2023

IIM COM 5 project "Strengthening Aviation Defenses: A Comprehensive Compilation of Training Programs on Aviation Cybersecurity and Cyber Resilience for Air Navigation Services"

IIM COM 5 Project

Infrastructure & Information Management

APIRG Sub Group

01/05/2023

APIRG
INFRASTRUCTURE & INFORMATION (IIM) SUB-GROUP
COMMUNICATION PROJECT 5

Africa-Indian Ocean (AFI) Region Air Navigation Services Cyber Resilience Framework

Document information	
APIRG Subgroup	Infrastructure & Information Management APIRG Sub Group
Project Title	Assessment of AFI Air Navigation Services Cyber Resilience
Project Number	IIM SG Communication Project n°5 (COM 5)
Project Coordinator	Côte d'Ivoire
Deliverable Name	Comprehensive Compilation of Training Programs on Aviation Cybersecurity and Cyber Resilience for Air Navigation Service
Deliverable ID	D11
Edition	00.00.01
Tasks Contributors	
ASECNA, Benin, Cameroon, Côte d'Ivoire, Gambia, Ghana, IATA, Kenya, Nigeria, South Africa, Somalia, Madagascar	

Document History

Edition	Date	Status	Author	Justification
00.00.01	04/12/2022	Initial Draft	GNASSOU Sandrine	Initial edition
00.01.00	31/05/2023	Final	GNASSOU Sandrine DIARRA Lamine	Non exhaustive compilation of aviation cyber training

Table of contents

1. Introduction

The IIM COM 5 project conducted a study on the available training programs in cybersecurity and cyber resilience within civil aviation, with a specific focus on air navigation services.

The study aimed to assess the current landscape of training offerings in these domains, considering the unique requirements and challenges faced by the aviation industry.
By analyzing the available programs, the project sought to identify gaps and opportunities for enhancing cybersecurity and cyber resilience knowledge and skills among aviation professionals.

The findings revealed a varied range of training options, including courses, workshops, and certifications, targeting different aspects of cybersecurity and cyber resilience within the civil aviation sector. However, the study also highlighted the need for greater alignment between training offerings and the specific needs of air navigation services.

Based on the study's results, recommendations were formulated to improve the effectiveness and relevance of training initiatives. These recommendations emphasized the importance of tailored training programs that address the unique cyber threats and vulnerabilities encountered in air navigation services. Additionally, the project proposed the establishment of collaborative partnerships between training providers, aviation authorities, and industry stakeholders to foster knowledge sharing and the development of standardized cybersecurity training frameworks.

Overall, the study provided valuable insights into the current state of cybersecurity and cyber resilience training in civil aviation, with a particular focus on air navigation services. The project's findings and recommendations serve as a foundation for enhancing training programs and promoting a stronger cybersecurity culture within the industry.

2. Summary of Findings

As part of the project's initiatives, the IIM COM 5 project conducted an inventory and evaluation of training programs in aviation cybersecurity. The outcomes of this undertaking encompass:

- Compilation of a comprehensive list of available aviation cybersecurity training programs.
- Analysis of cybersecurity training offerings pertinent to air navigation services

2.1 Comprehensive list of available aviation cybersecurity training programs.

Please note that the availability of specific courses may vary over time, and it's recommended to research and contact the respective training providers for up-to-date information.

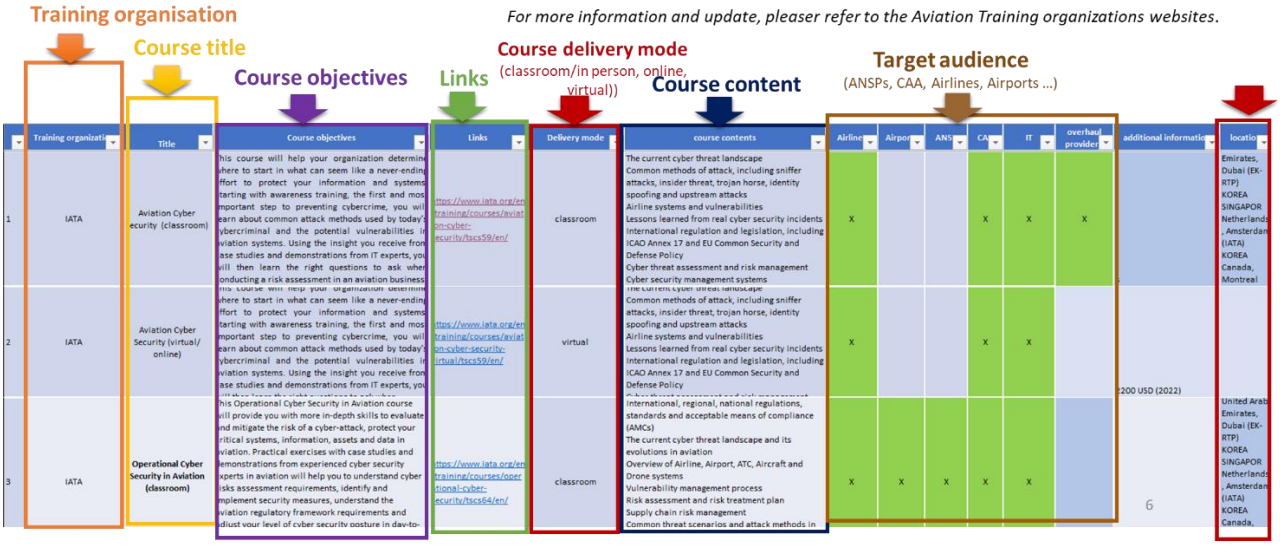
A non-exhaustive list of available Aviation cybersecurity and cyber resilience training identified by the IIM COM 5 project by January 2023 is provided in appendix A.

