

'ATC resilience from a solution developer perspective'

@ECAC/EU Dialogue, 13-14 October 2026

Raymond WEI

VP CTO

THALES Airspace Mobility
Solutions

www.thalesgroup.com



Cloud computing and ATC resilience

1. Achieved – Cloud-native ATC product safety concept: 'Vanilla Kubernetes' and 'ATC sidecar'

3. Going forward – Defining cloud portability standards and means of compliance to safety: NSDM

Enable usage of cloud-native technologies in ATC

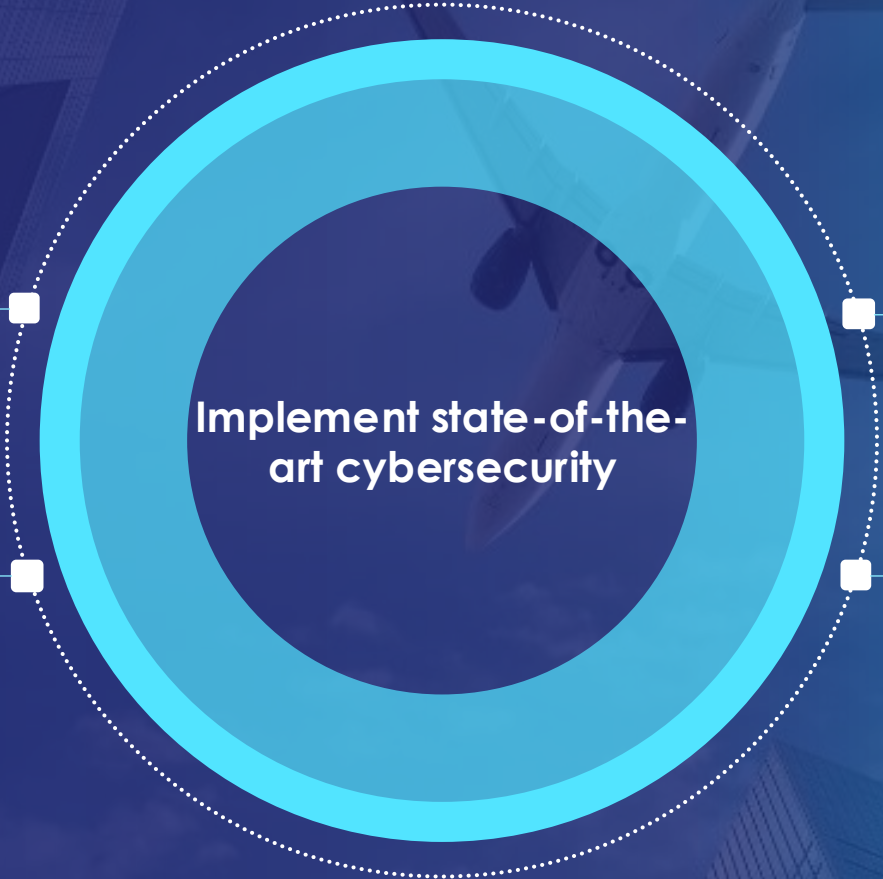
2. Started – ATC product DPO certification

4. Future breakthrough – Adopting safely advanced cloud computing concepts: elasticity, hybrid clouds,...

Security by design and ATC resilience

1. Achieved – Implement
'Security by Design' in ATC
products: defense in depth,
least privilege

3. Going forward – Survive
Mythos and Mythos-likes



Implement state-of-the-
art cybersecurity

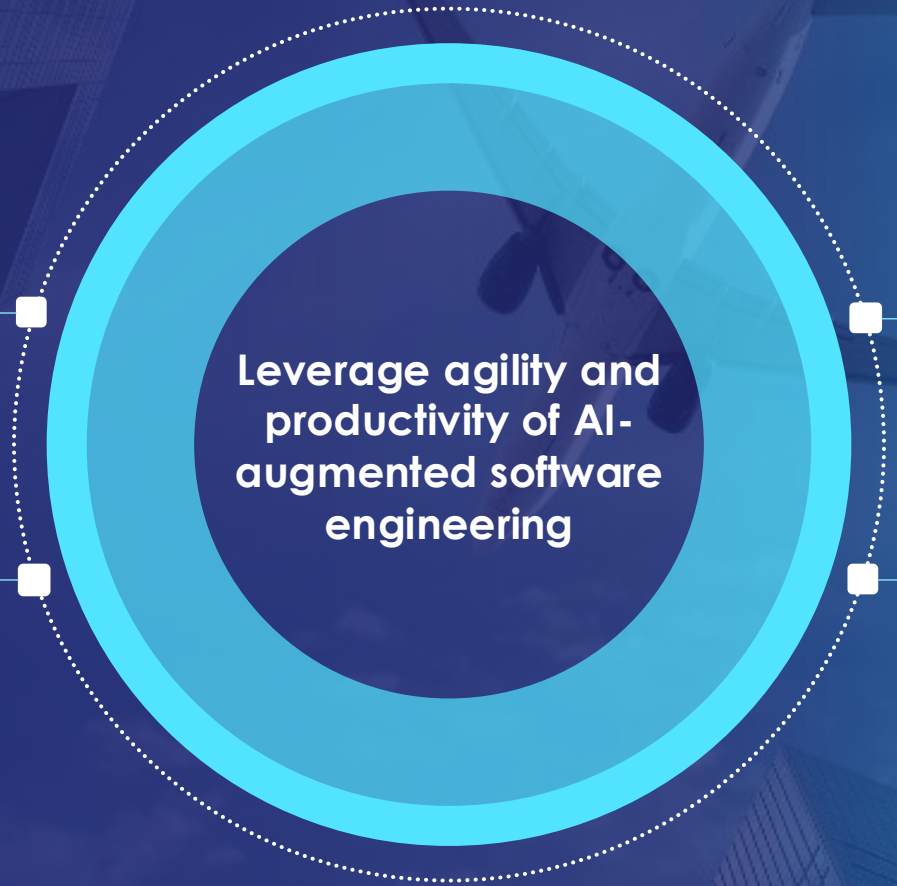
2. Achieved – Coast-to-
coast secure engineering
process: from secure code
to penetration tests

4. Future breakthrough –
Revisit ATC ecosystem
security concepts: system to
system communications,
data quality, ...

AI-augmented engineering and ATC resilience

1. Ongoing – Establish confidence in AI-augmented software with AI-assurance

3. Going forward – Take care of the whole AI zoo beyond LLMs: PINNs, LTM...



Leverage agility and productivity of AI-augmented software engineering

2. Ongoing – Leverage agentic AI while keeping humans in control and validation

4. Future breakthrough – Use AI to enrich ATC safety core concepts: testing, monitoring...

A few takeaways

- > Leveraging available technological innovation in ATC works, provided resilience is addressed seriously from design to operations
- > ATC domain knowledge - architecture, functions, solutions, means of compliance - is the basement we are building on, therefore we need to preserve and leverage it
- > ATC design principles and solutions need to be reinforced to keep the pace with rapidly changing opportunities - Artificial Intelligence - and threats - cybersecurity
- > Cooperation between users and operators, policymakers and enforcers, solution providers is a must to progress
- > If we want to accelerate even more, even more of this cooperation is needed