

# Airport Development Reference Manual 12<sup>th</sup> Edition

## ICAO MID Airport Master Planning Seminar



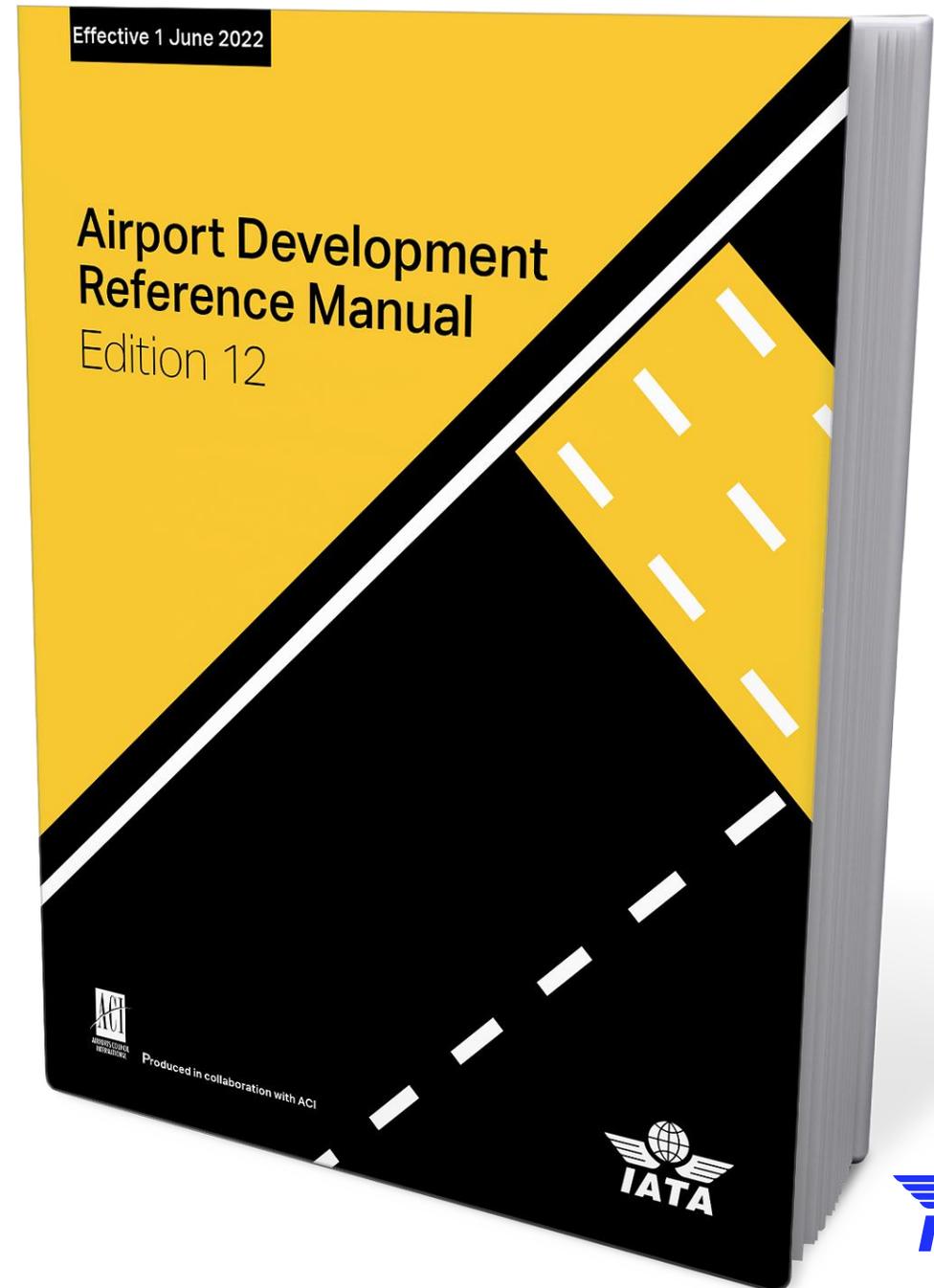
# What is the ADRM?

