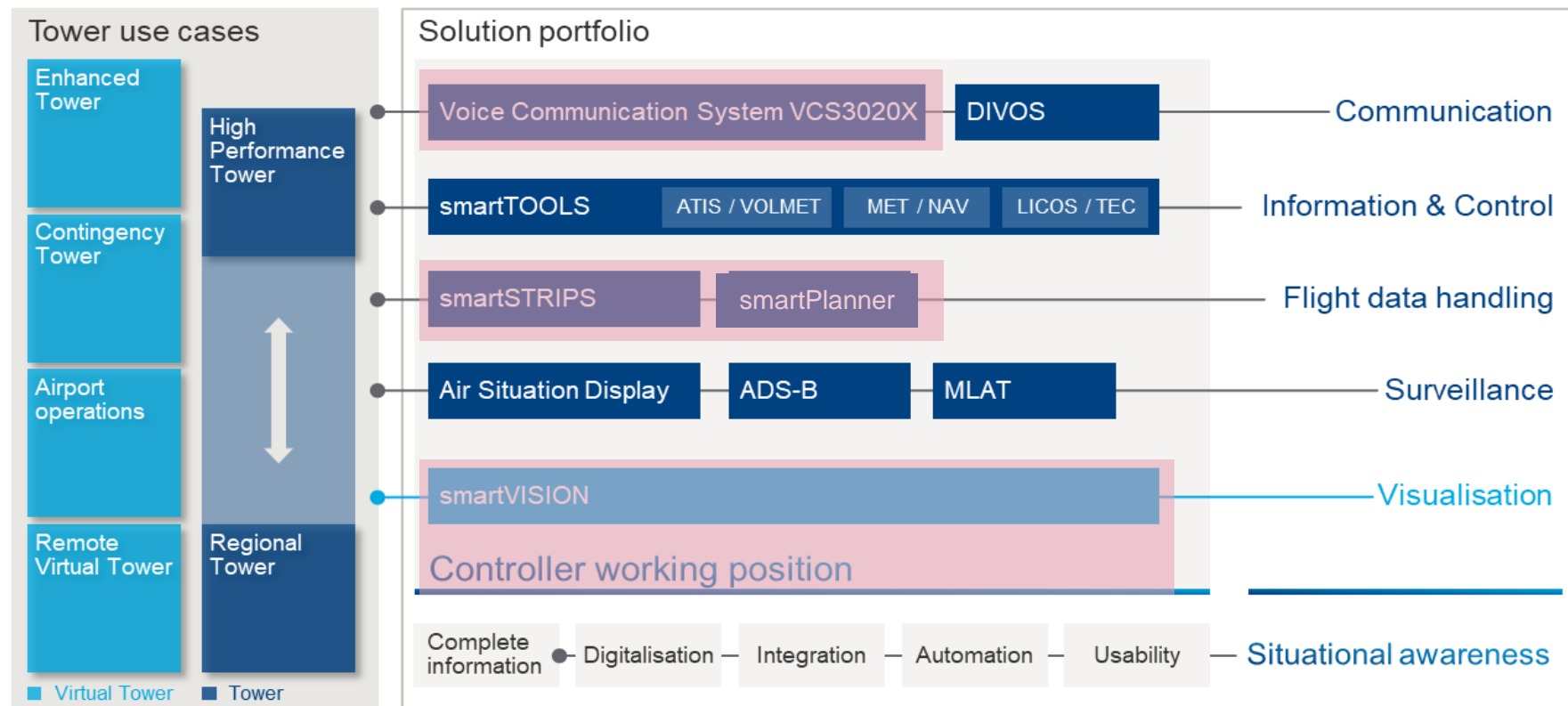


Iceland



Remote tower – more than visualization

Important factors for Multi Remote Tower



