

Use of Technology at Airports to Enhance Passenger Experience

ICAO Facilitation Regional
Forum

Ulaanbaatar, Mongolia

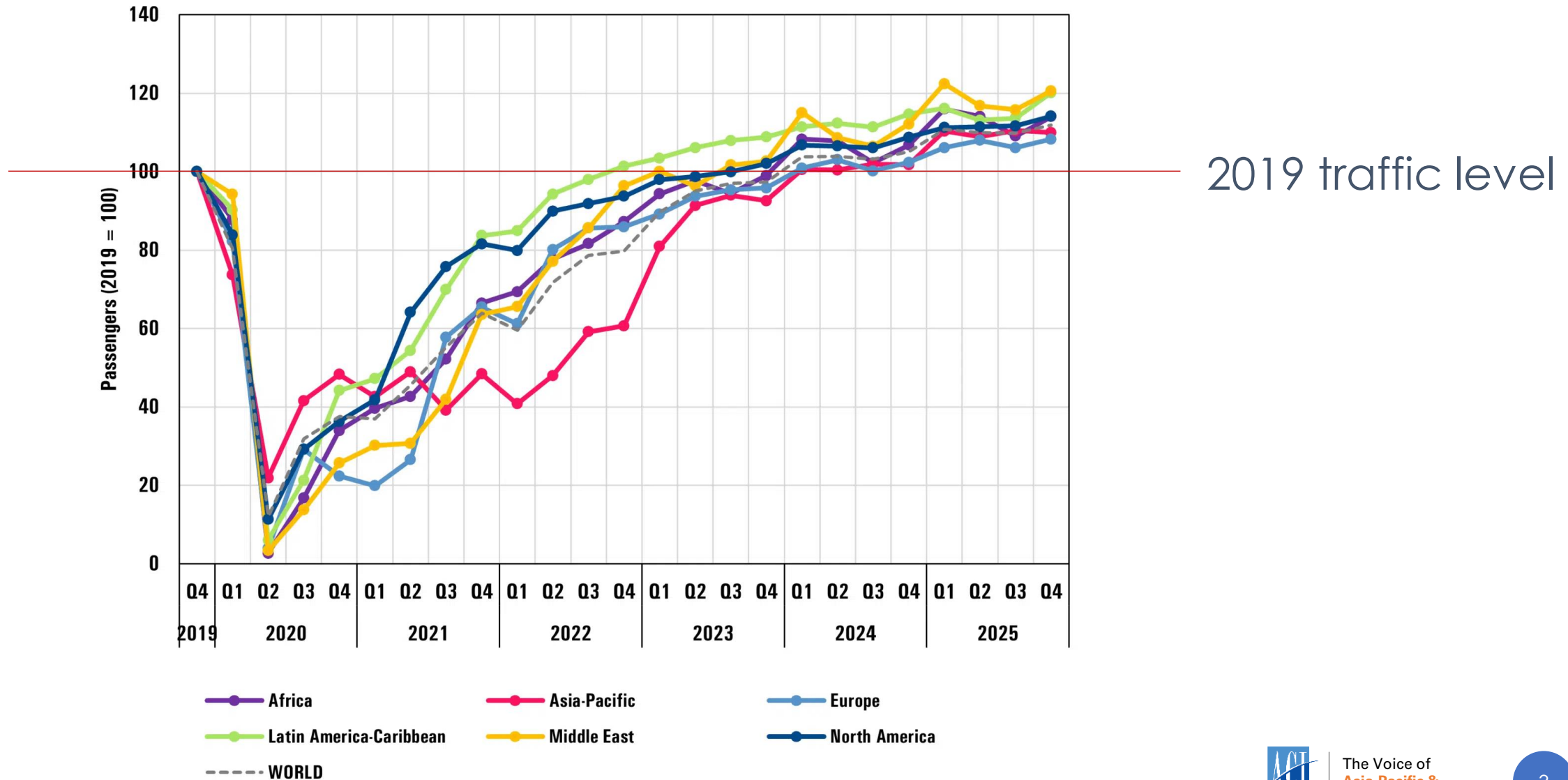
7-8 July 2025



ACI membership & regional offices



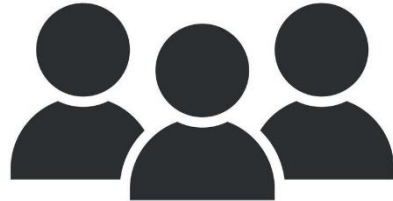
Air passenger traffic has surpassed 2019 level for all regions



