

Singapore Aviation Cybersecurity Framework and Structure

Regional Workshop on Cybersecurity In Aviation
5-7 Feb 2020

Objective

To share about Singapore's Aviation Cybersecurity Framework and Structure

Agenda

- Background
- Legislation, Policy and Compliance
- Education and Awareness



Background

CAAS Cybersecurity Branch

Cybersecurity Development Section

- Partner CAAS divisions and aviation sector to strengthen cybersecurity posture
- Drive cybersecurity projects to achieve security outcomes
- Conduct Education and awareness activities
- Enhance cybersecurity resiliency and readiness

Cybersecurity Regulation & Operations Section

- Develop cybersecurity strategies for the aviation sector
- Regulate aviation sector on cybersecurity
- Monitor sectoral cybersecurity readiness and Formulate Incident Response Plan
- Support incident management and SOC operations

Legislation, Policy and Compliance

Singapore's Cybersecurity Act

- Cybersecurity Act was passed in parliament on 5 Feb 2018, came into force in 2nd half of 2018
- Law provides for the oversight & maintenance of cybersecurity
- Proactive approach for the protection of Critical Information Infrastructure (CII) to ensure continuous delivery of essential services
- Common framework for governing cybersecurity across all sectors
- Effective powers for incident response and investigation
- Powers vested in the Commissioner for Cybersecurity (CE of Cyber Security Agency – CSA)



 CHANNEL NEWSASIA



Singapore

Cybersecurity Bill passed in Parliament; MPs raise questions on privacy, cost

The Ministry for Communications and Information will continue to work with stakeholders from the public and private sectors to ensure that Singapore's laws remain robust and relevant, Dr Yaacob said.

Cybersecurity Act 2018 – Key Features

1. Protection of Critical Information Infrastructure

- Essential services
- Designation of CIIs and their owners (CIIOs)
- Responsibilities of CIIOs in protecting their CIIs

2. Investigation of cybersecurity threats and incidents

- Powers to respond to cybersecurity threats and incidents

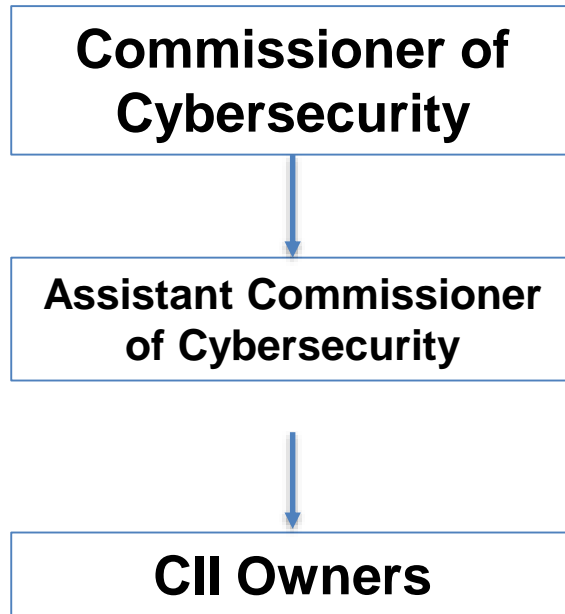
3. Information sharing

- Facilitate sharing of cybersecurity information with and by the Cyber Security Agency (CSA)

4. Licensing of cybersecurity service providers

- Penetration testing and managed security operations centre (SOC) services

CAAS is delegated regulatory powers to ensure compliance by CII owners under the Cybersecurity Act



The Cybersecurity Act sets out Essential Services in the aviation sector which cover the following areas:

- Air navigation services
- Airport passenger control and operations
- Airport baggage and cargo handling operations
- Aerodrome operations
- Flight operations of aircraft

Areas of compliance include risk management and information sharing such as audits, risk assessment and incident reporting

