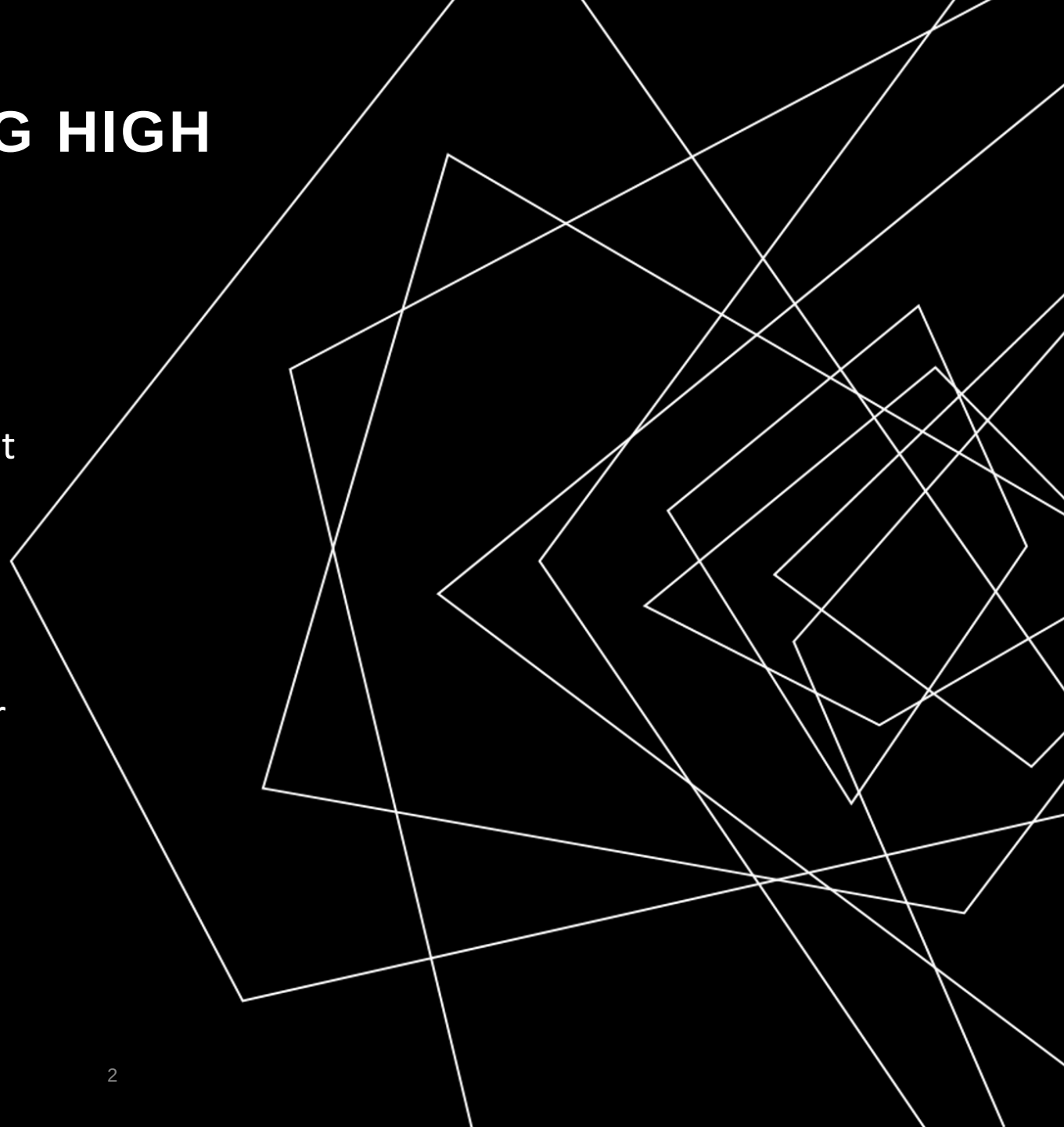
DOMESTIC IMPLEMENTATI0N OF AIR SAFETY AND SECURITY REGULATIONS IN INDIA

Wg Cdr G Srinivasu (retd)

INDIAN AVIATION, FLYING HIGH

A rising proportion of middle-income households, healthy competition amongst Low-Cost Carriers, infrastructure build-up at leading airports and supportive policy framework has given a positive push to the aviation sector.

In 2010, 79 Mn people travelled to/from/or within India. By 2017 that doubled to 158 Mn, and this number is expected to reach 520 Mn by 2037



INDIAN AVIATION, FLYING HIGH

Direct employment in the aviation and aeronautical manufacturing sector is around 2,50,000 employees.