Inevitable challenges faced by many airports in the region



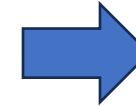
Growth of
traffic



Frontline staff
shortage



Infrastructure
constraint



Passengers are not just passengers. They are customers

Happy passenger spend more at airport



1%
increase in
customer
satisfaction

= 1.5%
increase in
non-aeronautical
spending



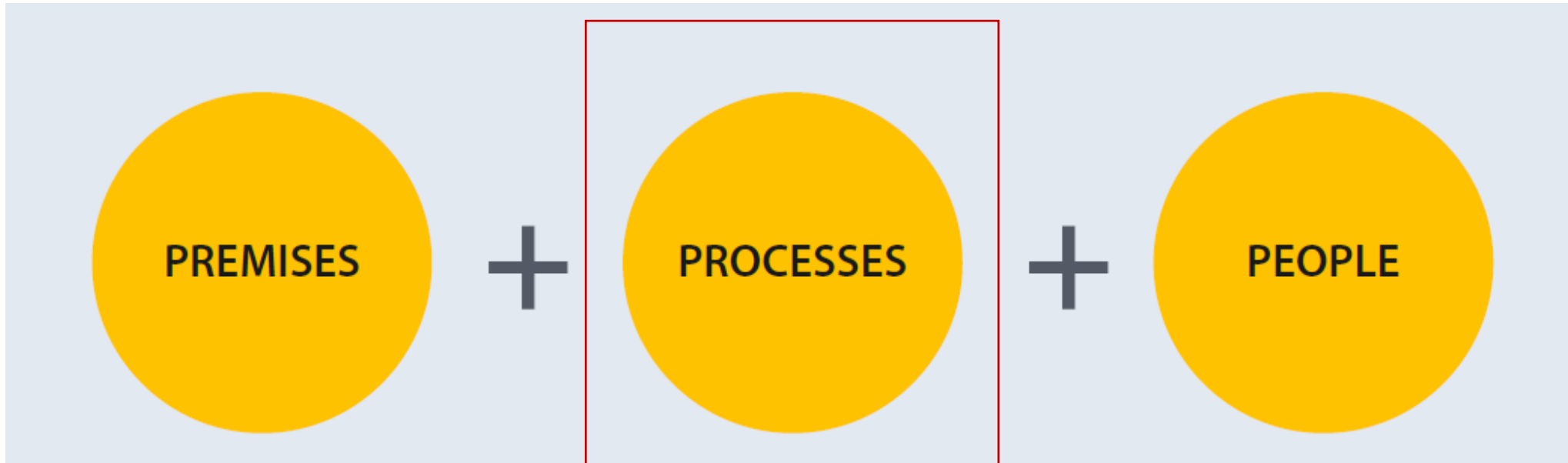
**based on ACI ASQ survey data (2016)*

Changing approach on CX by airports

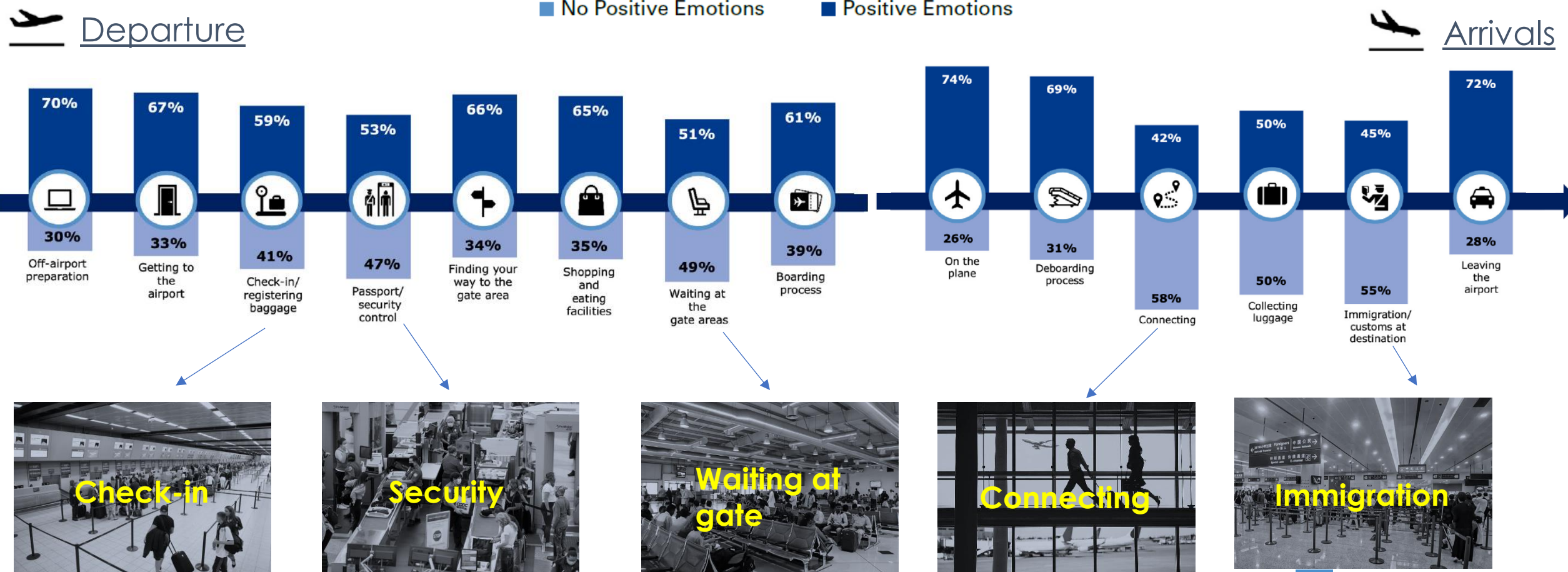


**experience pyramid*

3 fundamental elements that form passenger experience



Stressful points along the airport journey for passengers



*ACI ASQ 2024 Global Traveller Survey

More emphasis by ICAO on technology to improve pax flow

ICAO Doha Declaration 2025