Multi Remote Tower

Augmentation
of Video

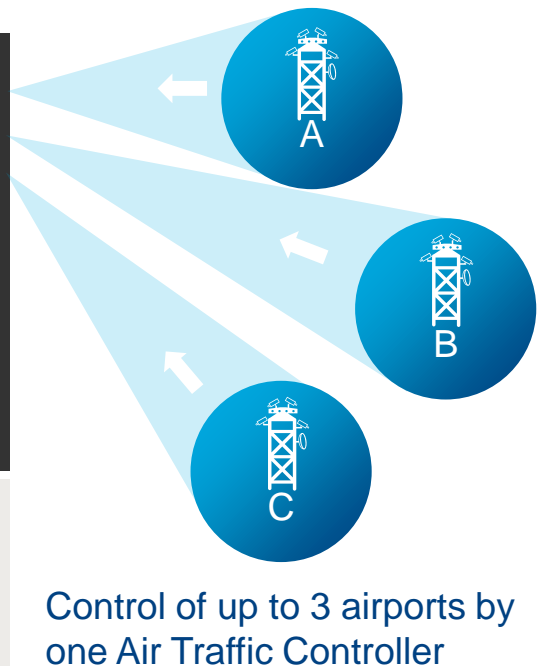
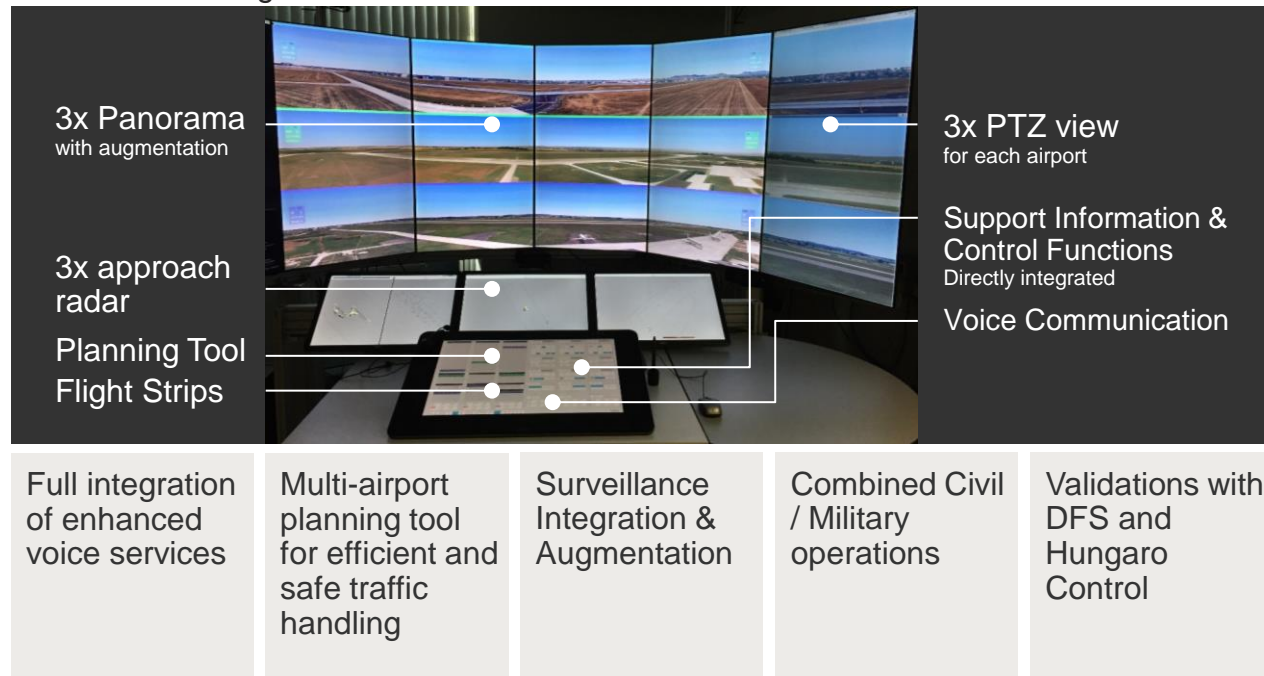
Integration
of VCS