There are 42 Aviation IT startups in India and 34 Flying Training Organizations (FTOs) operating at 52 bases

International flights : currently Air Services Agreements with 116 countries

Up to 100% FDI is permitted in Non-scheduled air transport services, MRO , Ground handling , route services to brown field Projects

INDIAN AVIATION, FLYING HIGH

The nation’s airplane fleet is projected to quadruple in size to approximately 2500 airplanes by 2038.

Currently, the country has 148 operational airports including 29 international, 92 domestic, and 10 custom airports and likely to cross 200 in next 4-5 years

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The Indian Civil Aviation MRO market, at present, stands at around $900 Mn and is anticipated to grow to $4.33 Bn by 2025 increasing at a CAGR of about 14-15%.

WHY AIR SAFETY AND SECURITY ARE IMPORTANT?

1. Passenger safety
2. Economic impact
3. National security
4. Environmental impact
5. Public confidence

SECURITY

- **Security** is a **procedure or action taken** to ensure safety of a person.
- The **PROCESS** of hazard identification and risk management is a **SECURITY** measurement.

If you can provide good security system, you will create very safe environment

SECURITY KEYWORDS

- Procedure
- Action taken
- Techniques
- Methods

TO ENSURE SAFETY

What are the steps, procedures, techniques and methods taken by aviation world to ensure safety?

HOW SAFE IS AVIATION

HOW SAFE IS AVIATION

- **No other form of transportation is as scrutinized, investigated and monitored as commercial aviation.**
- **Public perception of safety is focused on the absolute safety record rather than the relative one.**
- **Air accidents generally receive relatively wide publicity due to deaths of political, sports and entertainment figures**
- **It enjoys a good safety record, as can be derived from relative safety standards.**
  - **You are nineteen times safer in a plane than in a car.**
  - **In fact, based on this incredible safety record, if you did fly every day of your life, probability indicates that it would take you nineteen thousand years before you would succumb to a fatal accident.**

RECENT CASE STUDIES ON AIR SAFETY IN INDIA

1. Air India Express Flight 1344 Crash (2020)
2. Jet Airways Flight 9W 697 Emergency Landing (2018)
3. IndiGo Flight 6E-031 Emergency Landing (2021)

COMMON AVIATION RISKS

Aviation risks include operational, strategic, compliance, or financial risks that than put the assets into problem. There can be several types of risks for aircraft as well as airport −

- Bad weather conditions for a flying aircraft
- Aircraft about to run out of fuel while in flight
- A person in the aircraft or airport needs medical aid critically
- Failure of electrical, electronics, or mechanical component
- Pilot’s mistake
- Bird-strike at the time of aircraft movement
- An inexperienced employee or unknown person at the airport
- Unscreened passengers or their articles allowed to board the aircraft
- Repayment of loan

MAJOR CASE STUDIES ON GLOBAL AIR SAFETY AND SECURITY

1. Malaysia Airlines Flight MH370 Disappearance (2014)
2. 9/11 Terrorist Attacks (2001)
3. Air France Flight 447 Crash (2009)

COMMON AVIATION SAFETY THREATS

Today the terror methods have potentially increased with sophistication in destroying

Unattended or unclaimed baggage found at airport.

A person carrying weapon without declaration.

A person not cooperating with the security staff.

A person carrying sharp objects with him.

A call from an unknown person for destruction.

A person with suspicious gestures and appearance.