For each training offer, the following information is provided (see figure below):

- Training Program Name: The name or title of the training program.
- Training Provider: The organization or entity responsible for delivering the training.
- Training Format: Specifies whether the training is conducted in-person (face-to-face), online (webinar or e-learning), or a combination of both.
- Target Audience: The intended participants or professionals for whom the training is designed.
- Training Objectives: Describes the specific goals and learning outcomes of the training program.
- Course Topics: An overview of the key subjects or topics covered in the training.

Please note that:

- *the above information may vary depending on the specific training program and the information available.*
- *For accurate and up to date information, please refer to the Aviation Training organizations websites.*



2.2 Analysis of cybersecurity training offerings pertinent to air navigation services

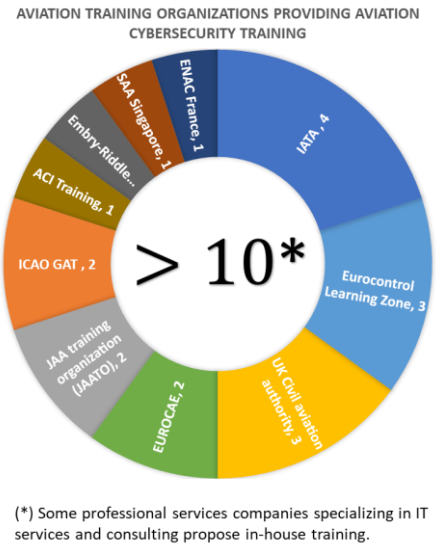
2.2.1 Overview

The following figured provides an overview of results of the analysis cybersecurity training offerings pertinent to air navigation services (January 2023).

2.2.2 Availability of Training Offerings in Africa

The availability of aviation cybersecurity training programs in Africa varies across different regions and countries. Some countries may have a more extensive range of training options, while others may have limited offerings.

Collaboration between international organizations, regional aviation authorities, and local training providers plays a crucial role in promoting and organizing training initiatives in Africa.



(*) Some professional services companies specializing in IT services and consulting propose in-house training.

2.2.3 Training Providers

1. **International Organizations**

International Organizations: Institutions like ICAO, ACI, and IATA contribute to the availability of aviation cybersecurity training programs in Africa. They often collaborate with local stakeholders to deliver workshops, webinars, and e-learning courses.

   a. **Civil Aviation Organization (ICAO) Cybersecurity Training:**
   - Cybersecurity in Civil Aviation
   - Cybersecurity Management Systems
   - Cybersecurity Incident Response
   - Cybersecurity Risk Assessment

   b. **Airports Council International (ACI) Training:**
   - Airport Cybersecurity
   - Cybersecurity Incident Response for Airports
   - Cybersecurity Awareness for Airport Personnel

2. **Civil Aviation Authority Training:**

National civil aviation authorities in Africa often organize or collaborate with training providers to offer cybersecurity training programs tailored to the needs of the aviation industry.
   - Cybersecurity for Air Traffic Management
   - Cyber Resilience for Aviation Organizations
   - Aviation Cybersecurity Risk Assessment

3. **International Air Transport Association (IATA) Training:**

   - Aviation Cybersecurity Awareness
   - Cybersecurity Management for Airline Operations
   - Cybersecurity Incident Response Planning

4. **Regional Aviation Organizations (seminar, workshops)**

Regional Aviation Security Organizations: AFCAC, EAC CASSOA, and other regional aviation security bodies in Africa facilitate the development and delivery of cybersecurity training programs specifically designed for the region (seminars, workshops, …).

- African Civil Aviation Commission (AFCAC) (seminar, workshop)
  - Cybersecurity in African Airports
  - Cyber Resilience in Air Navigation Services
- East African Community (EAC) Civil Aviation Safety and Security Oversight Agency (CASSOA)
  - Cybersecurity in East African Aviation

5. **Industry-specific Training Providers:**

Specialized training institutes focused on aviation security and cybersecurity also offer relevant training programs in Africa. These institutes may collaborate with aviation authorities and international organizations to enhance their training offerings.

- Aviation Security Training Institutes
- Cybersecurity Training Institutes with aviation-focused courses

3. Conclusion and recommendations

It is important to note that the analysis provided in this document is a general overview and the availability and format of aviation cybersecurity training programs may vary over time.

Organizations such as AFCAC, regional aviation authorities, and local civil aviation authorities are instrumental in providing training opportunities and fostering a cybersecurity culture within the African aviation community.

It is recommended to consult specific training providers and organizations for the most up-to-date information on training offerings in Africa.

Appendix A Comprehensive list of available aviation cybersecurity training programs

_____ END_____