Security Directive on Cybersecurity

- Applicable to Singapore Air Operators with effect from 31 May 2019
- Air operators are to implement a Singapore Operator Cybersecurity Programme
- Extensive consultation carried out with air operators to take into account feasibility and implementation concerns
- Intended outcome
 - Strengthen cybersecurity and data security measures of important systems for aviation operations
 - Availability of systems as well as the confidentiality and integrity of data including customer information

Aviation Cybersecurity Committee (ACC) - Governance

- As cybersecurity issues can have implications across the aviation sector, it is essential to establish close coordination among key aviation stakeholders
- CAAS established a high-level forum to enhance cybersecurity collaboration, and development of strategies in the aviation sector
 - Comprises CE-level representatives from key aviation entities
 - ACC meeting is scheduled quarterly

Education and Awareness

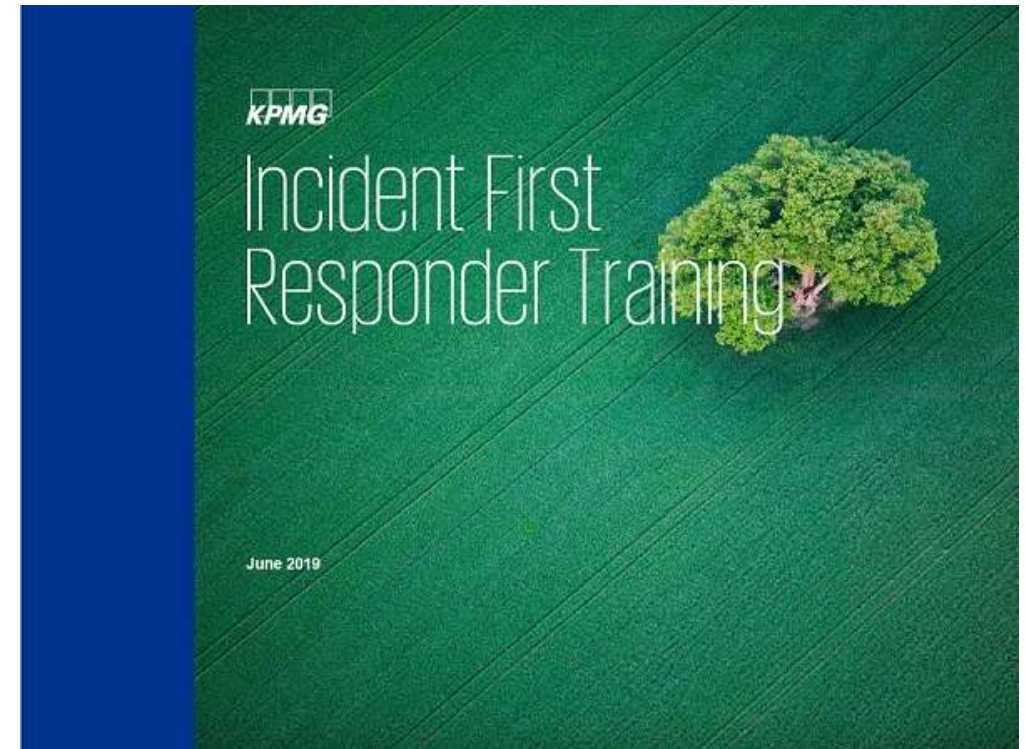
CAAS formed the Aviation Cybersecurity Community (ACSC) for engagement and information sharing

- Aviation Cybersecurity Community (ACSC) was established by CAAS in 2014:
 - Foster closer working relationships and develop greater synergy in cybersecurity efforts within the Aviation Sector
 - Facilitates information sharing
- CAAS organises cybersecurity seminars and workshops for the ACSC to create awareness and build capability, and enhance cyber resiliency



Aviation Cyber Security Community Workshop in 2019

- Training attended by about 100 participants from aviation community
- Focus on triage Standard Operating Procedure for first responders to assess whether an incident is cybersecurity related
- Establishes common understanding on incident notification and response protocols etc.



Thank you