ACI membership & regional offices

ACI World
Montreal, Canada

ACI Europe
Brussels, Belgium

ACI Asia-Pacific & Middle East (sub-office)
Riyadh, Saudi

ACI North America
Washington, DC

ACI Africa
Casablanca, Morocco

ACI Asia-Pacific & Middle East
Hong Kong, China

ACI Latin America-Caribbean
Panama City, Panama

717 members

1,950 airports

185 countries and territories

ACI
AIRPORTS COUNCIL
INTERNATIONAL
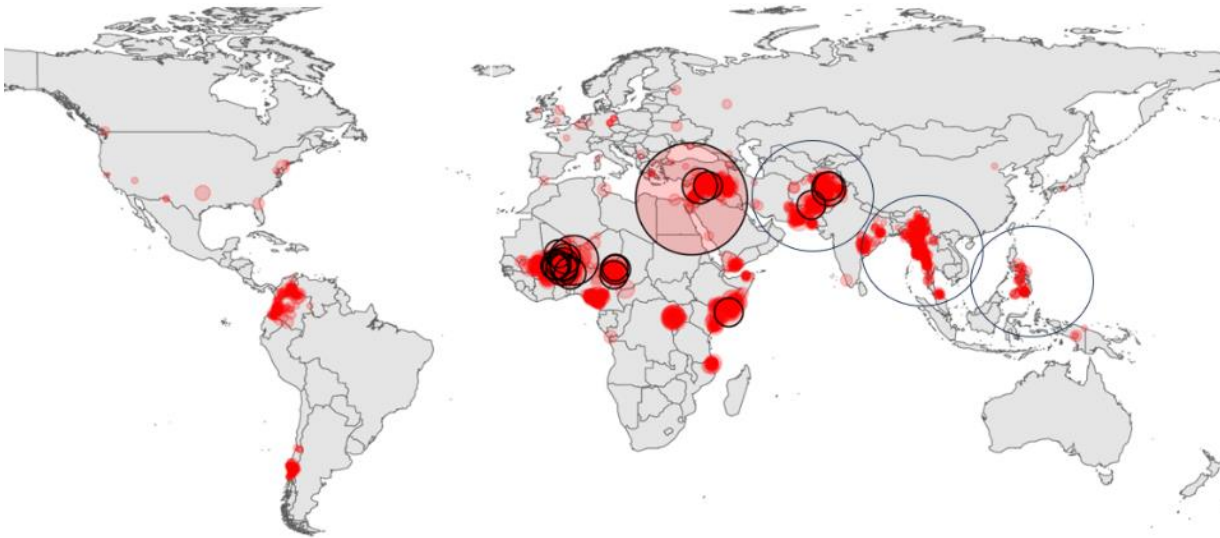
Air passenger traffic has surpassed 2019 level for all regions
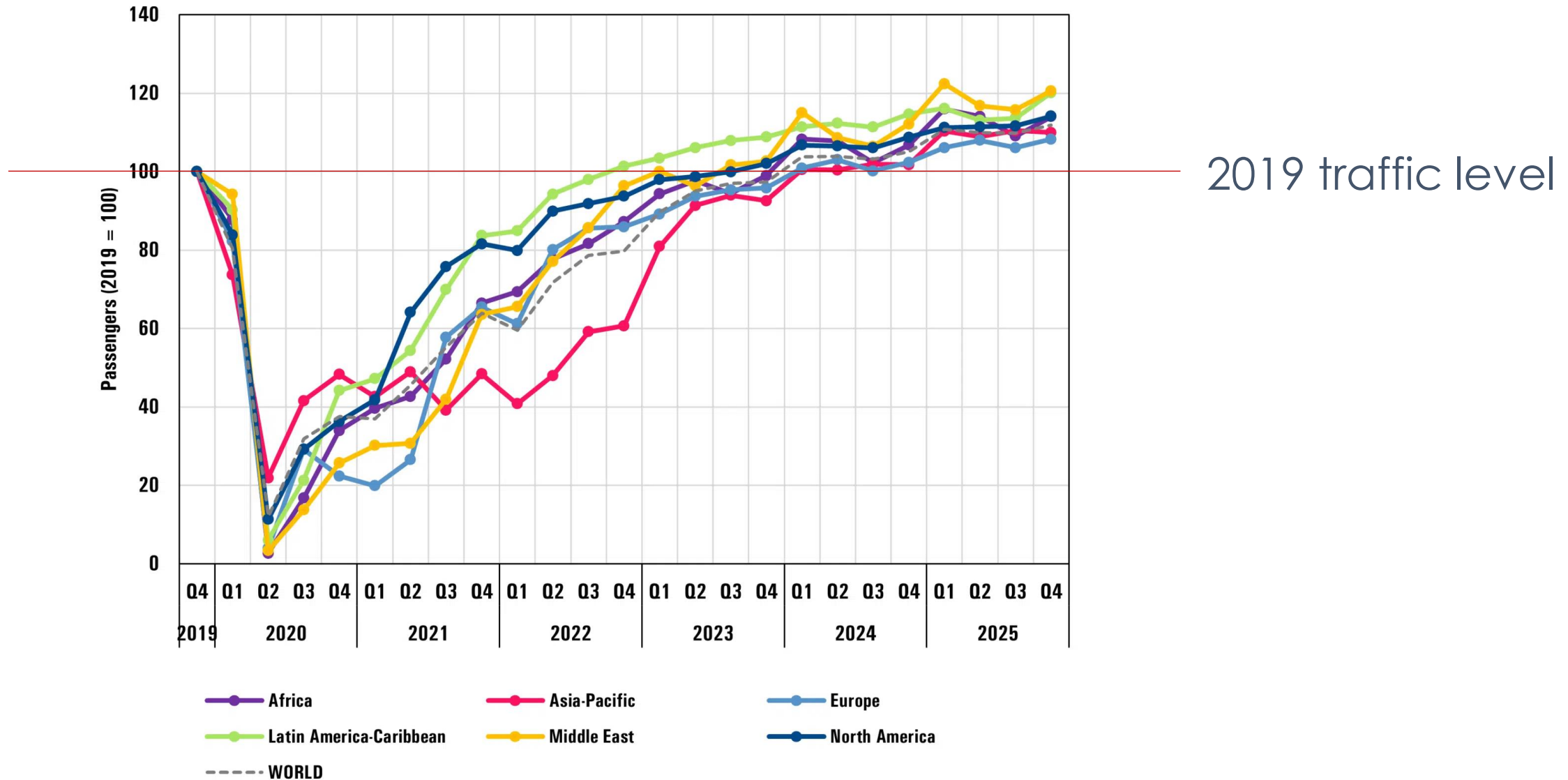
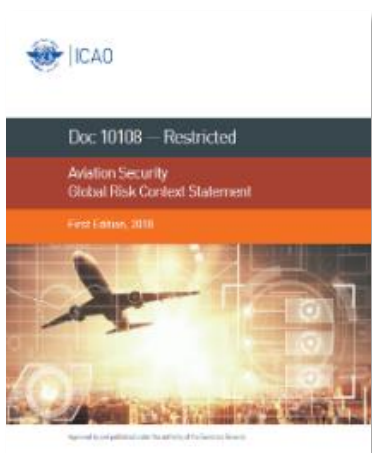# Civil Aviation still remains an attractive target for terrorists