Comprehensive airport design and development manual

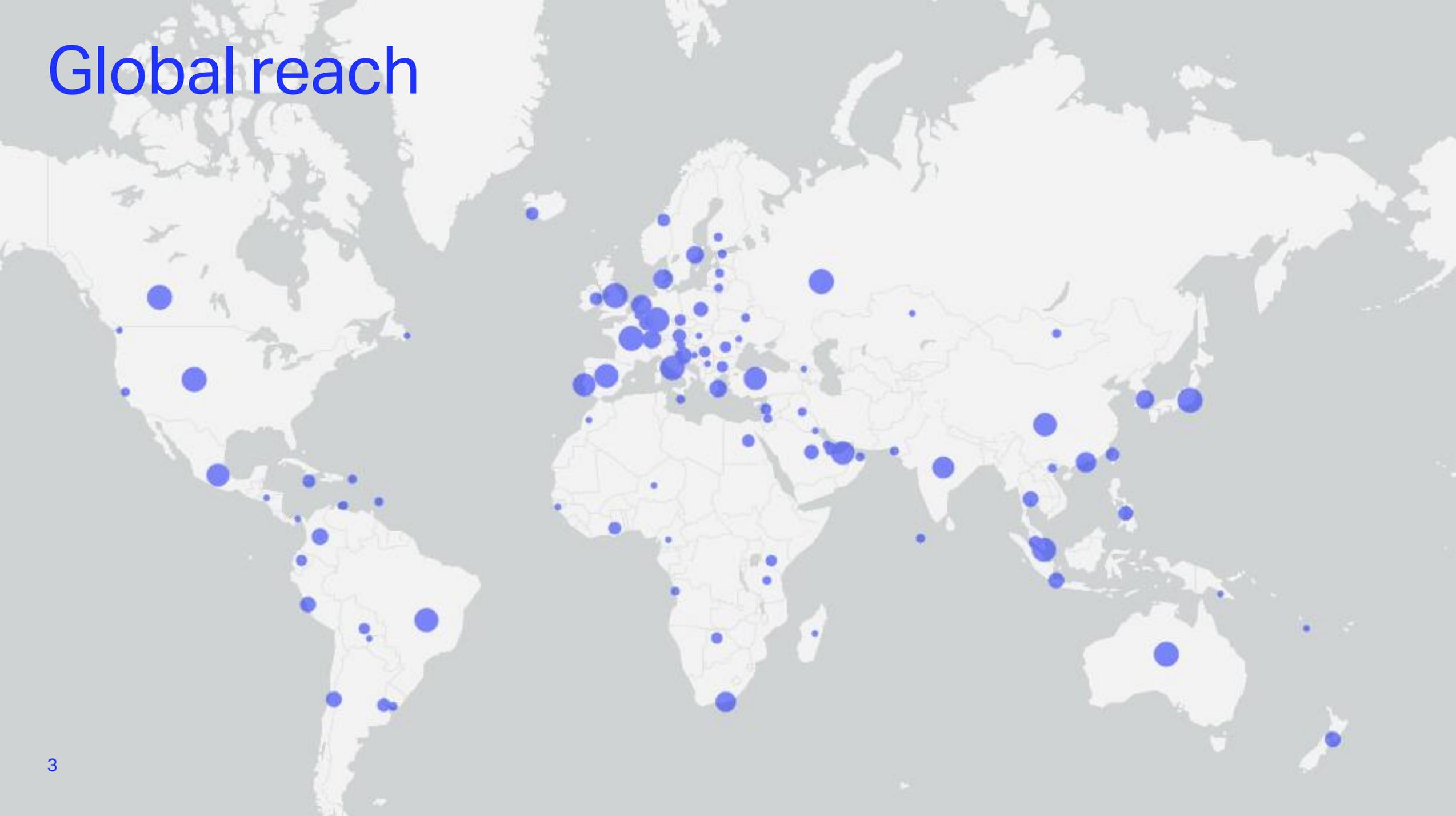
Provides a framework of best practice planning guidance developed with industry

Can be applied universally to airports

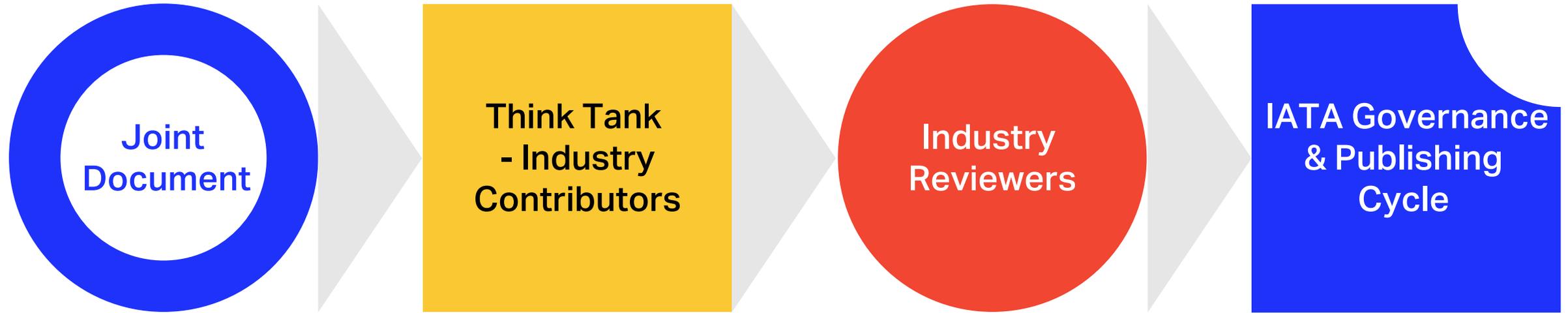
Considers infrastructure impacts based on the latest industry trends



