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UNITING AVIATION

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ICAO Regional USAP-CMA Seminar

Auditing Annex 17 Standards

Cairo, 15 to 17 October 2018



Module Objective

At the end of this module, the participants will be familiar with the interpretation used when auditing certain Annex 17 Standards, as well as different approaches that may be used by States to implement Annex 17 Standards.



Module Outline

- Annex 17 and Aviation Security Manual
- Structure of Annex 17
- Interpretation of certain Annex 17 Standards
- Different approaches to implementing Annex 17 Standards
- Risk-based Standards



Annex 17

- First edition – March 1974
- Tenth edition (Amendment 15) – April 2017
- 84 Standards
- 32 Recommended Practices
- 30 Definitions
- Amendment 16 – 16 November 2018





Aviation Security Manual

- Tenth edition – 2017
- 18 Chapters, 43 Appendices
- Guidance on compliance with Annex 17
- Generally recognized best practices and procedures
- Not the only means of compliance, other methods of meeting the SARPs may be equally appropriate





Article 37



Each Contracting State undertakes to collaborate in securing the **highest practicable degree of uniformity** in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation. To this end **ICAO shall adopt and amend from time to time, as may be necessary, international standards and recommended practices** and procedures dealing with: a)...k) and such other matters concerned with the safety, regularity, and efficiency of air navigation as may from time to time appear appropriate.



Standard



Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as **necessary** for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38 of the Convention.



Recommended Practice



Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as **desirable** in the interests of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.



Appendices



Appendices comprising material grouped separately for convenience but **forming part** of the Standards and Recommended Practices adopted by the Council.



Definitions



Definitions of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is **an essential part** of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.



Notes



Notes included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question, but **not constituting part** of the Standards or Recommended Practices.



Attachments



Attachments comprising material supplementary to the Standards and Recommended Practices, or included as **a guide** to their application.



Structure of Annex 17

- CHAPTER 1. Definitions
- CHAPTER 2. General principles
- CHAPTER 3. Organization
- CHAPTER 4. Preventive security measures
- CHAPTER 5. Management of response to acts of unlawful interference



Missing definitions from Annex 17

- Cyber threats
- Landside
- Security risk
- Transfer passenger/hold baggage
- Unauthorized interference



CHAPTER 2. General principles

- 2.1 Objectives
- 2.2 Applicability
- 2.3 Security and facilitation
- 2.4 International cooperation
- 2.5 Innovation, research and development



Organization and regulations



2.1.2 Each Contracting State shall establish an **organization** and develop and implement **regulations, practices and procedures** to safeguard civil aviation against acts of unlawful interference taking into account the safety, regularity and efficiency of flights.

2.1.3 Each Contracting State shall ensure that such an organization and such regulations, practices and procedures:

- a) **protect the safety** of passengers, crew, ground personnel and the general public in all matters related to safeguarding against acts of unlawful interference with civil aviation; and
- b) are capable of **responding rapidly to meet any increased security threat.**





Applicability



2.2.2 Each Contracting State shall ensure that **measures** designed to safeguard against acts of unlawful interference **are applied to domestic operations** to the extent practicable, based upon a **security risk assessment** carried out by the relevant national authorities.





CHAPTER 3. Organization

- 3.1 National organization and appropriate authority
- 3.2 Airport operations
- 3.3 Aircraft operators
- 3.4 Quality control and qualifications
- 3.5 Air traffic service providers



NCASP



3.1.1 Each Contracting State shall establish and implement a **written national civil aviation security programme** to safeguard civil aviation operations against acts of unlawful interference, **through regulations, practices and procedures** which take into account the safety, regularity and efficiency of flights.

3.1.9 - 3.1.10 Each Contracting State shall **make available** to its airport and aircraft operators and air traffic service providers operating in its territory and other entities concerned, a written version of the **appropriate parts** of its national civil aviation security programme **and/or relevant information or guidelines** enabling them **to meet the requirements** of the national civil aviation security programme.