*“**Improve passenger travel experience**....by enhancing efficiency of the movement of aircraft, passengers, crew and cargo”*

Annex 9 (RP.6.9)

*....should **implement automated facilities** for passenger and baggage processing.*

Annex 17 (RP 2.5.4)

*.....should **consider advanced security equipment**, when investing in new equipment, to achieve civil aviation security objectives.*

Wider use of technology to provide a more seamless journey



Self-service check-in



Self-service bag drop



Baggage reclaim tracking



Digital wallet



Automated border control



AI & robotics for customer enquiry



Digital wayfinding & navigation



Automated boarding

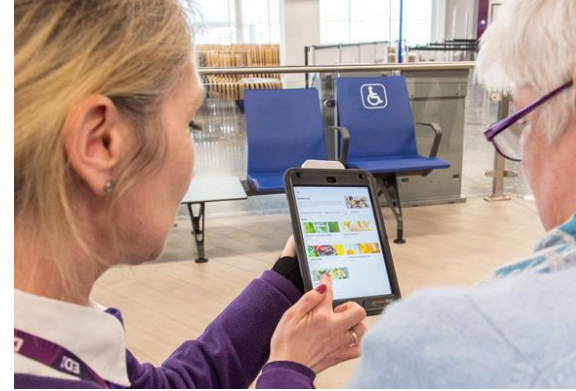
Also embracing technologies for pax with special needs