Fatal terrorist attacks in 2023 (all types)

AUIs against civil aviation

- 57 AUIs in 2022

- **60** AUIs in 2023
  - 8 on aircraft in flight
  - 13 on aviation facilities (e.g. airports)
  - 1 unlawful seizure
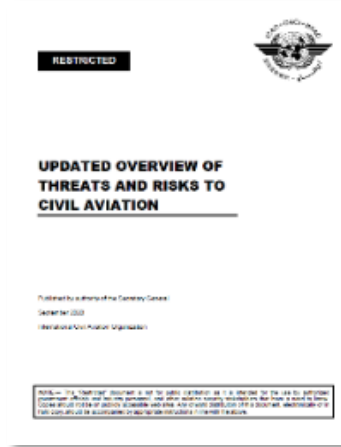 - 1 attack using aircraft as weapon
  - 37 attacks as others

Source (left) : Global terrorism Index 2024 (by Institute for Economics & Peace)
Source (right): ICAO

Constant update of ICAO Risk Context Statement (RCS)

1st edition (2018) → 2nd edition (2019) → Interim update (2020) → 3rd edition (Dec 2022) → 4th edition (soon, TBC)
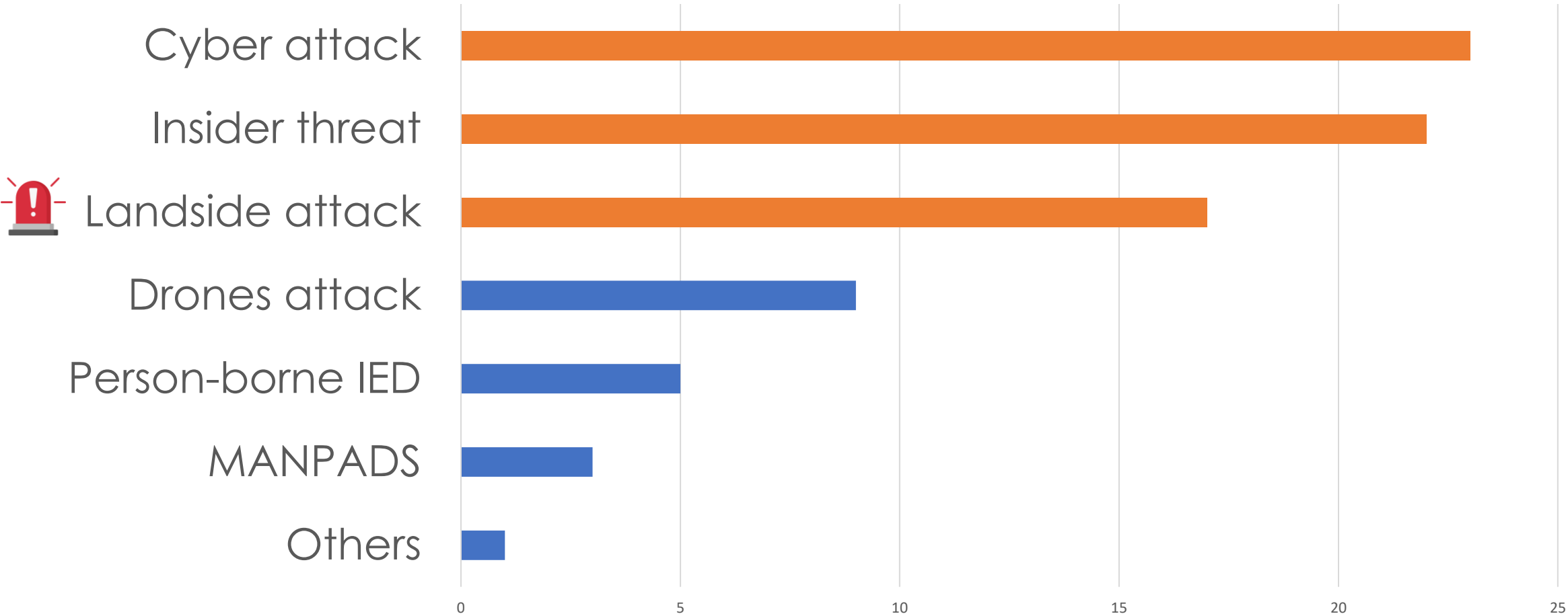
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ACI Regional Aviation Security Committee

38 committee members, representing over 130 individual airports

ACI survey: top risks for airports

Bar chart showing top risks for airports (survey counts, 0–25):
- Cyber attack — ~23 (orange)
- Insider threat — ~22 (orange)
- 🚨 Landside attack — ~17 (orange)
- Drones attack — ~9 (blue)
- Person-borne IED — ~5 (blue)
- MANPADS — ~3 (blue)
- Others — ~1 (blue)