Support
Planning



Multi Remote Tower

Controller Working Position



14-44-40

LHPB PLANNING

ATP	WTC	FWY	SD	ALT	SSR
1461	C/S	PA	AB'S	STS	ATO
1460	C/S	PA	AB'S	STS	ATO

LHPA PLANNING

ATP	WTC	FWY	SD	ALT	SSR
1462	C/S	PA	AB'S	STS	ATO
1462	C/S	PA	AB'S	STS	ATO

LHDC PLANNING

ATP	WTC	FWY	SD	ALT	SSR
1455	C/S	PA	AB'S	STS	ATO
1455	C/S	PA	AB'S	STS	ATO

LHPB ACTIVE AIR

LHPA ACTIVE AIR

LHDC ACTIVE AIR

LHPB RUNWAY 1.3R

LHPA RUNWAY 3R

LHDC RUNWAY 05R

LHPB ACTIVE GROUND

LHPA ACTIVE GROUND

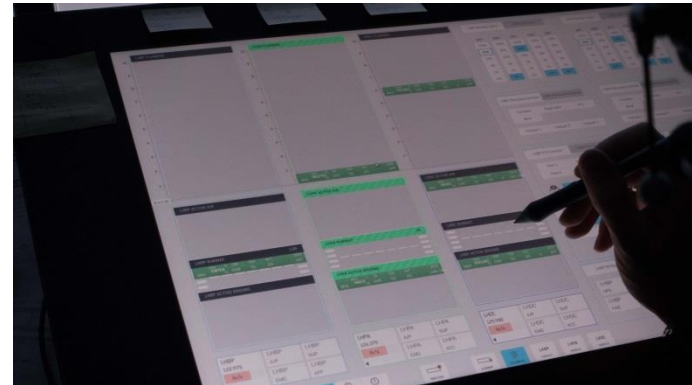
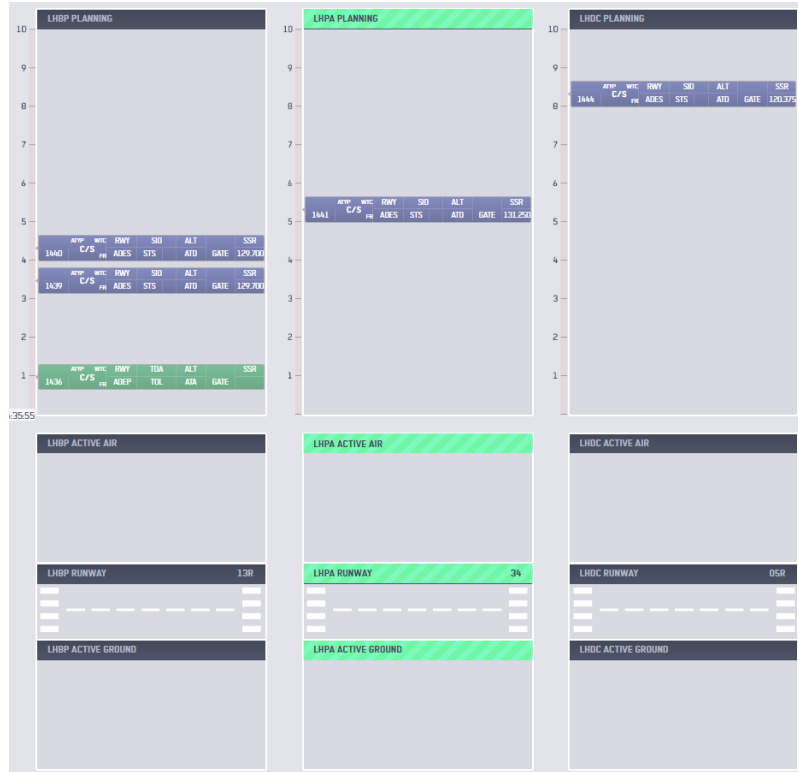
LHDC ACTIVE GROUND