Luggage carriage,
Vancouver Airport



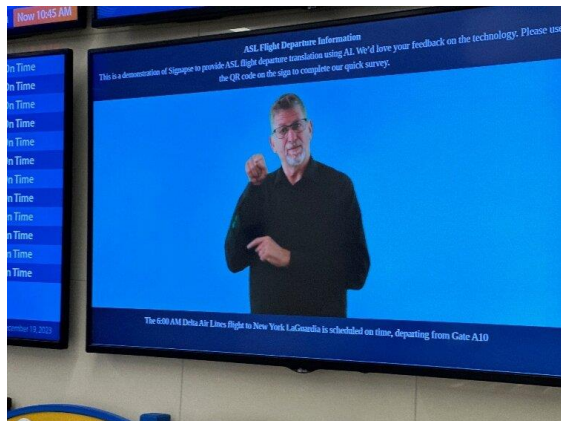
Automated wheelchair,
Narita Airport



Mobile food ordering,
Edinburgh Airport



Sensory room,
London Gatwick



AI sign language board,
Michigan Airport



VRS via sign language,
Haneda Airport



Caring corner,
Hong Kong Airport

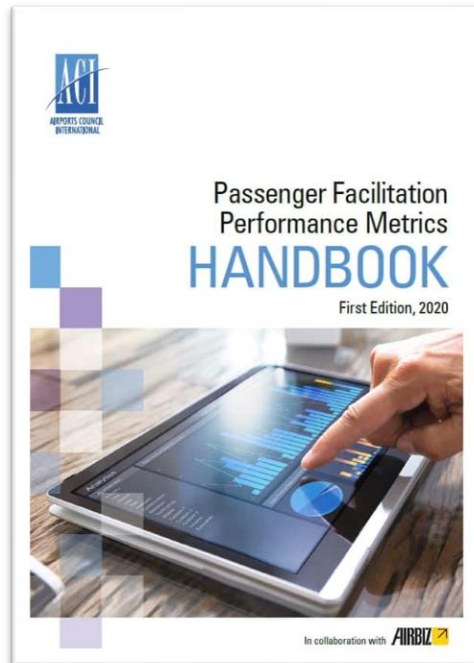


App for visually impaired,
Budapest Airport

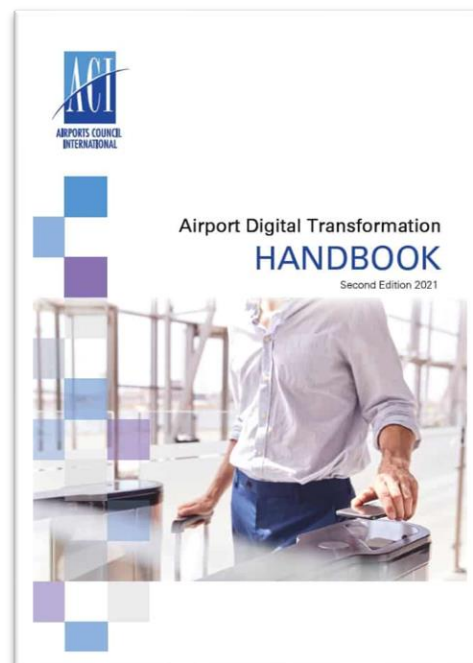
ACI guidance to assist airports on digitization & pax technology



The future of travel and digital identity at airports



Passenger facilitation performance metrics



Airport digital transformation



Digital culture & leadership strategy



Embracing the AI revolution (upcoming)

Multiple factors to enable a truly seamless end-to-end journey



Airport level

- Technology availability
- Robust IT infrastructure
- Data integration
- Staff training
- Cybersecurity



National & industry level

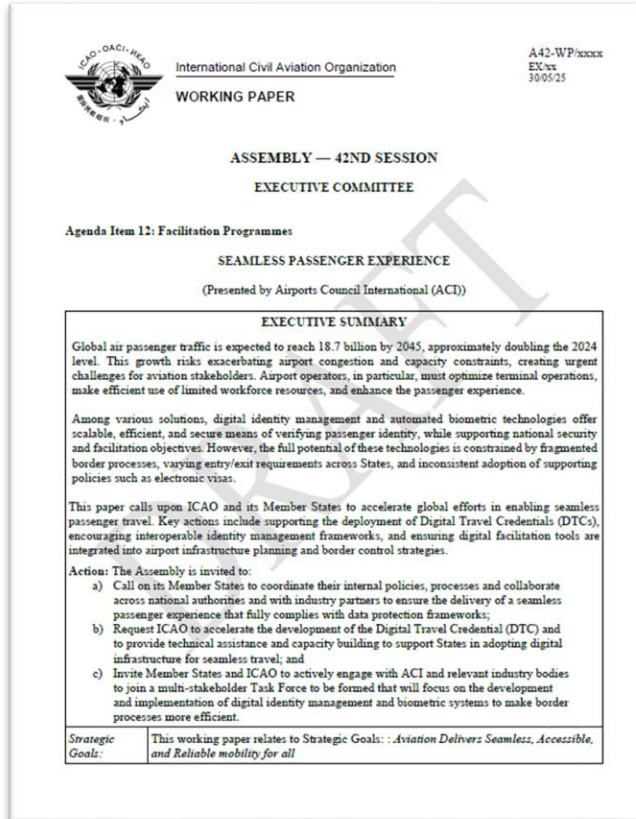
- Stakeholder coordination
 - Immigration, CAA
 - Airlines, ground handlers
- National regulations
- Data privacy protection