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Perpetrators are constantly looking for the weakest link
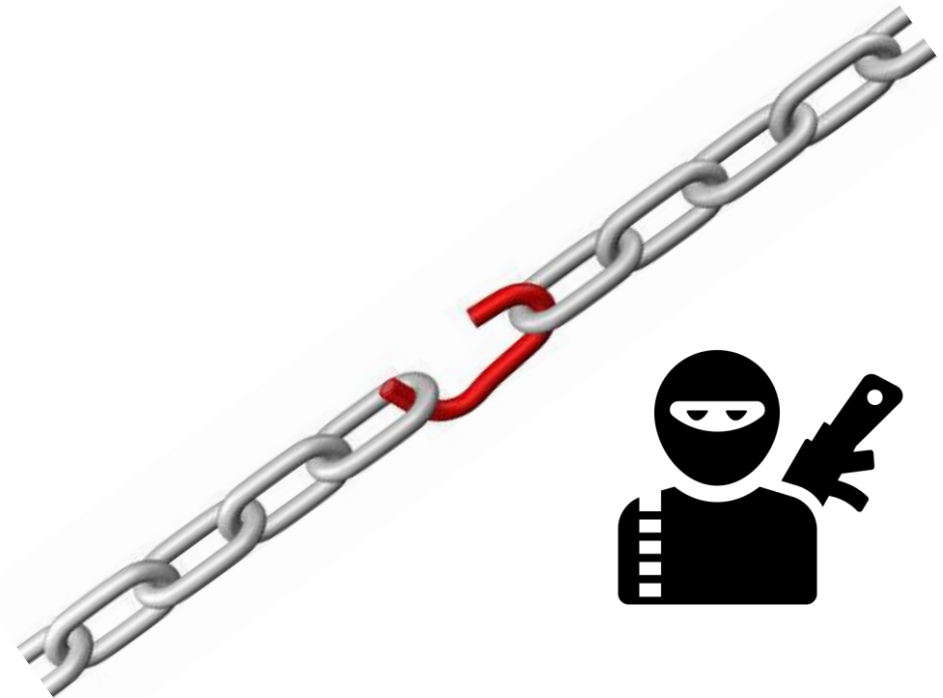
Landside attacks becoming frequent in the past decade

Glasgow (2007)

Moscow (2011)

Istanbul (2016)

Brussels (2016)

Shanghai(2017)

Fort Lauderdale (2017)

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ICAO strengthened landside security in July 2017

(New) 4.8.1 (standard)

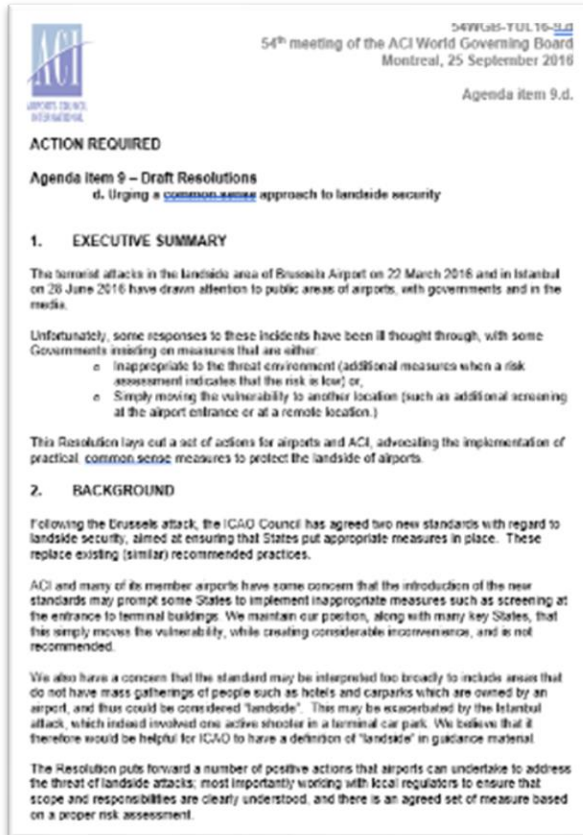.... shall ensure that landside areas are **identified**