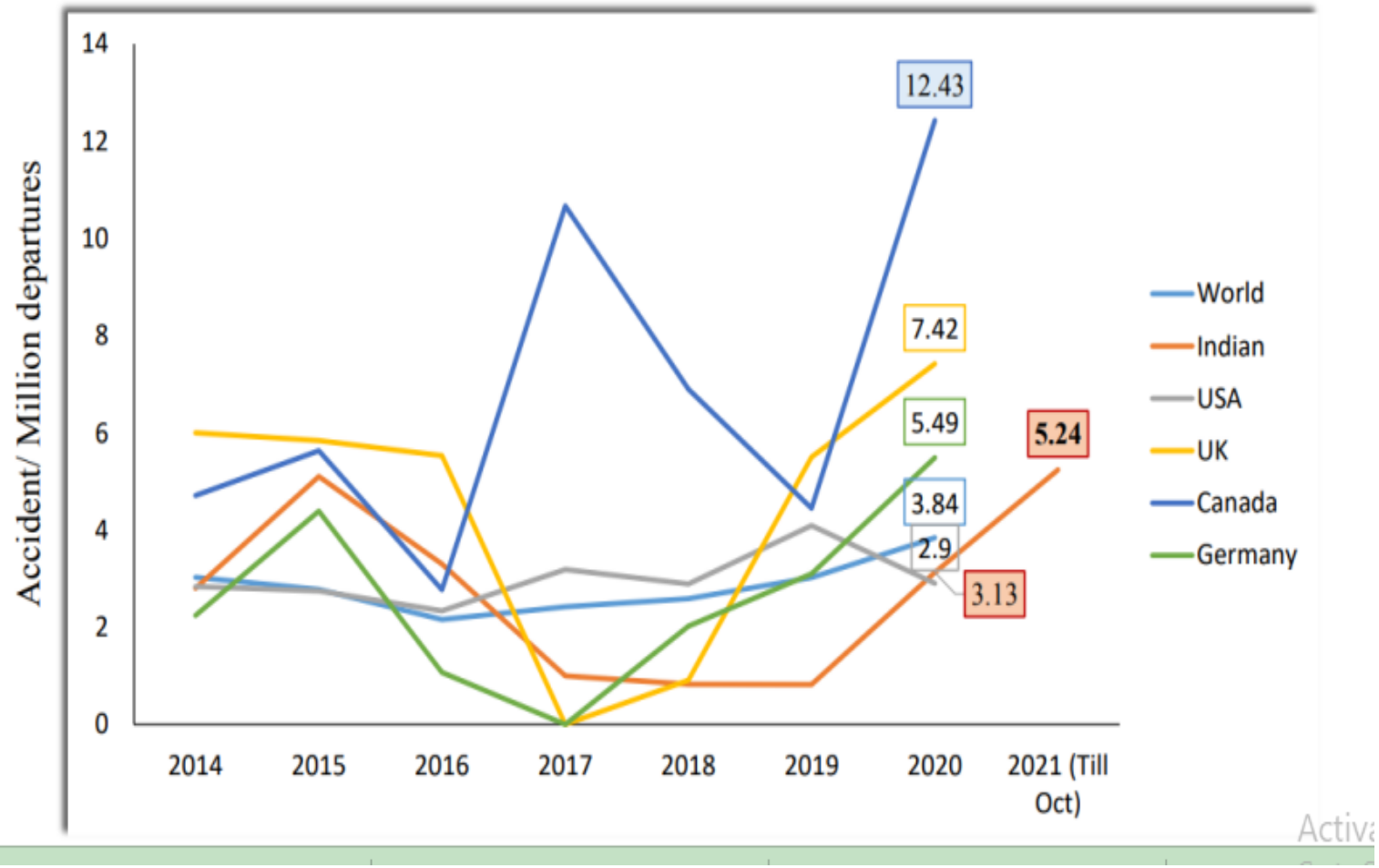
ISSUES CONCERNING AIR SAFETY IN AN AIRCRAFT

1. Pilot error
2. Mechanical failure
3. Weather conditions
4. Terrorism and hijacking
5. Airspace violations

ISSUES CONCERNING AIR SAFETY IN AVIATION

1. Runway incursions
2. Auditing member states' compliance with standards
3. Providing technical assistance and capacity building
4. Collaborating with other organizations
5. Collaborating with other organizations
6. Promoting innovation and research

Scheduled Airlines Accident Rate (Above 5700Kgs)



ROLE OF ICAO IN AIR SAFETY AND SECURITY

1. Developing global safety and security standards
2. Auditing member states' compliance with standards
3. Providing technical assistance and capacity building
4. Collaborating with other organizations
5. Collaborating with other organizations
6. Promoting innovation and research

CONVENTIONS ON AIR SAFETY AND SECURITY

1. Chicago Convention on International Civil Aviation (1944)
2. Tokyo Convention on Offences and Certain Other Acts Committed on Board Aircraft (1963)
3. Hague Convention for the Suppression of Unlawful Seizure of Aircraft (1970)
4. Montreal Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation (1971)
5. Montreal Convention on the Unification of Certain Rules for International Carriage by Air (1999)

IMPORTANT TREATIES ON AIR SAFETY AND SECURITY

1. The Cape Town Convention on International Interests in Mobile Equipment (2001)
2. The Rome Convention on the Law Applicable to Contractual Obligations (1980)
3. The Warsaw Convention for the Unification of Certain Rules Relating to International Carriage by Air (1929)
4. The Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
5. The Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997)