International level

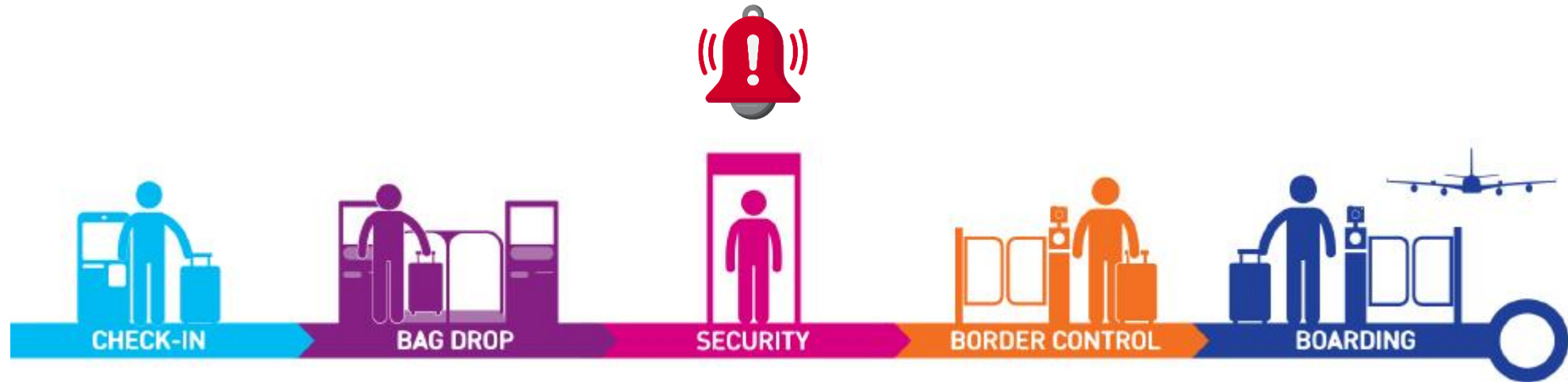
- Border entry/exit reqt.
 - Visa/ETA
- International std
 - ICAO DTC

ACI paper to be submitted to A42 on seamless journey



- Better coordination between stakeholders within a State
- Accelerate adoption of ICAO DTCs
- Leverage support from international associations (e.g. ACI, IATA)

Security remains the most challenging airport touchpoint



Touchpoints are becoming fully automated, but not security yet



Self-service check-in



Self-service bag drop



Automated border control

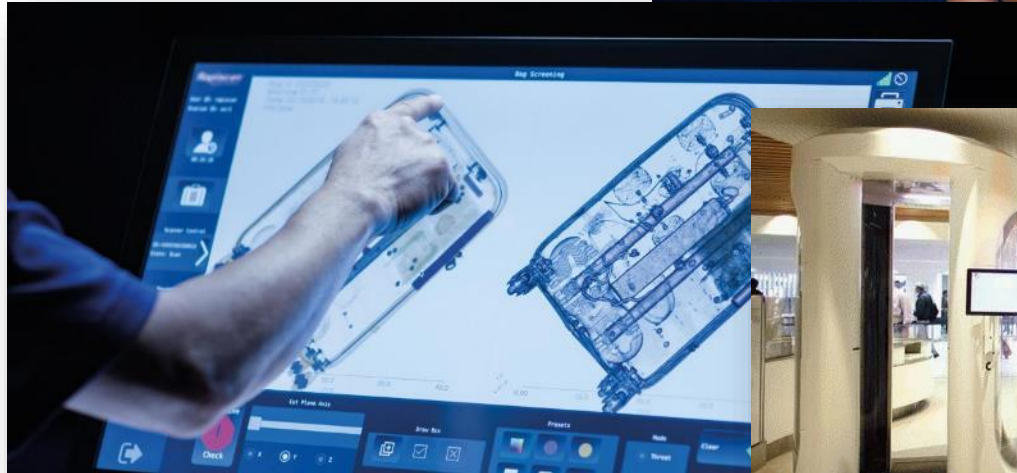


Automated boarding



Human beings are still indispensable in security

Increasing deployment of “smart” technologies at checkpoint



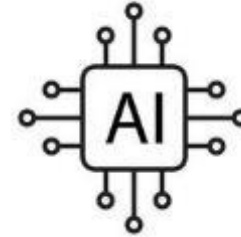
Future trends on screening technology



ACI Smart Security Vision 2040



More seamless
(i.e. less hassle and frictionless)



