



Aviation Cyber Security

Background

IATA has successfully represented the airline industry since 1945. In that time there have been numerous challenges stretching across security, safety, and commercial. In the current age of intensified digitization and connectivity, the airline industry is now dealing with a new and critical challenge, namely cyber security.

Technology and digitization not only brings many advantages, but also risks associated with the challenge of finding and managing cyber vulnerabilities across complex, international operations from airports, aircraft operators, Air Traffic Management, and supply chain. This complexity makes the aviation sector globally interdependent and vulnerable to hidden risks and ever-increasing threats. The airline industry is an attractive target for a large number of cyber threat actors with a multitude of motivations, ranging from stealing value in data or monetary, to causing disruptions and harm.

This combined rapid evolution of technology, vulnerabilities, threats and adversary opportunity is occurring against a background of international complexity of cyber security regulations, opaque supply chain integrity and insufficiently understood cyber security risk across all aspects of the aviation sector.

A definition of 'Aviation Cyber Security'

'Aviation Cyber Security' may be defined as cyber security pertaining to aircraft and airport operations.

Aviation Cyber Security may be considered as the convergence of people, processes and technology that come together to protect civil aviation organizations, operations and individuals from digital attacks. Understanding that not all risks can be known or fully mitigated, adequate resilience to digital attacks and ensuring the continuance of safe aviation operations is a key element of cyber security.

The scope of aircraft operations is considered to include: Commercial Air Transport Operation (i.e., an aircraft operation involving remuneration or hire), or General Aviation Operation (i.e., an aircraft operation other than a commercial air transport operation or an aerial work operation).

The Role of IATA

The critical, complex nature of aviation cyber security challenges and the associated inherent risks, directly aligns with the IATA principles and how it uniquely supports its members.

IATA Vision

"Working together to shape the future growth of a safe, secure and sustainable air transport industry that connects and enriches our world."

Tackling the aviation cyber security challenge aligns directly with the IATA Vision. Through leadership and acting now, IATA can positively shape the nature of 'how' the industry responds to the cyber security challenge.

IATA Mission

With the critical nature and scale of the cyber security challenge alongside IATA's mission to represent, lead, and serve the airline industry, there are key opportunities to shape and lead international action now, so that the industry, regulator, national and international response to the cyber security challenge is measured and appropriate.

Representing the airline industry

Only by increasing understanding of the cyber security challenge facing the air transport industry can we effect changes. By advocating for positive cyber security change and the needs of airlines across the globe, IATA can highlight poor practice,

challenge unreasonable cyber security practices and strive for sensible regulations, standards and best practices through influence and engagement with all stakeholders.

Leading the airline industry

It can be challenging for the airline industry to drive a positive cyber security change, increase transparency and make appropriate, risk-based decisions on cyber security. As an informed advocate for cyber security improvements across all aspects of the industry, IATA can advise on and set appropriate industry standards and represent its members in international forums. With IATA in a global leadership role, it will be in a strong position to drive the harmonization of aviation cyber security regulations, approaches and risk management. For its members and the wider industry this will lead to reduced complexity, better awareness of risk, efficiencies and increased international resilience.

Serving the airline industry

IATA can help airlines to operate in a cyber secure, safe and resilient manner. As awareness of the need for cyber security increases across the industry, IATA can also position itself to be the trusted partner to support all industry stakeholders, including those that support or supply the aviation industry.

Next Steps

IATA Internal Governance and Structures

- As part of the formal IATA governance the newly formed IATA Security Advisory Council (SAC) will advise and guide IATA towards answering the cyber security challenges and opportunities faced by IATA and its airline members. The SAC will identify pain points, endorse the development of SARPs as well as speak with one voice to improve cyber security posture and reduce complexity.
- In view of the newly formed IATA Governance Structure, aviation cyber security cross-cutting issues related to, *inter alia*, safety, privacy of data, and the Passenger Standards Conference (PSC), will be collaboratively addressed with the Safety, Flight and Ground Operations Advisory Council (SFGOAC) and the Digital Transformation Advisory Council (DTAC).

IATA Aviation Cyber Security Strategy and Vision

- In consultation with IATA leadership, members and industry partners, an IATA Aviation Cyber Strategy and Vision is to be developed.
- Alongside the IATA Aviation Cyber Security Strategy and Vision, a delivery roadmap will lay out how the strategy is delivered.

Stakeholder Engagement

- IATA will engage with its members, industry leaders and stakeholders to develop and subsequently communicate the IATA role and vision in global aviation cyber security.
- IATA will ensure that appropriate partnerships are established that will enable the IATA Aviation Cyber Security Strategy and Vision to be delivered.

Aviation Cyber Security Action

- Taking industry insight, gained during the successful IATA Aviation Cyber Security Roundtable, held in April 2019 in Singapore, some actionable short-term cyber security steps and actions should be identified and conducted by IATA. This will not only assist in reducing of cyber security risks but also ensuring that levels of safety and security remain high during the digital transformation of our industry.

Conclusion

On aviation cyber security, IATA, along with the airline industry and all other air transport industry stakeholders, faces a complex, critical challenge that is yet to have a clear answer.

By taking an active leadership role on this challenge, IATA is in a unique position to systemically reduce aviation cyber security risk for its members across the globe, as well as securing the continued growth of air transport by developing a global cyber security framework as well as standards covering the entire supply chain. This will fit into an integrated risk management approach combined with threat intelligence and real time information sharing.