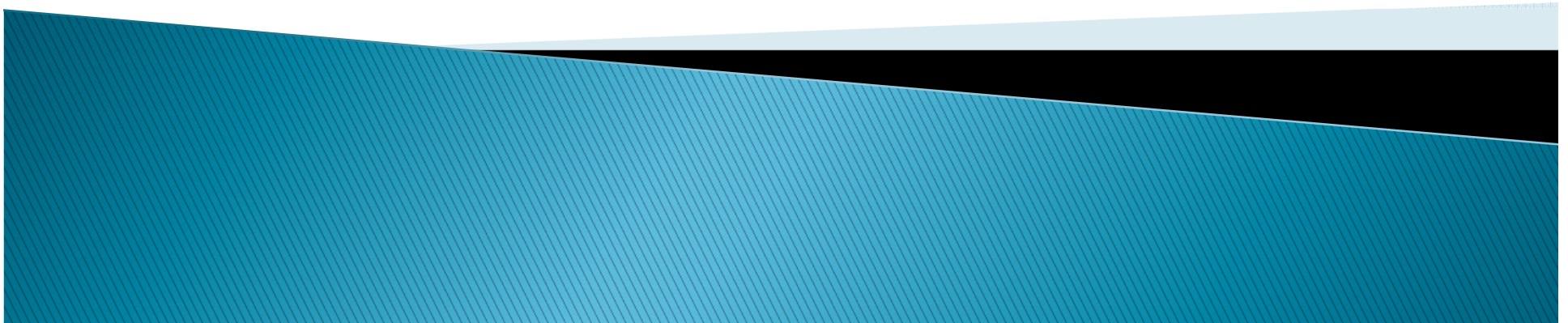


Module 2

Preventive Security

Concepts



Structure of the Module

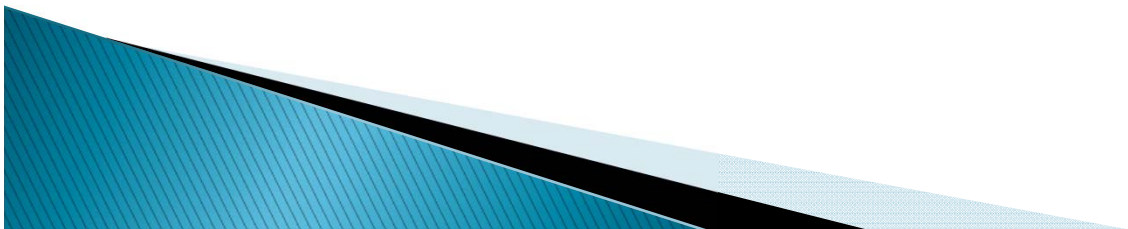
First part: Nature of the threat

Second part: Industry
countermeasures



Module Objectives

- Describe the threat against civil aviation security
- Identify the methods used for attacking civil aviation
- List the types of individuals that represent a threat to civil aviation

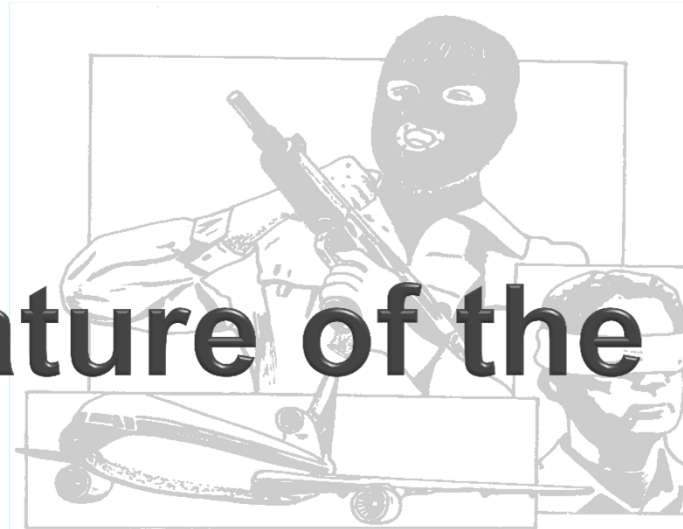


Module Objectives

- ▶ Identify the terms “threat”, “vulnerability” and “risk” within the context of security
- ▶ Explain the main responsibilities of the appropriate State authority
- ▶ Understand the concepts underlying industry countermeasures



Nature of the Threat



Methods of Attack

- ▶ Sabotage to aircraft and airport facilities
- ▶ Hijacking of aircraft on ground or in flight
- ▶ Armed attacks at the airport
- ▶ Attacks against air carrier facilities



Threat

Quantification of the possibility or likelihood of occurrence of an attempt against a specific target.