(Upgrade) 4.8.2 ~~Recommendation~~ (Standard)

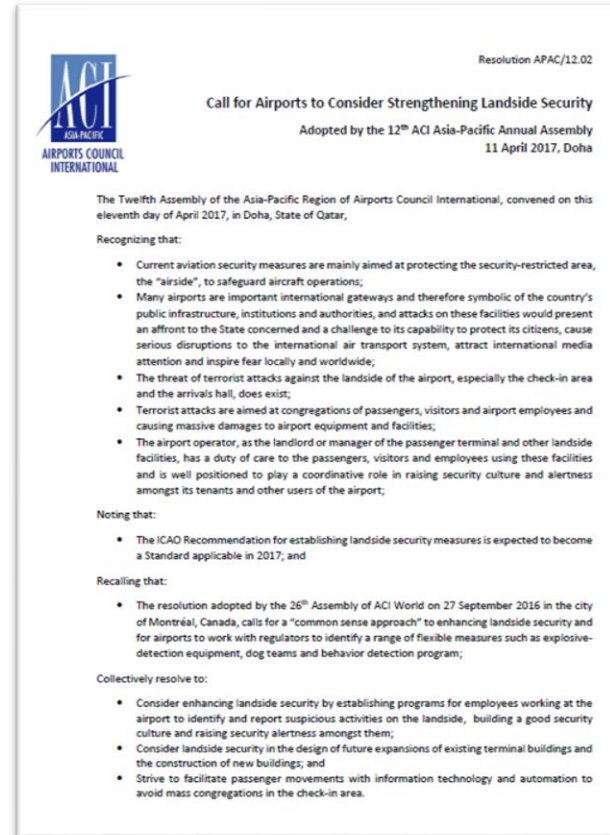....shall ensure…. security measures in landside areas are **established**....

(Upgrade) 4.8.3 ~~Recommendation~~ (Standard)

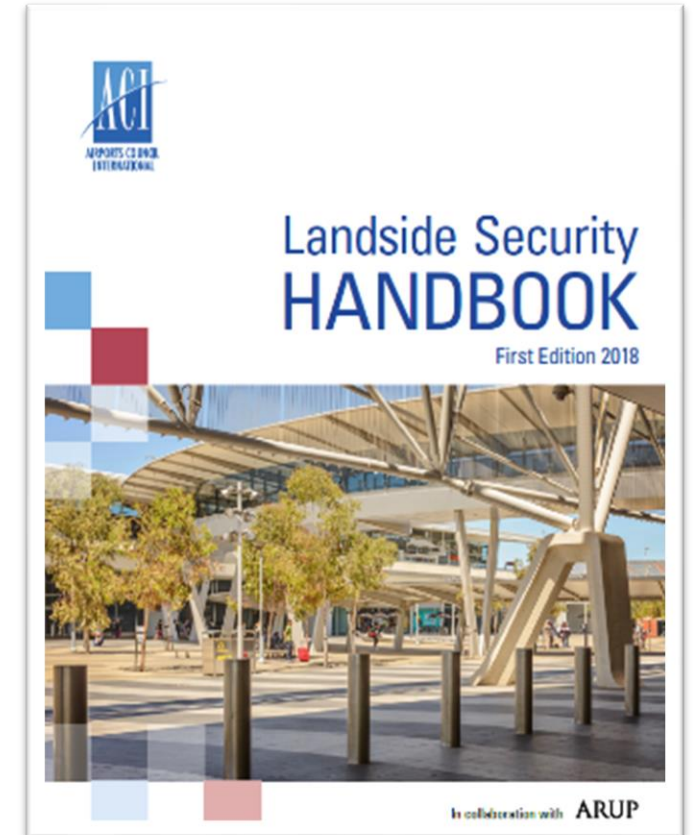….shall ensure **coordination** of landside security measures………