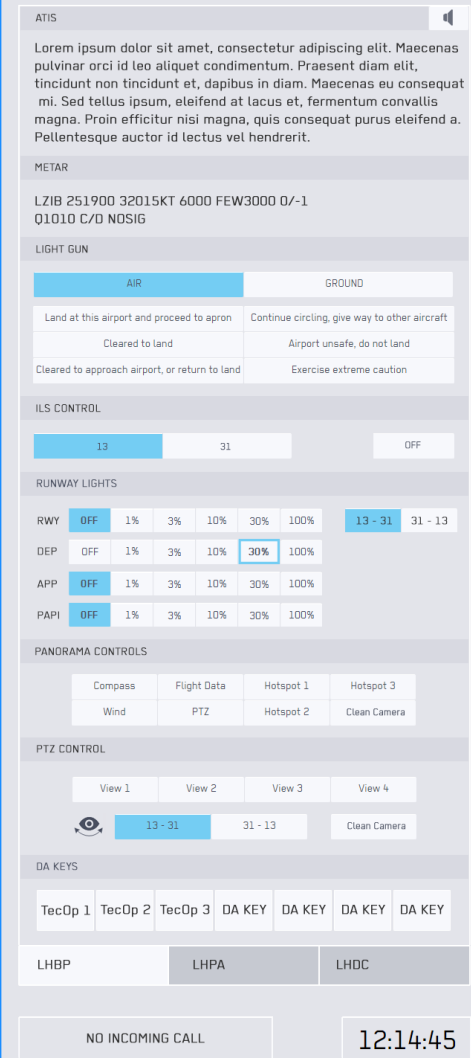
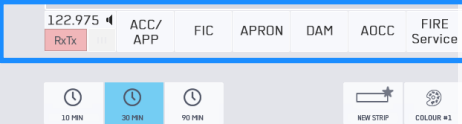
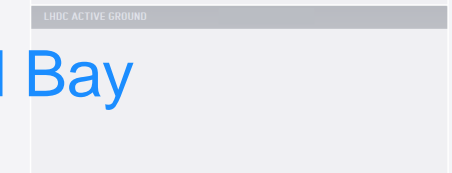
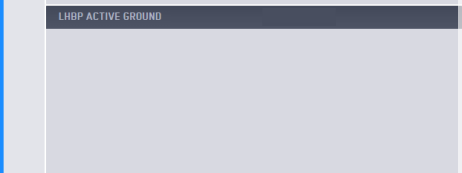
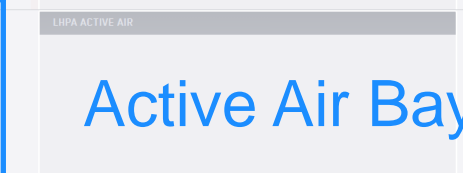
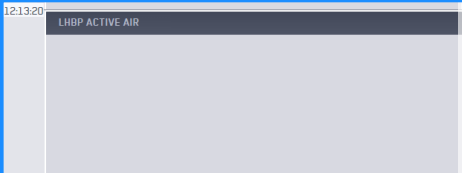
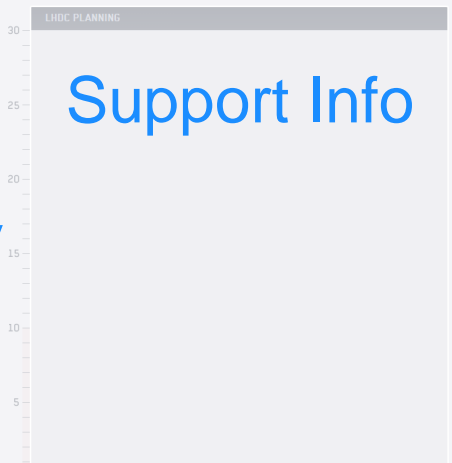
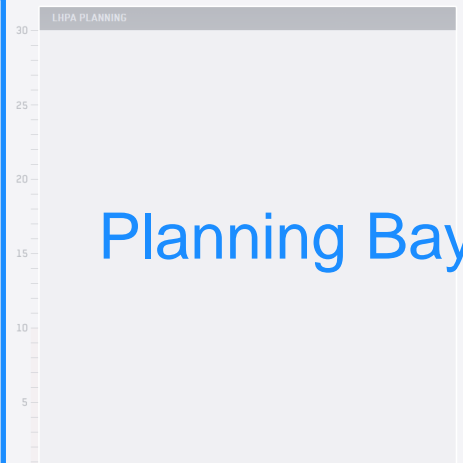
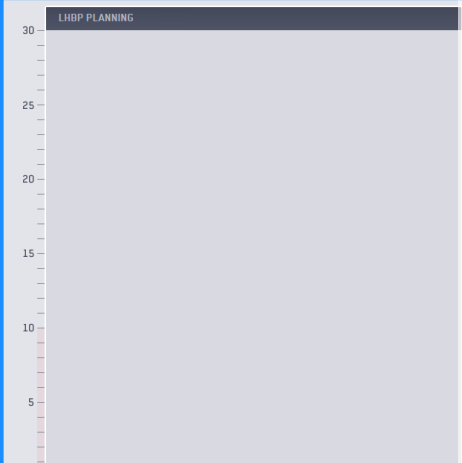
LHPB	LHPB	LHPB	LHPA	LHPA	LHPA	LHDC	LHDC	LHDC
122.975	A/P	SUP	126.375	A/P	SUP	125.900	A/P	SUP
RxTx	LHPB	LHPB	RxTx	LHPA	LHPA	RxTx	LHDC	LHDC
EMG	APP		EMG	ACC		EMG	ACC	

System Controls: Settings, Download, 30 FPS, 30 FPS, 10 FPS, Stop Step, Cleanup, Color Map, LHPB, LHPA, LHDC