Threat

It depends on two factors, namely:

- The intention or desire to attack a target
- The capacity of performing such an attack



Threat Assessment

The estimate of the likelihood of an attack being performed against a target during a specific period of time.



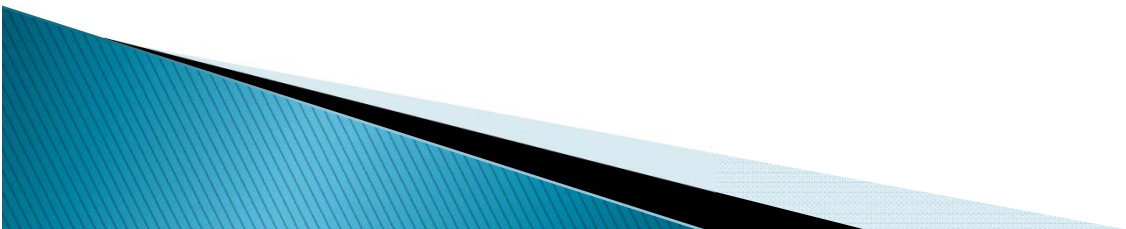
Vulnerability

The features of a target that may be exploited during an attack, or the ease with which a target may be attacked.



Vulnerability Assessment

The analysis of the features of the target to establish the weak points that could be exploited to conduct various attacks, indicating the likelihood of success of such attacks.



Risk

The likelihood of an attack being conducted successfully against a target.



Risk Components

$RISK = THREAT \times VULNERABILITY$



Risk Assessment

Calculation of the likelihood of an attack being conducted successfully.



Types of Offenders

- ▶ Terrorists
- ▶ Criminals
- ▶ Individuals with psychological problem
- ▶ Individuals seeking revenge



Why Attack Civil Aviation?

- ▶ The reaction of governments, organisations and companies under attack
- ▶ The visibility of their cause generated in the media
- ▶ Minimum risk of being captured



Motivation of Terrorists

- ▶ Air carriers are often “flag” carriers
- ▶ Draw global attention and attract publicity to their cause
- ▶ Direct the attack to specific individuals on an aircraft
- ▶ Create terror amongst the general public
- ▶ Obtain the release of prisoners



Characteristics of Terrorists

- ▶ They operate in small groups or complex networks
- ▶ Generally, they are trained individuals
- ▶ They have resources
- ▶ Their purpose is political in nature



Characteristics of Criminals

- ▶ Monetary gain
- ▶ Extortion
- ▶ Personal reasons
- ▶ Difficult to classify
- ▶ Unpredictable



Industry Countermeasures



Industry Countermeasures

- ▶ Legal
- ▶ Technical
- ▶ Physical



Legal Countermeasures

- ▶ Tokyo Convention, 1963
- ▶ The Hague Convention, 1970
- ▶ Montreal Convention, 1971
- ▶ Supplementary Protocol of the Montreal Convention, 1988
- ▶ Convention on the Marking of Explosives, 1991



Technical Countermeasures

- ▶ There are 18 Annexes to the Convention on International Civil Aviation
- ▶ International standards and recommended practices



Technical Measures

- ▶ Annex 17, Seventh Edition (Amendment 10)
- ▶ 66 Standards
- ▶ 19 Recommended practices
- Annex 17, Eighth Edition (Amendment 12)
- 79 Standards
- 26 Recommended practices



Technical Countermeasures

A **Standard** is defined as follows:

*“Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognised as **necessary** for the safety or regularity of international air navigation and which, in accordance with the Convention, has to be met by the contracting States.”*



Technical Contermeasures

A **Recommendd practice** is defined as follows:

*“Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognised as **desirable** in the interest of safety, regularity or efficiency of international air navigation, and to which contracting States will endeavour to confform in accordance with the Convention.”*



Standard 2.1.1 of Annex 17

“The primary objective of each contracting State is safeguarding its passengers, crews, ground personnel, and the general public against acts of unlawful interference.”



State Responsibilities

Standard 3.1.1 of Annex 17 establishes that:

“ Each contracting State will establish and implement a written national civil aviation security programme to safeguard civil aviation operations from acts of unlawful interference, by means of standards, practices and procedures that take into account the safety, regularity, and efficiency of flights. ”



State Responsibilities

Standard 3.1.3 of Annex 17 establishes that:

“Each contracting State will constantly assess the level of threat to aviation in its territory and establish and apply policies and procedures for adjusting the relevant aspects of its national civil aviation security programme accordingly, based on a security risk assessment conducted by the appropriate national authorities.”