More intelligent
(i.e. Use of AI for threat & data analysis)



More connected
(i.e. Open architecture concept)

More examples of smart security checkpoint in the region



Hong Kong Airport



Changi Airport



Perth Airport



Daxing Airport



Incheon Airport



Narita Airport



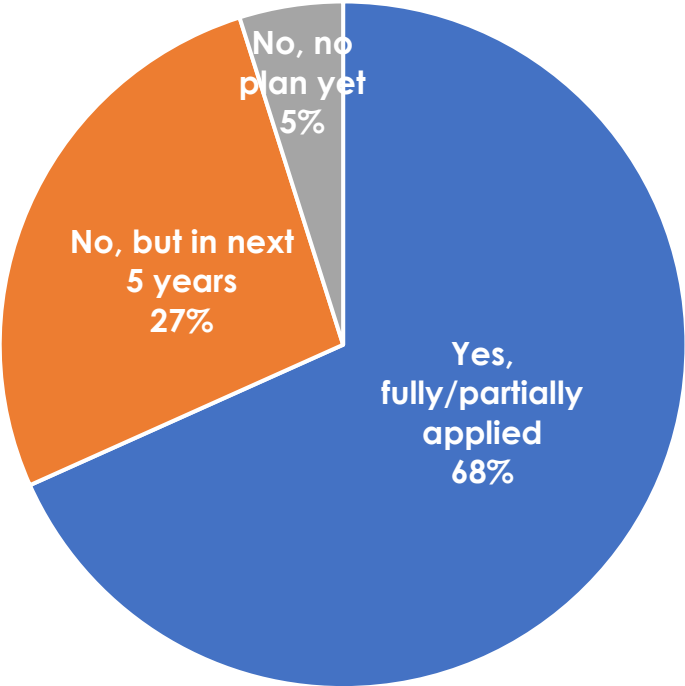
Kansai Airport



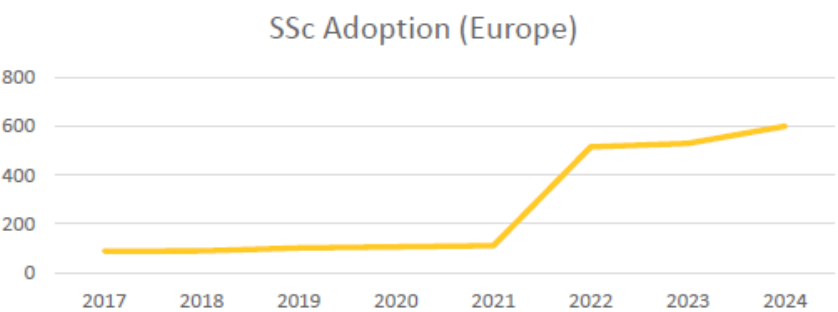
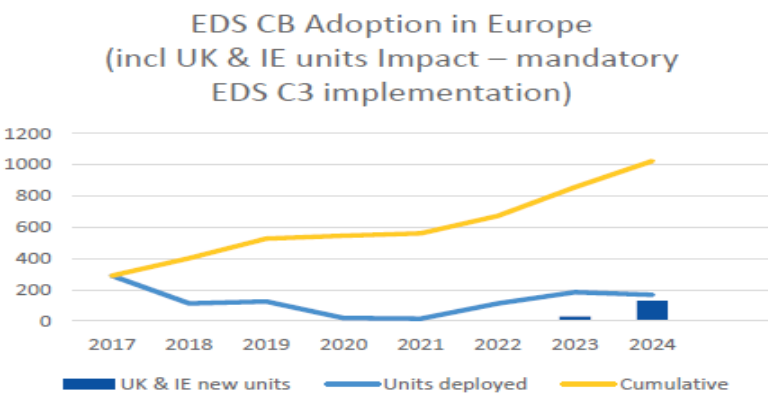
Auckland Airport