ACI also reacted swiftly to the rising landside threats

ACI World Resolution
(adopted in 2016)

ACI Asia-Pacific Resolution
(adopted in 2017)

ACI Landside Security Handbook
(published in 2018)

Comprehensive approach developed for landside risk mitigation

	People	Physical design	Dynamic Measures
Prevention	Threat and intelligence sharing Risk analysis Public awareness Staff training Clear allocation of responsibilities	Building design Roadway design Blast proofing Terminal and flow design	Physical presence of patrols Communication
Detection	Behavior detection, security culture, public awareness and reporting	Well lit areas, good terminal design	Monitoring, CCTV, patrols, overt and covert screening, canines
Response and recovery	Crisis management processes, training, communication	Evacuation routes, design to limit impacts	Communication processes, evacuation procedures, business continuity and contingency plans

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More advanced solutions are deployed for landside security

Explosives K9 team

Security robot

Crowd monitoring tools

ANPR & road blocker system

Advanced CCTV with behaviour analysis

Autonomous patrol car

Body camera

PIDS

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Besides, airports are doing more to train up its people
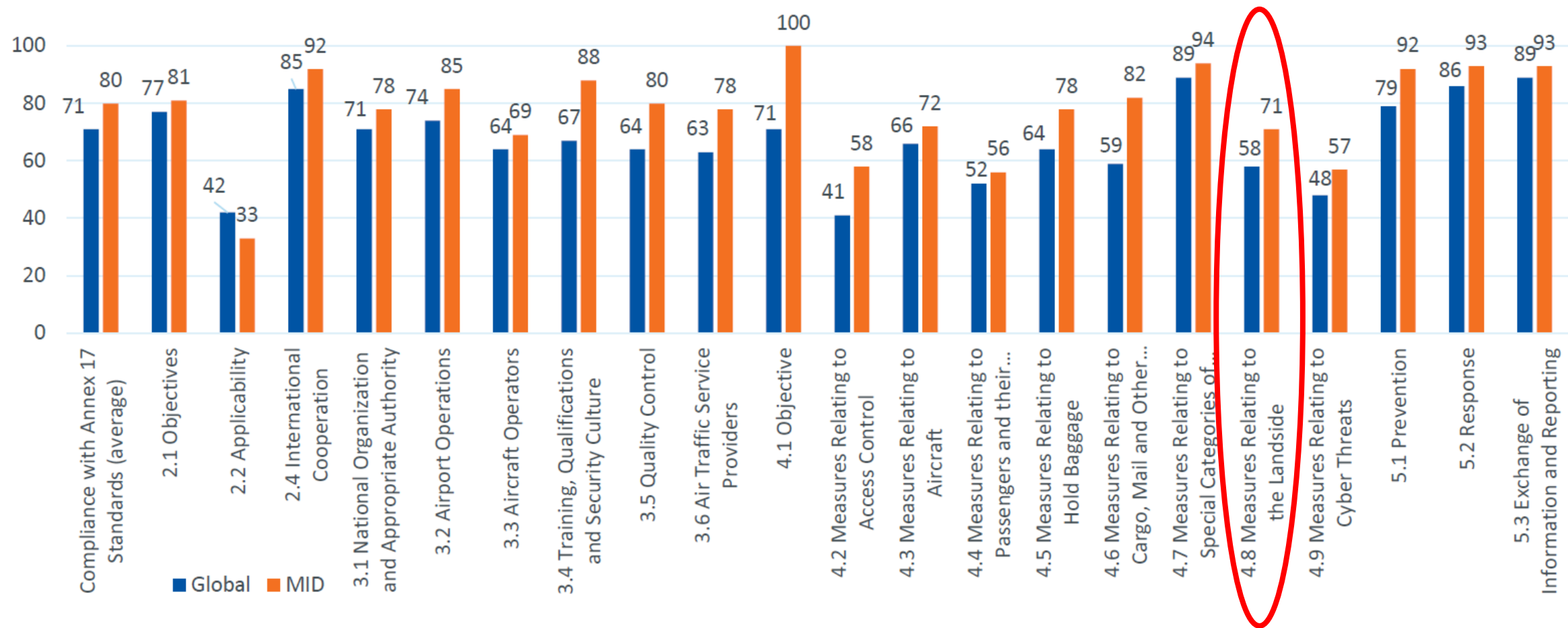

