

Wrap-up and next steps

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Conclusions from discussion

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At the core of the Engage KTN is the definition of various thematic challenges: new ideas suggested by the research community, not already included within the scope of an existing SESAR project. They are developed along with the ATM concepts roadmap and complementarily with some of the network's PhDs and theses.

Thematic challenge 1

Vulnerabilities and global security of the CNS/ATM system



Edition 2.0, November 2018

*This is an evolving document that summarises the key concepts
(and, later, findings) for thematic challenge 1.*

Abstract

CNS/ATM components (e.g., ADS-B, SWIM, datalink, Asterix) of the current and future air transport system present vulnerabilities that could be used to perform an "attack". Further investigations are necessary to mitigate these vulnerabilities, moving towards a cyber-resilient system, fully characterising ATM data, its confidentiality, integrity and availability requirements. A better understanding of the safety-security trade-off is required. Additional security assessments for legacy systems are also needed to identify possible mitigating controls in order to improve cyber-resilience without having to replace and retest. Future systems security by design is essential: a new generation of systems architectures and applications should be explored to ensure confidentiality, cyber-resilience, fault tolerance, scalability, efficiency, flexibility and trust among data owners. Collaborative, security-related information exchange is essential to all actors in aviation. This is specially challenging in a multi-stakeholder, multi-system environment such as ATM, where confidentiality and trust are key.

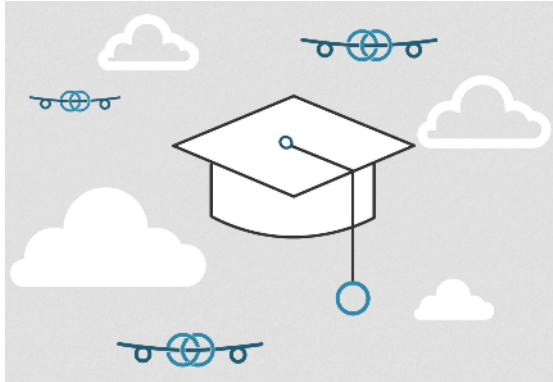
Next steps – cybersecurity context

- refresh the challenge text and re-publish
- presentations on the website
- elements within:
 - 11 PhDs launching in April
 - ≈8 focused projects
 - 1st catalyst funding Call
 - 12 month duration; €60k

Engage consortium to discuss PhDs/ projects relating to cybersecurity:

- next phase of workshop prog.
- SIDs conference
- summer school (?)
- *research gap analysis/mapping; future calls*

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Next steps – wider context

- review of the workshop programme, currently
 - TC1 Vulnerabilities & global security of CNS/ATM systems
 - TC2 Data-driven trajectory prediction
 - TC3 Efficient provision & use of MET information
 - TC4 Novel & more effective allocation markets
- 4-day summer school
 - Belgrade, September (w/c 09SEP)
 - demand-led content
- 9th SESAR Innovation Days conference
 - Athens, during the week of 02-06 December
 - dedicated TC events (TBD)