Many other airports in the region will eventually follow suit

CT & body scanner adoption rate (APAC & MID)*



CT & body scanner adoption rate (Europe)**

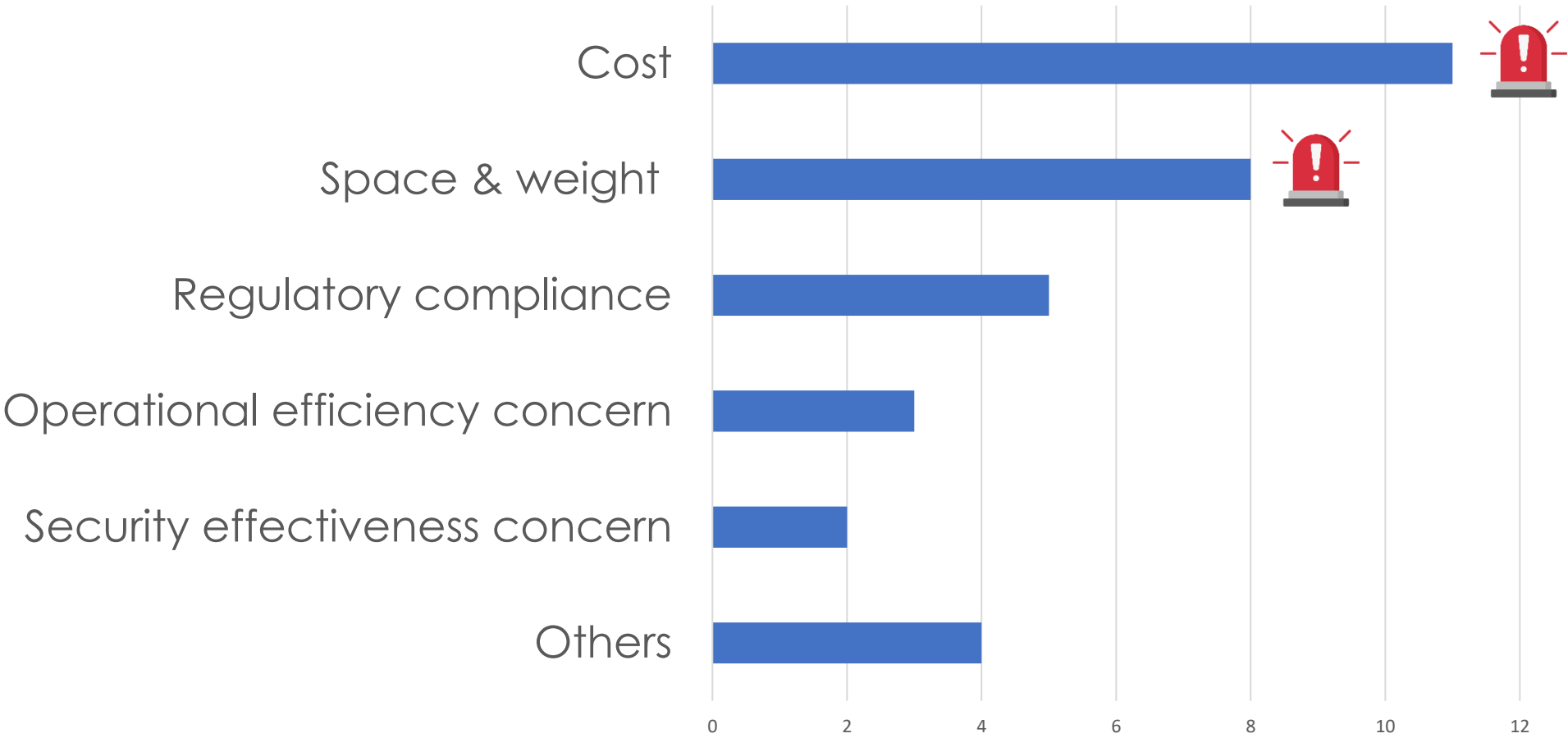


*based on RASC survey in Apr 2025 (with 41 airport operators responded)