Security exercises for landside attack

Dedicated trainings for crowd management

Security awareness campaign

Landside remains one of the least-complied areas in Annex 17

Many airports are still struggling with basic protection

1) **Design & space constraint**
   o e.g. limited stand-off distance, gathering of crowds
2) **Risk assessment**
   o e.g. ineffective risk assessment for landside
3) **Stakeholder coordination**
   o e.g. ineffective communication between stakeholders for emergency response
   o e.g. balance of SEC & FAL
4) **Vulnerability to vehicle attacks**
   o e.g. limited hostile vehicle mitigation, ineffective unattended vehicle procedures
5) **Perimeter protection**
   o e.g. unclear landside boundary, poor maintenance of fence
6) **Landside surveillance**
   o e.g. insufficient CCTV coverage and landside patrolling
7) **Facilitation**
   o e.g. balance of SEC & FAL

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Rising activism activities add complexity to landside protection

Suvarnabhumi
Airport

Hong Kong
Airport

Frankfurt
Airport

Barcelona
Airport

London City
Airport

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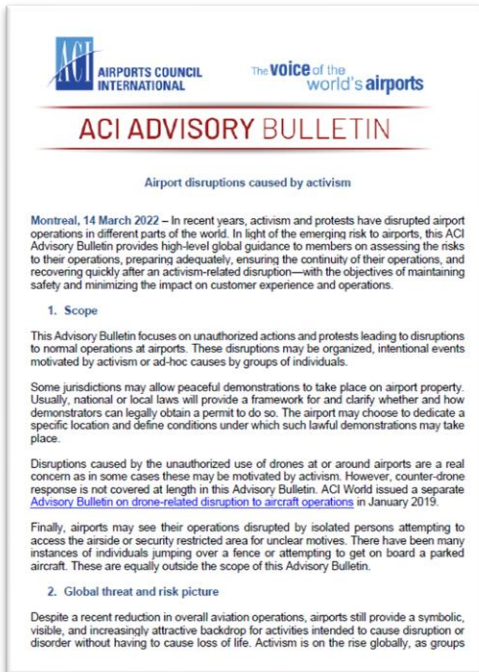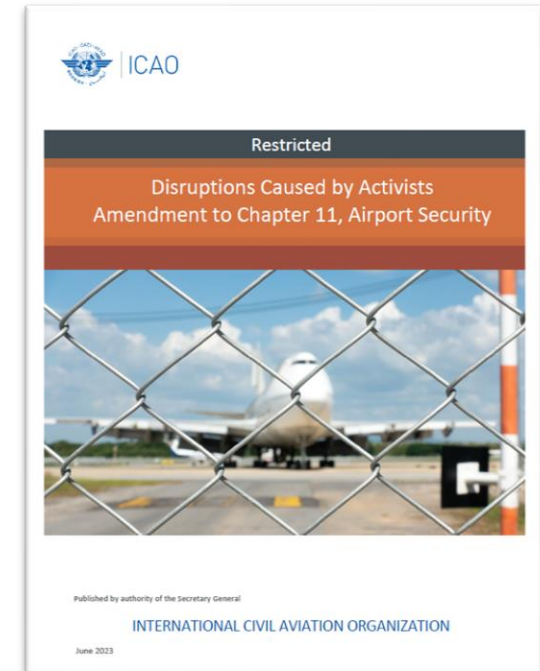
Specific guidance newly available on landside activism

New ACI advisory bulletin - Airport disruption caused by activism

New webinar on activism at airports

New section on "disruption caused by activists" in Doc 8973

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Apart from "people" and "measures", design is also crucial