ICAO STRATEGIC OBJECTIVES

In its ongoing mission to support and enable a global air transport network that meets or surpasses the social and economic development and broader connectivity needs of global businesses and passengers, and acknowledging the clear need to anticipate and manage the projected doubling of global air transport capacity by 2030 without unnecessary adverse impacts on system safety, efficiency, convenience or environmental performance, ICAO has established five comprehensive Strategic Objectives:

-SAFETY

-AIR NAVIGATION CAPACITY AND EFFICIENCY

-SECURITY & FACILITATION:

-ECONOMIC DEVELOPMENT OF AIR TRANSPORT:

-ENVIRONMENTAL PROTECTION

MAJOR AIR SAFETY AND SECURITY REGULATIONS BY ICAO

1. Annex 1: Personnel Licensing
2. Annex 6: Operation of Aircraft
3. Annex 8: Airworthiness of Aircraft
4. Annex 11: Air Traffic Services
5. Annex 13: Aircraft Accident and Incident Investigation
6. Annex 17: Security
7. Doc 9859: Safety Management Manual
8. Doc 8973: Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference

DOMESTIC IMPLEMENTATION OF AIR SAFETY AND SECURITY REGULATIONS IN INDIA

Directorate General of Civil Aviation (DGCA)

Air Operators Certificate (AOC)

