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# CANSO Standard of Excellence in Cybersecurity





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## CANSO introduction

- ✈️ CANSO is the voice of the air traffic management (ATM) industry. We work with our Members from around the globe to continuously improve ATM performance.
- ✈️ The performance of the future ATM system relies on a high level of security across the whole aviation industry.



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# CANSO Standard of Excellence in Cybersecurity

## Cybersecurity Culture

Development of a positive and proactive cybersecurity culture

### CANSO Emergency Response Planning Guide

- Planning Guide
- Contingency Procedures
- Lessons Learned

### CANSO Standard of Excellence in Cybersecurity

- Maturity Model
- Advice and Lessons Learned

### CANSO Cyber Risk Assessment Guide

- Risk Assessment Guide
- Risk Matrix
- Threat Landscape



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# Why is cybersecurity necessary?

- ✈ It is necessary to increase sharing of information and the creation of a common situational awareness for all aviation stakeholders with the aim to enhance the efficiency of operations and raise productivity.
- ✈ New technologies increase the potential for cyber-attack. Furthermore, the potential vulnerabilities are growing because current and next generation systems, like NextGen and SESAR, demand more information sharing through increased use of commercially available information technology, shared network and computing infrastructures, and network-centric architectures and operations.



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## What is the regulatory requirement for cybersecurity?

- ✈ States must have to identify their critical information and communications technology systems and data used for civil aviation.
- ✈ Each Contracting State should ensure that the measures implemented protect, as appropriate, the confidentiality, integrity and availability of the identified critical systems and/or data.



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## What are the top-level security requirements for data and information?

✈ Of paramount importance to cybersecurity in ATM is data integrity and availability, but it is important to fully understand the wider top-level security requirements for data and information:

- ✈ Confidentiality
- ✈ Integrity
- ✈ Availability
- ✈ Authentication
- ✈ Authorisation
- ✈ Non-repudiation
- ✈ Traceability



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## CANSO Standard of Excellence in Cybersecurity

- ✈ This Standard of Excellence (SoE) contains the cybersecurity maturity model to enable an Air Navigation Service Provider (ANSP) to assess its own as well as their suppliers' cybersecurity maturity.
- ✈ The maturity model comprises thirteen elements based on six functions that would be expected in an organization with an effective approach to cybersecurity.

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## Introduction to Cybersecurity task force initiative

### ✈️ CANSO Cyber Safety Task Force (CSTF)

- ✈️ The CSTF is working on the development of a cyber maturity model that focuses on how the ATM service provider prepares for, detects, responds and recovers from a cyber incident, helping to ensure that ATM services remain safe during and following a cyber-attack. It also provides guidance on cyber security risk assessment

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## Partnership with AIRBUS

- ✈ Present the CTF and partnership with Airbus
- ✈ Airbus return of experience
- ✈ Approach to support TAM Cybersecurity



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# CANSO LAC CTF and Airbus

## ✈ Why Airbus ?

- ✈ Pioneers of cybersecurity in aircraft design
- ✈ From “protecting the aircraft” to “protecting the aviation ecosystem”

## ✈ Apsys, the Airbus unit expert in security risk management

## ✈ CANSO/Airbus long-term partnership



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# AIRBUS: Cybersecurity by design

- ✈ Security in Aircraft lifecycle
- ✈ Risk based approach
- ✈ Compliant with new industry standards (Eurocae and RTCA)
  - ✈ No single point of vulnerability
  - ✈ Segregation of security domains based on criticality (safety first)
  - ✈ Security Assurance levels



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# Approach to support LATAM Cybersecurity

## ✈ CANSO Cybersecurity project for the Americas

On December 2019, the CANSO Latin America and Caribbean CEO Committee (LAC3) approved the Latin America and Caribbean Cybersecurity plan

- ✈ Create awareness
- ✈ Development of a cybersecurity policy template
- ✈ Cybersecurity training
- ✈ Cybersecurity maturity level
- ✈ Regional cybersecurity analysis team and information exchange



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## Partnership with ICAO NACC Regional Office

- ✈ Identification that the States of the region have the same needs and challenges.
- ✈ That both Organizations support States in the development of their regulations and operational safety improvement facilities.
- ✈ Standardization that helps to improve implementation
- ✈ Recognize that working together makes us more efficient and get results in less time.

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# Cybersecurity Task Force



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*Javier Vanegas*  
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*Andy Boff*  
Helios / CANSO

**“People Working together can do anything”**



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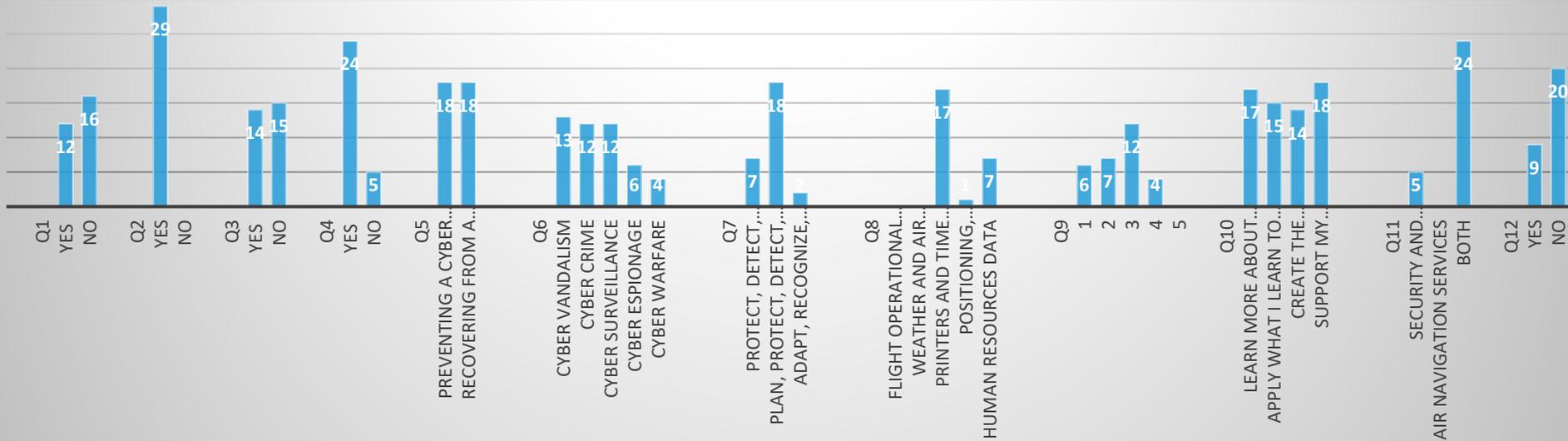


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# Assessment about States Aviation System and Infrastructure

## Cybersecurity Survey





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## ICAO-CANSO Cyber security awareness webinars

- ✈️ Establish a project to support Cybersecurity Implementation in the Region.
- ✈️ Introduction of Cybersecurity Police Manual for the Region (ICAO-CANSO-AIRBUS).
- ✈️ Face to face meetings on maturity level (Cuba).

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THANK YOU!