ICAO EUR/NAT DGCA 2022

Cyber-Resilience for Operators

IATA's international support

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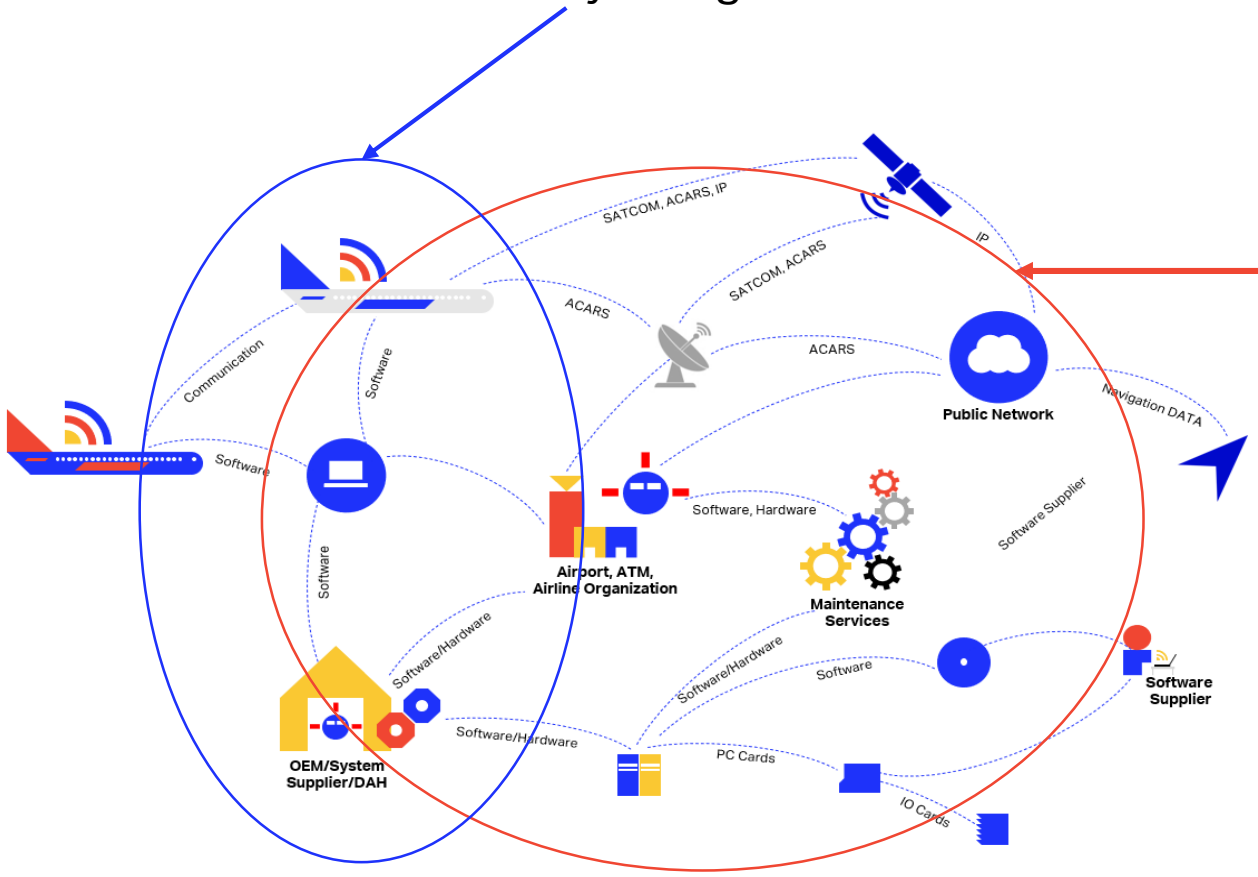
Current Scope of the Civil Aviation

Safety of flight



Aviation Cyber Resilience

We are moving to a new massively interconnected system environment

Critical Information and Systems which

- connect to, maintain and/or operate the aircraft or its critical airline functions
- are used to support the critical airline operations
- are connected, maintained and/or operated by a supply chain party for critical aircraft or airline functions

need to be cyber protected, updated and monitored!

Confluence of Cyber-Resilience for Operators

International regulation in time of Restart and Digital Transformation

Shaping the nature of the industry response to the cyber security challenge

- Aviation Cyber Security Legislation, Standards and AMCs/MoCs development
- Regional/local regulations over critical infrastructures requires adaptations for compliance

IATA has been part of different working groups, to support **harmonization** of the different frameworks for Aviation Cyber Security

Developing a strategic implementation roadmap including the supply chain

As new digital technologies are integrated into the aviation ecosystem, the overall life-cycle of aviation will be changed forever…

and so will the attack landscape.

Knowledge and information sharing as well as **understanding the shared risks** is essential for cyber resilience of the civil aviation ecosystem.

Increasing the overall aviation cyber awareness

The following needs to happen:

- Manage expectations from the management
- Lower the costs of cyber and hire people
- Report back, in a short time

Find the **right resources**!

ICAO Annex 17 | IOSA | EASA

	ICAO A17*	IOSA	EASA Part-IS
Identification of critical assets	✓	✓	⧗
Assess the risk	✓	✓	⧗
Treatment/transference of risks and acceptance of residual risks	✓	✓	⧗
Monitor and adjust according to threat landscape	✓	✓	⧗
Incident response & recover	✓	✓	⧗
Log & report		✓	⧗
Appoint responsible/accountable Senior Management Official		✓	⧗
Integrate in existing Safety Cyber Security Events in Management Systems		✓	⧗
Information Security Manual		✓	⧗
Have the right people, with the right training and right resources	✓	✓	⧗

* ICAO Standard 4.9.1 is introduced in the EU by way of Implementing Regulation (EU) 2019/1583

IATA

IOSA | Examples of systems and data

- Flight planning/dispatch systems and data to support it
- Load control systems and data
- Aircraft performance calculation systems and data
- Reservation/DCS systems
- Baggage reconciliation systems
- Electronic Flight Bag
- Aircraft Maintenance systems
- Training and Scheduling/rostering systems
- Communication systems/ACARS
- Navigation systems

IATA and International Regulations activities

Since 2018:

Secretariat Study Group on Cyber Security (SSGC)

Trust Framework Study Group (TFSG)

ICAO Cybersecurity Panel CYSECP

ICAO Trust Framework Panel TSP (TBC)

Since 2020 (earlier for SEC):

European Commission

EU Regulation 1583/2019 (Standard ICAO 4.9.1)

NIS Directive (business continuity)

EASA

Aircraft Cybersecurity

PART-IS - Information Security

ECAC

Different working groups support.

Since 2020:

- **ED-201A/DO-391** Aeronautical Information System Security (AISS) Framework Guidance
- **ED-205A/DO-393** Process Standard For Air Traffic Management/Air Navigation Services (ATM/ANS) Ground Systems Security Aspects For Certification/Declaration
- **ED-206/DO-392** Guidance on Information Security Event Management

Conclusions

- We are moving towards a massive **interconnected system** environment;
- Where critical information systems need to be **protected, updated and monitored**
- **Cyber-resilience of operators** focused on:
  - Shaping the nature of the industry response to the cyber security challenge
  - Developing a roadmap for new digital technologies (including supply chain)
  - Increasing aviation cyber awareness.
- Notwithstanding ongoing policy developments, **airline operators** already moving towards a **self protection and control** of their cyber risks.
- IATA urges **ICAO to lead the international debate on cybersecurity risks** in aviation with a view to having a harmonised framework (as oppose to a patchwork of measures) that guarantees cyber-resilience for the entire aviation sector.

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