State Responsibilities

- ▶ Standard 3.4.3 of Annex 17 establishes that:
 - ▶ *“Each contracting States will make sure that individuals conducting screening operations have been certified in accordance with the requirements of the national civil aviation security programme in order to ensure uniform and reliable compliance with performance standards”.*



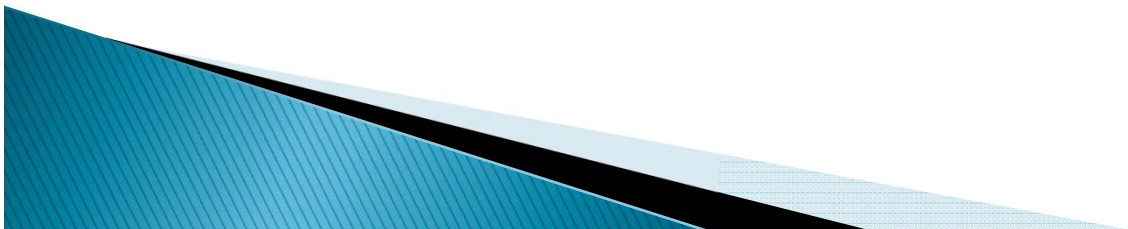
Physical Countermeasures

- ▶ Passenger screening
- ▶ Hand luggage screening
- ▶ Screening of passengers with a “suspicious profile”
- ▶ Explosive detector equipment
- ▶ Screening using X-ray equipment



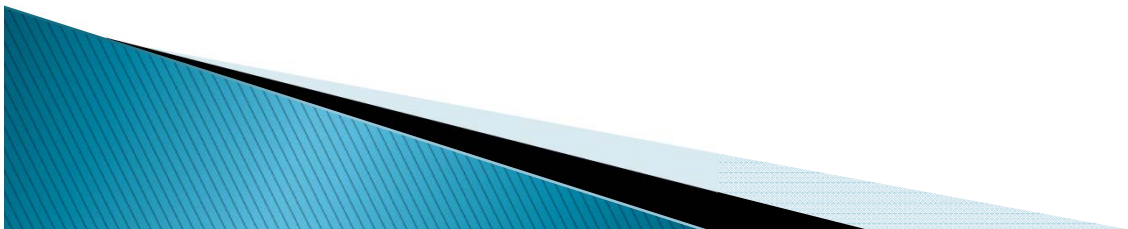
Physical Countermeasures

- ▶ Control the access to restricted security areas (individuals/vehicles)
- ▶ Screening of crews and ground personnel
- ▶ Safeguarding of aircraft
- ▶ Safeguarding of the airport and air navigation facilities



Responsibilities of the Appropriate Authority

- ▶ Conduct control activities, such as security audits, tests, studies, and inspections
- ▶ Improve security through the development and dissemination of progressive operational and administrative practices and procedures



Responsibilities of the Appropriate Authority

- ▶ Develop, apply, and maintain the PNSAC
- ▶ Define and assign tasks, coordinate activities with the various State departments, agencies, and other organisations, airport, air operators, and any other entity involved in the various aspects of the PNSAC



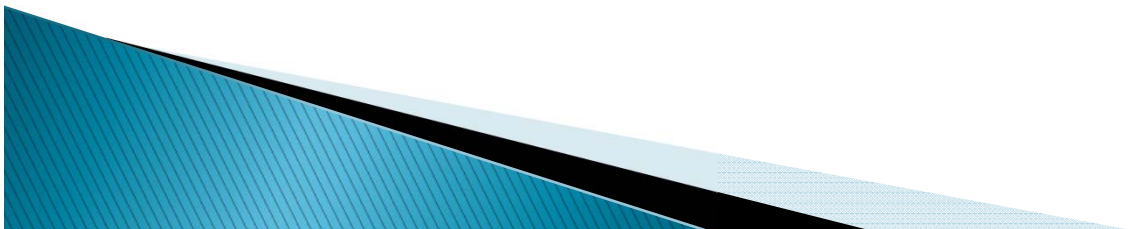
Summary of the Module

- Aviation security organisations
- The “appropriate authority”
- Concepts underlying industry countermeasures



Summary of the Module

- Threats to civil aviation
- Methods of attack used against civil aviation
- Individuals that represent a threat to civil aviation



End of Module 2