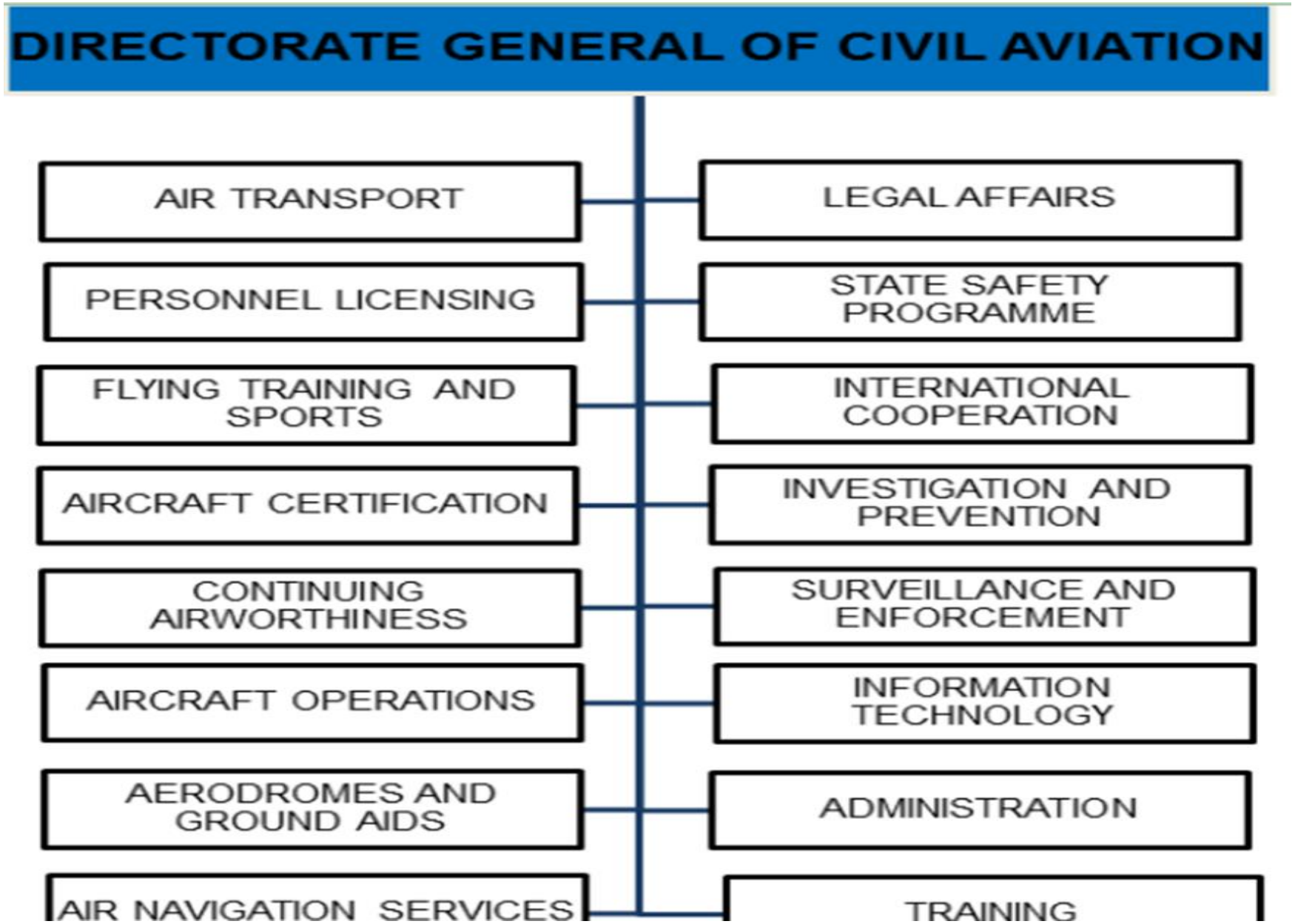
Aircraft Maintenance

Pilot Training

Air Traffic Control (ATC)

Airport Security

Passenger Safety


DIRECTORATE GENERAL OF CIVIL AVIATION
AIR TRANSPORT
PERSONNEL LICENSING
FLYING TRAINING AND SPORTS
AIRCRAFT CERTIFICATION
CONTINUING AIRWORTHINESS
AIRCRAFT OPERATIONS
AERODROMES AND GROUND AIDS
AIR NAVIGATION SERVICES
LEGAL AFFAIRS
STATE SAFETY PROGRAMME
INTERNATIONAL COOPERATION
INVESTIGATION AND PREVENTION
SURVEILLANCE AND ENFORCEMENT
INFORMATION TECHNOLOGY
ADMINISTRATION
TRAINING

Act and Rules

The Aircraft Act, 1934

Rules

- The Aircraft Rules, 1937
- The Aircraft (Demolition of Obstruction caused by Buildings and Trees etc.) Rules, 1994
- The Aircraft (Carriage of Dangerous Goods) Rules, 2003
- The Aircraft (Security) Rules,2011
- The Aircraft (Investigation of Accident and Incidents) Rules, 2017
- The Drone Rules, 2021

Statutory Notifications Affecting Aviation In India

- The Aircraft Rules, 1937
  - S. O. 726(E) dated 4-10-94
  - S. O. 727(E) dated 4-10-94
- The Aircraft (Carriage of Dangerous Goods) Rules, 2003
  - S.O. 446(E) dated 19-3-2007
  - S.O. 447(E) dated 19-3-2007

National Legislation

Requirements and Guidance

Civil Aviation Requirements

Aeronautical Information Circulars

Circulars

Manuals and Procedures

Forms

Public Notices

Exemptions

- Exemptions Under Rule 160
- Exemptions Under Rule 133A

Comments

Comments Invited

Manual

portal/#regulationGuidance

IMPORTANT REGULATIONS ON AIR SAFETY AND SECURITY IN INDIA

1. The Aircraft Act, 1934
2. Civil Aviation Requirements (CARs):
3. Civil Aviation Requirements (CARs):
4. Aviation Security Training Institutes
5. Air Navigation Service Provider Regulations
6. Aircraft Rules, 1937
7. Airport Security Guidelines

MAJOR CASE STUDIES OF BREACH OF SECURITY IN AVIATION HISTORY

1. September 11 attacks (2001)
2. Pan Am Flight 103 (1988)
3. Air India Flight 182 (1985)
4. Metrojet Flight 9268 (2015)

AIRCRAFT ACCIDENT INVESTIGATION BUREAU
INDIA

SECTION 7 OF THE AIRCRAFT ACT 1934 EMPOWERS THE GOVERNMENT OF INDIA TO MAKE RULES FOR INVESTIGATION OF ACCIDENTS ARISING OUT OF OR IN THE COURSE OF THE NAVIGATION IN OR OVER INDIA OF ANY AIRCRAFT, OR ANYWHERE OF AIRCRAFT REGISTERED IN INDIA

In accordance with ICAO Annex 13, Aircraft (Investigation of Accidents and Incidents) Rules 2012 were amended in 2017 and AAIB was designated as an “Attached Office” of the Ministry of Civil Aviation

Based on ICAO SARPs and the Indian Civil Aviation scenario in mind, the Aircraft (Investigation of Accidents and Incidents) Rules, 2012 were formulated and notified through a Gazette Notification