Appropriate authority



3.1.2 Each Contracting State shall **designate and specify to ICAO an appropriate authority** within its administration to be **responsible for the development, implementation and maintenance of the national civil aviation security programme.**

3.1.4 - 3.1.5 Each Contracting State shall require the **appropriate authority to define and allocate tasks and coordinate activities** between the departments, agencies and other organizations of the State, airport and aircraft operators, air traffic service providers and other entities concerned with or responsible for the implementation of various aspects of the national civil aviation security programme.





NCASC



3.1.5 – 3.1.6 Each Contracting State shall establish **a national aviation security committee or similar arrangements** for the purpose of **coordinating security activities** between the departments, agencies and other organizations of the State, airport and aircraft operators, air traffic service providers and other entities concerned with or responsible for the implementation of various aspects of the national civil aviation security programme.





Level and nature of threat



3.1.3 Each Contracting State shall **keep under constant review the level and nature of threat to civil aviation within its territory and airspace above it**, and establish and implement **policies and procedures to adjust relevant elements of its national civil aviation security programme accordingly**, based upon a **security risk assessment** carried out by the relevant national authorities.





NEW - Sharing relevant information



3.1.4 (New) Each Contracting State shall establish and **implement procedures to share**, as appropriate, with its airport operators, aircraft operators, air traffic service providers or other entities concerned, in a practical and timely manner, **relevant information to assist them to conduct effective security risk assessments relating to their operations.**
(Amendment 16)





NCASTP



3.1.6 - 3.1.7 Each Contracting State shall require **the appropriate authority to ensure** the development and implementation of a **national training programme for personnel of all entities** involved with or responsible for the implementation of various aspects of the national civil aviation security programme. This training programme shall be designed to ensure the effectiveness of the national civil aviation security programme.

3.1.7 - 3.1.8 Each Contracting State shall ensure the development and implementation of **training programmes** and an **instructor certification system** in accordance with the national civil aviation security programme.





ASP/ASC



3.2.1 Each Contracting State shall require each airport serving civil aviation to establish, implement and maintain a **written airport security programme appropriate to meet the requirements of the national civil aviation security programme.**

3.2.2 Each Contracting State shall ensure that **an authority at each airport** serving civil aviation is **responsible for coordinating the implementation of security controls.**

3.2.3 Each Contracting State shall ensure that an **airport security committee** at each airport serving civil aviation is established **to assist the authority** mentioned under 3.2.2 in its role of **coordinating the implementation of security controls and procedures** as specified in the airport security programme.





AOSP



3.3.1 Each Contracting State shall ensure that **commercial air transport operators providing service from that State** have established, implemented and maintained a **written operator security programme** that **meets the requirements** of the national civil aviation security programme of that State.





Certification



3.4.3 Each Contracting State shall ensure that the **persons carrying out screening operations are certified** according to the requirements of the national civil aviation security programme to ensure that performance standards are consistently and reliably achieved.





NQCP



3.4.4 Each Contracting State shall require **the appropriate authority** to develop, implement and maintain a **national civil aviation security quality control programme to determine compliance with and validate the effectiveness** of its national civil aviation security programme.

3.4.5 Each Contracting State shall ensure that the **implementation of security measures is regularly subjected to verification of compliance** with the national civil aviation security programme. The **priorities and frequency of monitoring** shall be **determined** on the basis of **risk assessment** carried out by the relevant authorities.





NQCP



3.4.6 Each Contracting State shall arrange for **security audits, tests, surveys and inspections** to be conducted on a **regular basis**, to verify compliance with the national civil aviation security programme and **to provide for the rapid and effective rectification of any deficiencies**.

3.4.7 Each Contracting State shall ensure that **the management, setting of priorities and organization of the national civil aviation security quality control programme** shall be undertaken **independently from the entities and persons responsible for the implementation** of the measures taken under the national civil aviation security programme.





National AVSEC inspectors



3.4.7 Each Contracting State shall also:

- a) ensure that the **personnel carrying out security audits, tests, surveys and inspections are trained** to appropriate standards for these tasks in accordance with the national civil aviation security programme;
- b) ensure that the **personnel carrying out security audits, tests, surveys and inspections are afforded the necessary authority to obtain information** to carry out these tasks and **to enforce corrective actions**;





Analysis and reporting



3.4.7 Each Contracting State shall also:

- c) supplement the national civil aviation security quality control programme by establishing a **confidential reporting system** for analysing **security information provided by sources** such as passengers, crew and ground personnel; and
- d) establish a process to **record and analyse the results** of the national civil aviation security quality control programme, to contribute to the effective development and implementation of the national civil aviation security programme, including identifying the **causes and patterns of non-compliance** and verifying that **corrective actions** have been implemented and sustained.





