THALES

TopSky – ATC
Remote Control Towers
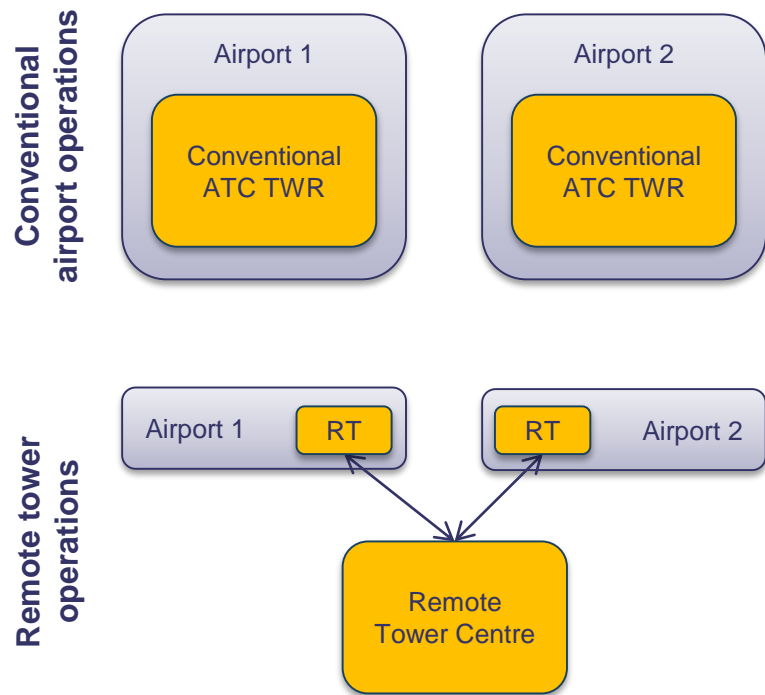
2nd MEAUSE Forum – Cairo – 04/04/16
François-Xavier Richard

OPEN

What is a Remote Tower?

> **enables Air Traffic Control services from a remote location vs standard ATC tower**

> **utilizes innovative technology such as high resolution cameras, microphones, sensors and local processing linked to a remote ATC automation system**

> **provides displays and controls for the air traffic controller to deliver the same ATC services as if at the conventional tower**

> **offers potential to consolidate multiple airport ATC operations into a single remote tower center**

Conventional airport operations

Airport 1	Airport 2
Conventional ATC TWR	Conventional ATC TWR

Remote tower operations

Airport 1 — RT ⟷ Remote Tower Centre ⟷ RT — Airport 2

Deliver reliable and safe ATC services more efficiently leveraging today's modern technology and communication capabilities

OPEN

THALES

ANSPs interest in RCT implementation: Benefits

Cost	• **significantly reduce CAPEX investments** • **improve ATCO productivity through multi-airport consolidation and roster optimisation**
Service Provision	• **facilitates ATC services at previously "unjustifiable" sites** • **extend services to dangerous locations (war zones)**
Contingency	• **enables flexible operations off site** • **facilitates disaster recovery**
Safety & Security	• **enhance situational awareness** • **deliver visibility beyond human capacity**
Flexibility	• **adapts to airport expansion and changes** • **reconfigure operations to adapt to operational variability**

ANSPs can realize substantial economic value by consolidating remote tower operations for a group of airports into a single remote tower center

THALES

Thales approach for RCT concept

> **Not a new product but an expansion of our Automation functionalities,**

   - most widely-deployed and flexible ATC automation system

   - 140 air traffic control centres supporting tower, approach, en route & oceanic services

> **Solution builds upon significant functional and operational overlap with existing TopSky-ATC – reduced cost to implement through system extension**

   - Offers customers higher level of integration (simplified coordination, one FDP, common data, integrated visualizations, …)

   - Leverage existing investment (simplified infrastructure, etc)

   - Achieve commonality (reduced training, common technical tools, etc)

> **Configurable from small heliport to large airport with functionality suited to each environment**

Built upon our large Automation installed base, Thales Remote Tower concept, provides a flexible and scalable solution to enable lower cost tower ATC services

THALES

TopSky-ATC Remote Tower (WAC 2016)

Implementation and Use case

Engineering/Simulation/Training

> Capacity to de-risk deployment using our Tower simulator, to study and validate sensor location scenario

> Training by using existing Scansim Tower platform expanded to RCT function

Operational prospects

> Small airports without ATS,

> Isolated island with airports,

> Off-shore platform for helicopters,

> Dangerous locations (human security)

SESAR validation project with 2 ANSPs

> Hungarocontrol, Oro Navigacjia & Thales

> Remotely providing ATS for multiple Airports

> RCT Center with flexible allocation to RT modules

Partnership agreement with Searidge

> Leader and Innovator in airport intelligent video systems

> Extensive experience implementing systems in this emerging market

Thales offers an easy to adopt, complete & flexible solution for your safety critical Remote Tower ATC requirements

THALES

THANK

YOU

FOR

YOUR

ATTENTION