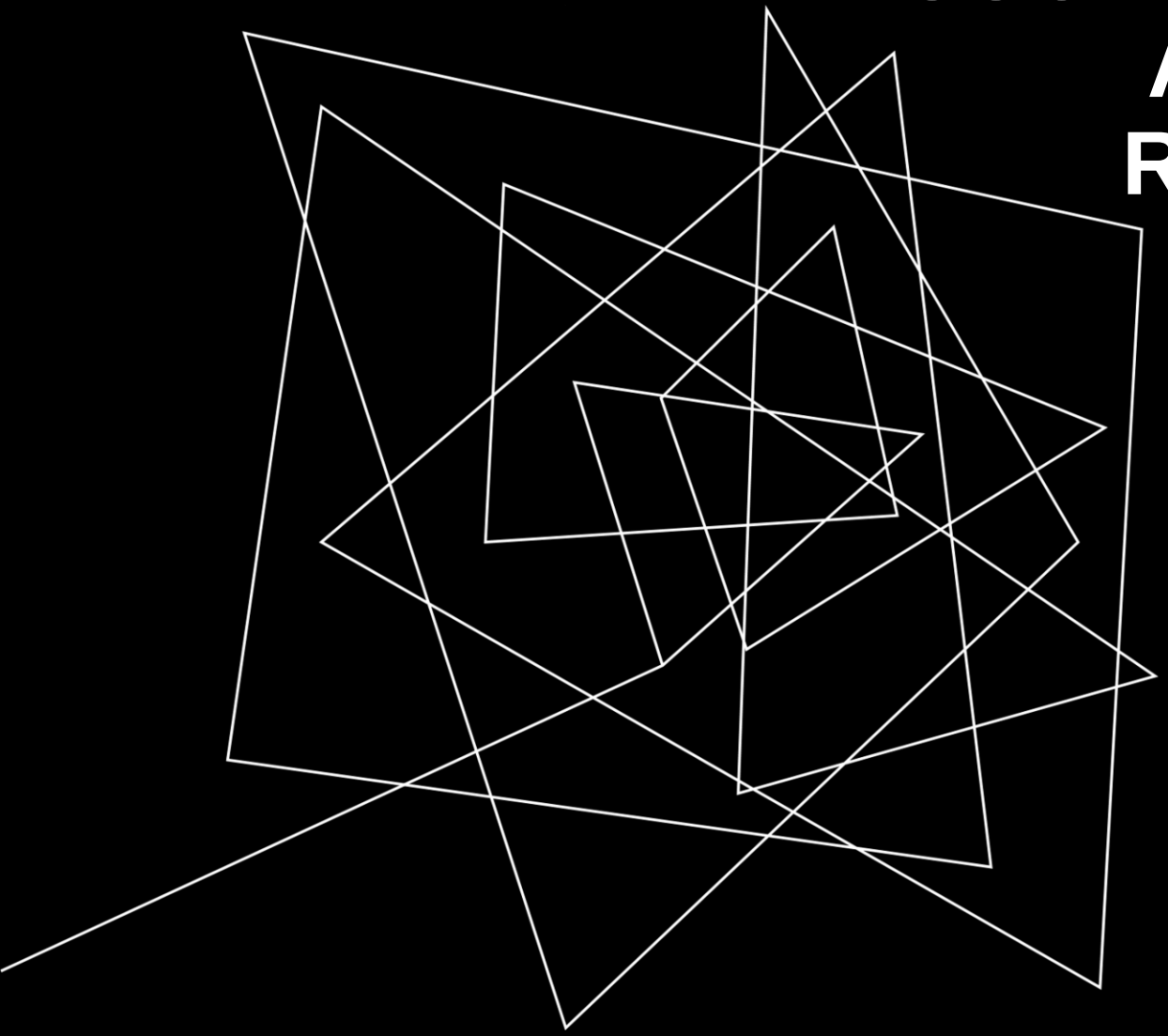
SYNERGY BETWEEN LOCAL AUTHORITIES AND AIRPORT FOR AIR SAFETY AND SECURITY

1. Coordinated emergency response
2. Sharing intelligence and information
3. Training and exercises

ISSUES THAT NEED TO BE ADDRESSED

1. Lack of Infrastructure
2. Staff Shortage
3. Human Error
4. Security Concerns
5. Enforcement Issues

ISSUES IN IMPLEMENTATION AIR SAFETY SECURITY REGULATIONS IN INDIA



1. Inadequate training
2. Resource constraints
3. Corruption
4. Lack of awareness
5. Coordination issues

THANK YOU

Wg Cdr G Srinivasu (retd)

Sr. Consultant Aviation

ISAC-GMR Aviation Cyber security program

garigisri90@gmail.com

9917939700