	People	Physical design	Dynamic Measures
Prevention	Threat and intelligence sharing Risk analysis Public awareness Staff training Clear allocation of responsibilities	Building design Roadway design Blast proofing Terminal and flow design	Physical presence of patrols Communication
Detection	Behavior detection, security culture, public awareness and reporting	Well lit areas, good terminal design	Monitoring, CCTV, patrols, overt and covert screening, canines
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Lots of new airport infrastructure needed to meet future demand

2021-2040 total needed capex by region

EUROPE
US$ **427bn**
- 18% of total
- US$77bn CAPEX in greenfield
- 4.4bn passengers by 2040

NORTH AMERICA
US$ **400bn**
- 17% of total
- Insignificant CAPEX in greenfield
- 3.1bn passengers by 2040

LATIN AMERICA-CARIBBEAN
US$ **94bn**
- 4% of total
- US$41bn CAPEX in greenfield
- 1.6bn passengers by 2040

AFRICA
US$ **32bn**
- 1% of total
- US$13bn CAPEX in greenfield
- 457mn passengers by 2040

MIDDLE EAST
US$ **151bn**
- 6% of total
- US$54bn CAPEX in greenfield
- 1.2bn passengers by 2040

ASIA-PACIFIC
US$ **1.3tr**
- 54% of total
- US$579bn CAPEX in greenfield
- 8.9bn passengers by 2040

Examples of airport mega project in MID region
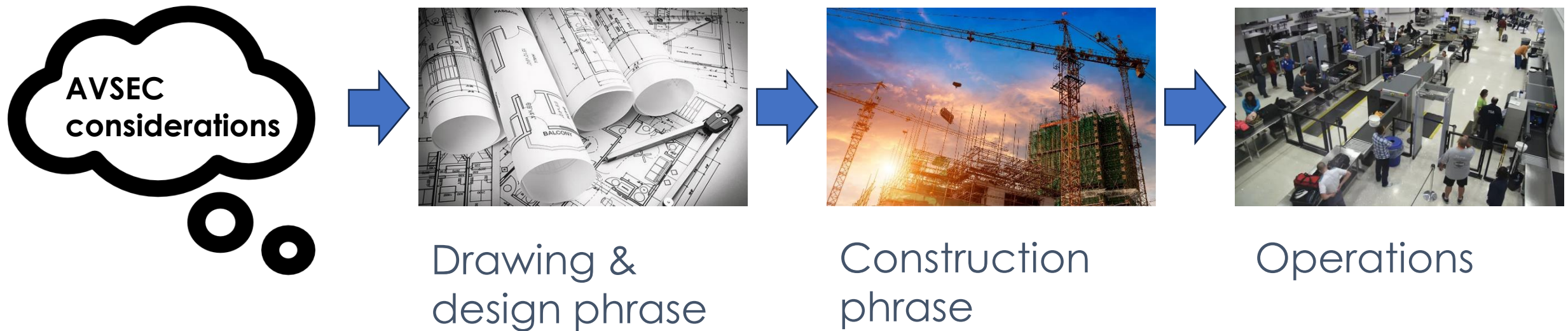
Musandam International Airport (Oman)

Al Maktoum International Airport (UAE)

King Salman International Airport (Saudi)

Security-by-design becoming more important to save cost, improve security and enhance efficiency

AVSEC considerations → Drawing & design phrase → Construction phrase → Operations

Good design incorporating landside security elements

Courtesy of Montevideo Airport

Courtesy of Changi Airport

Courtesy of Atlanta Airport

Courtesy of Adelaide Airport

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In summary….

To note:

- Landside security remains a top challenge for airports among other emerging threats

- Major challenges for airports
  - Design & space
  - Risk assessment
  - Stakeholder coordination
  - Surveillance & patrolling

To be encouraged:

- Make use of ACI's resources available on landside security (e.g. handbook)

- Work closer with airports & stakeholders for addressing landside security challenges

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