**based on ACI Europe data till 2024

Still a distant dream for most of the small airports

Major hurdles in advanced screening technology adoption



*ACI survey conducted in May 2024 among 40 airport operators in Asia

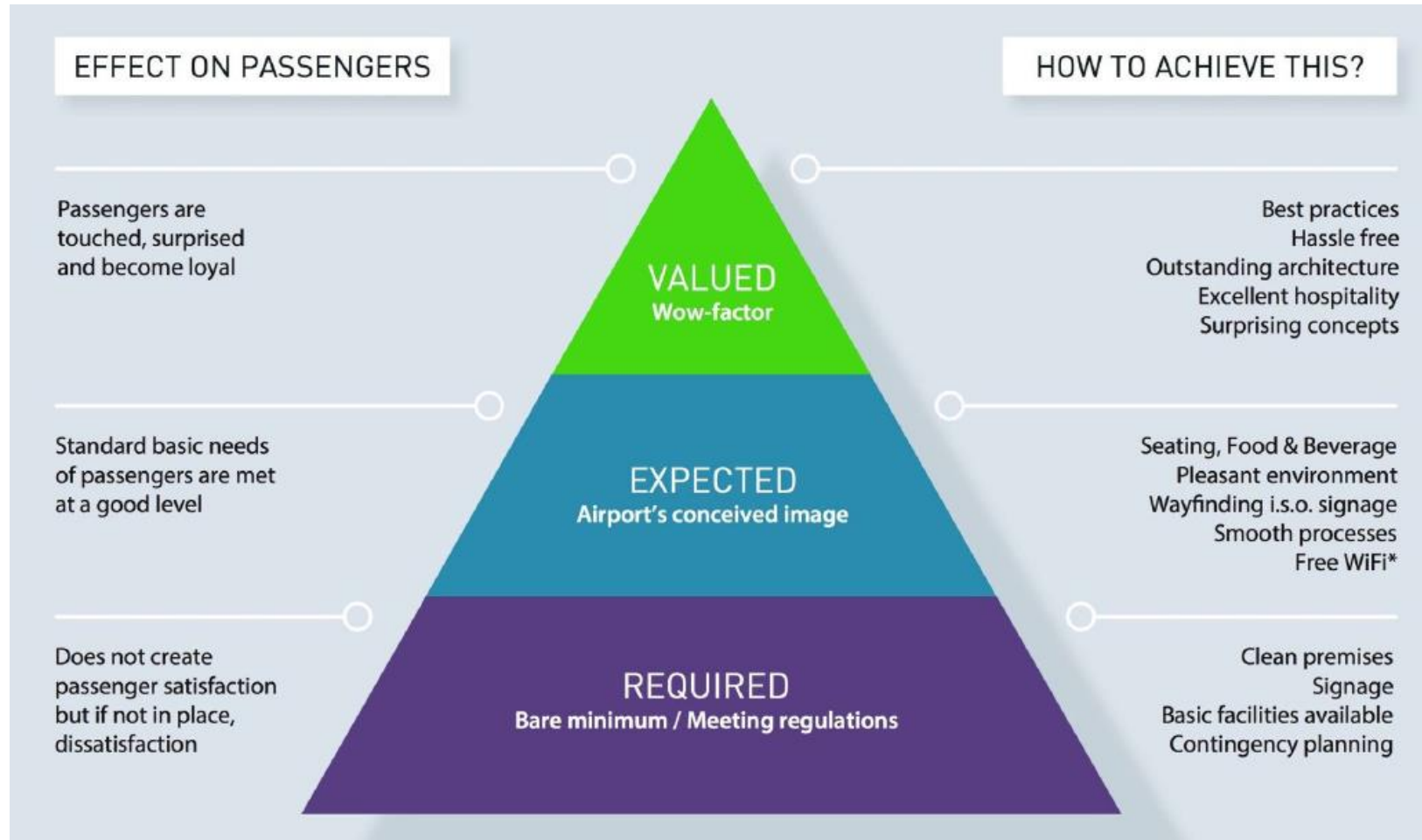
ACI regional security group with heavy focus to streamline security

39 committee members, representing over 200 individual airports



The Voice of
Asia-Pacific &
Middle East Airports

Commitment by airports to provide an “valued” journey



The Forum is invited to

- Note the growing adoption of technology to enhance operational efficiency and passenger experience across all touchpoints at airports
- Continuously work together with the national and international stakeholders to minimize obstacles that hinder the smooth processing of passengers at airports
- Make use of ACI's guidance documents and resources presented

THE VOICE OF ASIA-PACIFIC AND MIDDLE EAST AIRPORTS



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