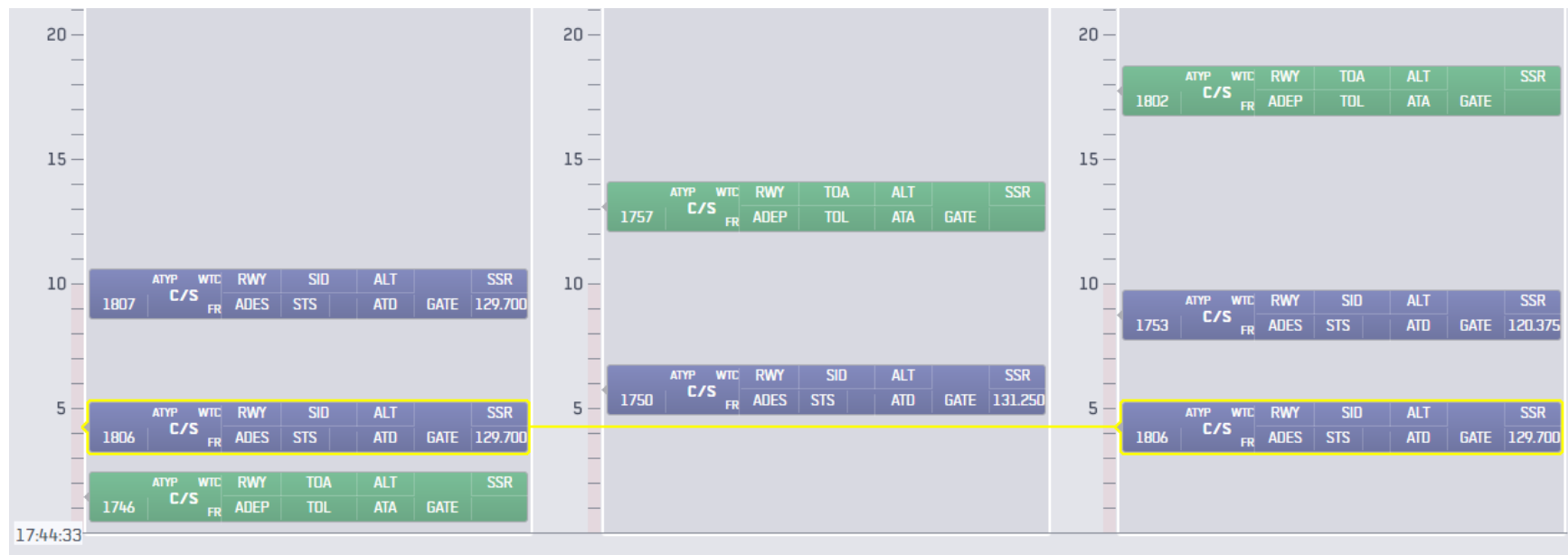
VCS Integration – Squelch Highlighting





Planning Tool

Traffic: Same Time - Multiple Airports



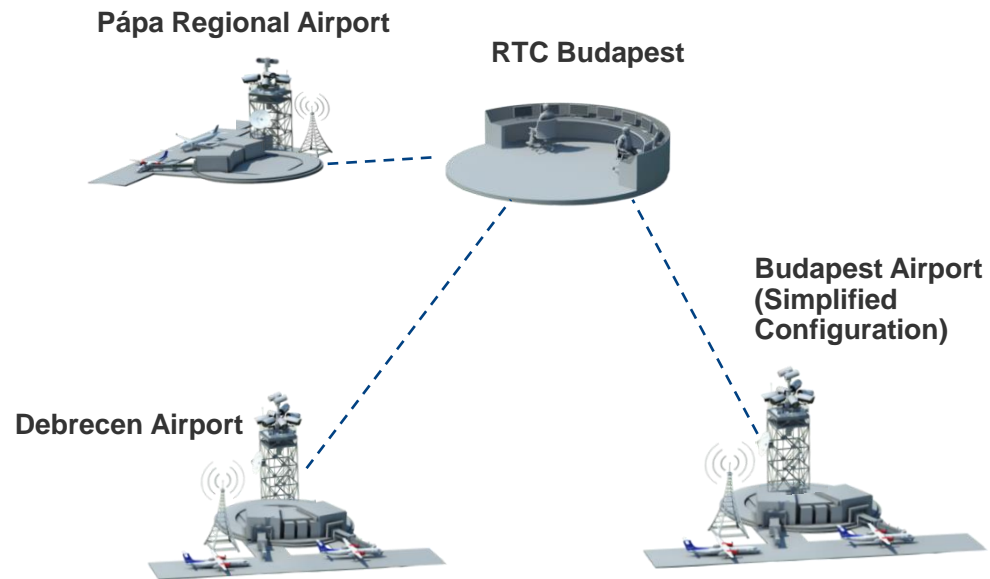
Next Steps – Further Validation

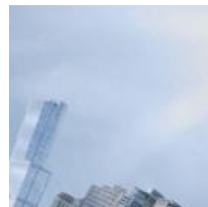
- PJ05 SOL3 – V2 Validation with ON
DECEMBER 2018 – SIMULATION

Focus: airport split off to 2nd working position

- PJ05 SOL2 – V3 Validation with HC
MARCH 2019 – **LIVE Val Budapest**

Focus: Live traffic evaluation with real airports





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