CHAPTER 4. Preventive security measures

- 4.1 Objective
- 4.2 Measures relating to access control
- 4.3 Measures relating to aircraft
- 4.4 Measures relating to passengers and their cabin baggage
- 4.5 Measures relating to hold baggage
- 4.6 Measures relating to cargo, mail and other goods
- 4.7 Measures relating to special categories of passengers
- 4.8 Measures relating to the landside
- **4.9 Measures relating to cyber threats**



Access control



4.2.1 Each Contracting State shall ensure that the **access to airside** areas at airports serving civil aviation **is controlled** in order to **prevent unauthorized entry**.

4.2.2 Each Contracting State shall ensure that **security restricted areas are established** at **each airport** serving civil aviation designated by the State based upon a **security risk assessment** carried out by the relevant national authorities.





Persons/vehicles



4.2.6 Each Contracting State shall ensure that **persons other than passengers, together with items carried**, prior to entry into airport security restricted areas serving international civil aviation operations, are **subject to screening and security controls**.

4.2.7 Each Contracting State shall ensure that **vehicles being granted access to security restricted areas, together with items contained** within them, are **subject to screening or other appropriate security controls** in accordance with a **risk assessment** carried out by the relevant national authorities.





Aircraft checks/searches



4.3.1 Each Contracting State shall ensure that **aircraft security checks of originating aircraft** engaged in commercial air transport movements are performed or **an aircraft security search** is carried out. The **determination** of whether it is an aircraft security check or a search that is appropriate shall be based upon a **security risk assessment** carried out by the relevant national authorities.

4.3.2 Each Contracting State shall ensure that **measures are taken** to ensure that any **items left behind by passengers disembarking from transit flights** are **removed** from the aircraft or **otherwise dealt with** appropriately before departure of an aircraft engaged in commercial flights.





Protection of aircraft



4.3.4 Each Contracting State shall ensure that an **aircraft subject to 4.3.1 is protected from unauthorized interference** from the time the aircraft search or check has commenced until the aircraft departs.

4.2.5 Each Contracting State shall ensure that the **movement of persons and vehicles to and from the aircraft is supervised in security restricted areas** in order to prevent unauthorized access to aircraft.





MANPADS



4.3.6 Each Contracting State, **in accordance with the risk assessment** carried out by its relevant national or local authorities, shall ensure that **appropriate measures on the ground or operational procedures are established to mitigate possible attacks against aircraft using MANPADS** and other weapons representing a similar threat to aircraft at or near an airport.





Screening of passengers/baggage



4.4.1 Each Contracting State shall establish measures to ensure that **originating passengers** of commercial air transport operations and **their cabin baggage are screened** prior to boarding an aircraft departing from a security restricted area.

4.5.1 Each Contracting State shall establish measures to ensure that **originating hold baggage is screened** prior to being loaded onto an aircraft engaged in commercial air transport operations departing from restricted area.





NEW : Screening for explosives



4.4.2 (New) Each Contracting State shall ensure **the use of appropriate screening methods** that are capable of **detecting the presence of explosives and explosive devices** carried by passengers on their persons or in cabin baggage. Where these methods are not applied **continuously**, they shall be used in an **unpredictable manner**. (Amendment 16)





Protection of passengers/baggage



4.4.3 – 4.4.4 Each Contracting State shall ensure that **passengers and their cabin baggage** which have been **screened** are **protected from unauthorized interference** from the point of screening until they board their aircraft. If **mixing or contact** does take place, the passengers concerned and their cabin baggage shall be **re-screened before boarding an aircraft**.

4.5.2 Each Contracting State shall ensure that **all hold baggage** to be carried on a commercial aircraft is **protected from unauthorized interference** from the point it is **screened or accepted** into the care of the carrier, whichever is earlier, until departure of the aircraft on which it is to be carried. If the **integrity of hold baggage is jeopardized**, the **hold baggage shall be re-screened** before being placed on board an aircraft.





One-stop security



4.4.2— 4.4.3 Each Contracting State shall ensure that **transfer passengers** of commercial air transport operations and **their cabin baggage are screened** prior to boarding an aircraft, **unless** it has established a **validation process and continuously implements procedures, in collaboration with the other Contracting State** where appropriate, to ensure that **such passengers and their cabin baggage have been screened to an appropriate level at the point of origin and subsequently protected from unauthorized interference** from the point of screening at the originating airport to the departing aircraft at the transfer airport.

4.5.4 Each Contracting State shall ensure that **transfer hold baggage is screened** prior to being loaded onto an aircraft engaged in commercial air transport operations, **unless it has established a validation process and continuously implements procedures**, in collaboration with the other Contracting State where appropriate, to ensure that such hold baggage has been screened at the point of origin and subsequently protected from unauthorized interference from the originating airport to the departing aircraft at the transfer airport.





Transit passengers



4.4.4 **4.4.5** Each Contracting State shall establish at an airport **measures for transit operations to protect transit passengers' cabin baggage from unauthorized interference and protect the integrity** of the security of the **airport of transit**.





Reconciliation/authorization



4.5.3 Each Contracting State shall ensure that commercial air transport operators **do not transport the baggage of persons who are not on board** the aircraft **unless that baggage is identified as unaccompanied and subjected to appropriate screening.**

4.5.5 Each Contracting State shall ensure that commercial air transport operators transport **only items of hold baggage** which have been **individually identified** as **accompanied or unaccompanied, screened to the appropriate standard and accepted for carriage** on that flight by the air carrier. **All such baggage should be recorded** as meeting these criteria and **authorized** for carriage on that flight.





Cargo and mail



4.6.1 Each Contracting State shall ensure that **appropriate security controls, including screening** where practicable, are applied to **cargo and mail**, prior to their being loaded onto an aircraft engaged in **commercial air transport operations**.

4.6.4 Each Contracting State shall ensure that **enhanced security measures** apply to **high-risk cargo and mail** to appropriately **mitigate the threats** associated with it.

4.6.10 Each Contracting State shall ensure that, where **screening of cargo and mail** is conducted, screening is carried out using an **appropriate method or methods**, taking into account the **nature of the consignment**.





Supply chain security



4.6.2 Each Contracting State shall establish a **supply chain security process**, which includes the **approval of regulated agents and/or known consignors**, if such entities are **involved in implementing screening or other security controls of cargo and mail**.

4.6.5 Each Contracting State shall ensure that operators **do not accept cargo or mail** for carriage on an aircraft engaged in commercial air transport operations **unless the application of screening or other security controls is confirmed and accounted for** by a **regulated agent**, or an **entity** that is approved by an appropriate authority. **Cargo and mail which cannot be confirmed and accounted for** by a regulated agent or an entity that is approved by an appropriate authority **shall be subjected to screening**.





Cargo and mail



4.6.3 Each Contracting State shall ensure that **cargo and mail** to be carried on a commercial aircraft are **protected from unauthorized interference** from the point screening or other security controls are applied **until departure of the aircraft**.

4.6.8 Each Contracting State shall ensure that **cargo and mail** that has been **confirmed and accounted for** shall then be issued with a **security status** which shall **accompany**, either in an **electronic format or in writing**, the cargo and mail **throughout the secure supply chain**.





Airport and in-flight supplies



4.6.6 Each Contracting State shall ensure that **catering, stores and supplies** intended for carriage on passenger commercial flights are subjected to appropriate security controls, **which may include a supply chain security process or screening**, and thereafter **protected until loaded** onto the aircraft.

4.6.7 Each Contracting State shall ensure that **merchandise and supplies introduced into security restricted areas** are subjected to appropriate security controls, **which may include a supply chain security process or screening**.



Transfer cargo and mail



4.6.9 Each Contracting State shall ensure that **transfer cargo and mail** has been subjected to **appropriate security controls** prior to being loaded on an aircraft engaged in commercial air transport operations departing from its territory.





Landside security



- 4.8.1 Each Contracting State shall ensure that **landside areas are identified**.
- 4.8.2 Each Contracting State shall ensure that **security measures are established for landside areas to mitigate the risk of and to prevent possible acts of unlawful interference** in accordance with **risk assessments** carried out by the relevant authorities or entities.
- 4.8.3 Each Contracting State shall ensure **coordination of landside security measures** in accordance with Standards ~~(3.1.5)~~ 3.1.6, 3.2.2 and 3.2.3 between relevant departments, agencies, other organizations of the State, and other entities, and **identify appropriate responsibilities for landside security** in its national civil aviation security programme.





NEW : Cybersecurity

4.9.1 (NEW) Each Contracting State shall ensure that operators or entities as defined in the national civil aviation security programme or other relevant national documentation **identify their critical information and communications technology systems and data used for civil aviation purposes** and, in accordance with a risk assessment, develop and implement, as appropriate, **measures to protect them from unlawful interference.**





CHAPTER 5. Management of response to acts of unlawful interference

→ 5.1 Prevention

→ 5.2 Response

→ 5.3 Exchange of information and reporting



Contingency plans



5.1.4 Each Contracting State shall ensure that **contingency plans** are developed and **resources made available** to safeguard civil aviation against acts of unlawful interference. The contingency plans shall be **tested on a regular basis**.



Reporting incidents



5.1.6 Each Contracting State shall ensure that its national civil aviation security programme defines processes for the **reporting of information concerning incidents of acts of unlawful interference and preparatory acts thereto**, by any entity responsible for the implementation of the national civil aviation security programme in a practical and timely manner to the relevant authorities, as appropriate, taking into account 2.1.4.



Different approaches to implementing Annex 17 Standards

- Prescriptive approach
- Outcome-based approach



Prescriptive approach

- National-level programmes and regulations prescribe processes or procedures in detail
- Regulated entities have little or no choice regarding how to comply
- USAP-CMA audit takes into consideration regulated entities' compliance with prescriptive national requirements and procedures



Outcome-based approach

- Required outcomes or levels of performance is established in national-level programmes or regulations
- Emphasis on specific and measurable outcomes versus prescriptive provisions
- More detailed requirements and procedures established at the operational level



Outcome-based approach

- USAP-CMA audit takes into consideration outcomes or levels of performance established in national-level programmes or regulations



Risk-based Standards

Several Annex 17 Standards require the establishment of measures based on a risk assessment:

2.2.2 – domestic operations

3.4.5 – priorities and frequency of monitoring

4.2.2 – security restricted areas

4.2.7 – security controls for vehicles

4.3.1 – aircraft security checks/searches

4.3.6 – MANPADS

4.8.2 – security measures for landside areas

4.9.1 – cybersecurity



Risk-related Standards

3.1.3 – level and nature of threat

3.1.4 – sharing relevant information

4.4.2 – screening for explosives

4.6.4 – high-risk cargo and mail



Auditing Risk-based Standards

- When auditing such Standards, the USAP-CMA audit would determine whether:
 - ✓ a risk assessment has been conducted using established methodology;
 - ✓ relevant risk-based security measures or outcomes have been clearly defined and implemented; and
 - ✓ the State oversees the implementation of risk-based security measures or outcomes.



Auditing Non-risk-based Standards

- Other Annex 17 Standards establish baseline security measures for States to implement under normal operating conditions.
- In many cases, a risk assessment may be used in order to determine whether additional security measures are required to cope with increased levels of threat or to mitigate associated risks, but should not be used to reduce or eliminate the baseline security measures.
- The USAP-CMA audits do not accept the use of a risk-based approach to reduce baseline requirements established by the relevant Annex 17 Standard.



Module Review

- Annex 17 and Aviation Security Manual
- Structure of Annex 17
- Interpretation of certain Annex 17 Standards
- Different approaches to implementing Annex 17 Standards
- Risk-based Standards



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UNITING AVIATION

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Questions?



North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montreal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Office
Bangkok

End of Module 2