# Global reach



# Industry effort – collaborative process



Foster + Partners Turner & Townsend IDOM JACOBS

SCOTT BROWNRIGG Heathrow SJ SURBANA JURONG

ATKINS

NACO



مطار حمد الدولي  
Hamad International Airport  
قطر QATAR

Member of the SNC-Lavalin Group

a company of Royal HaskoningDHV



ARC Airport Research Center



RICONDO

ARUP

SITA

MOTT MACDONALD

M M



# New ADRM structure to encourage best practice application

<b>ADRM - 12th Edition</b>
<b>Section 1 - Introduction</b>
<b>Section 2 - Key Considerations for Airport Development</b>
2.1 Introduction
2.2 Forecasting
2.3 Master Planning
2.4 Airport Environmental Sustainability
2.5 Universal Design and Accessibility
2.6 Airport Technology
2.7 Development of a Concept of Operations
2.8 Pandemic Resilience and Healthy Buildings
2.9 Planning for Construction Delivery
2.10 Planning for Operational Readiness and Airport Transfer
2.11 Airport Simulation
2.12 Planning for Collaborative Decision-Making
<b>Section 3 - Facilities Planning</b>
3.1 Introduction
3.2 Airside Infrastructure
3.3 Passenger Terminal
3.4 Landside Access Systems
3.5 Cargo Terminal
3.6 Airport Support Elements
3.7 Utilities



# Major changes in 12<sup>th</sup> Edition

Airport  
Environmental  
Sustainability



Peak Demand  
Guidance



ConOp's &  
Construction  
Delivery



Covid impacts

Pandemic  
Resilience &  
Healthy  
Buildings

Universal  
Design



Other changes – Passenger Terminal, Airside Infrastructure, BHS, Forecasting, International Cost Variations, Wayfinding, Technology, Simulation, Landside Efficiency, A-CDM



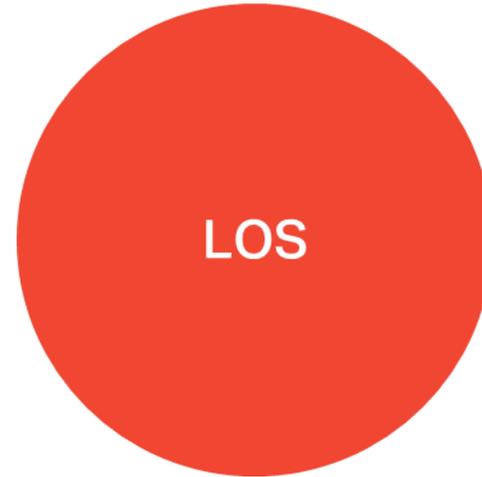
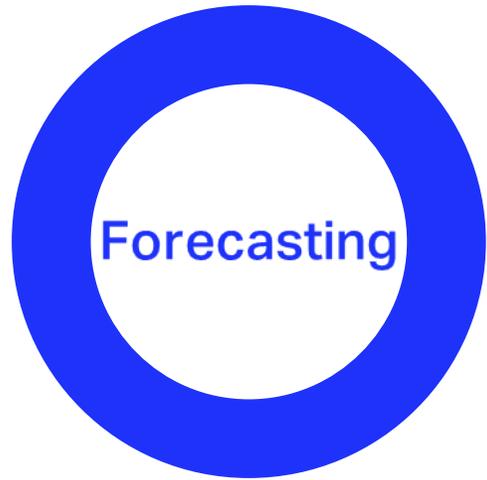
# Airport Environmental Sustainability

## Key topics include

- Local Environmental Issues
- Community and Social
- Energy and Carbon
- Green Mobility
- Resources Management
- Airport Environmental Resiliency



# COVID-19 Impacts





# Peak Demand Guidance

## Major changes

- New recommended definition in selecting historical peaks
- Recommended approach is Design Hour Rate (97-99%)
- Expanded guidance in Forecasting Peak Demand
- Expanded Guidance on Design Day Flight Schedules
- Alternative approach to Capacity Calculations using single peak figure

# Pandemic Resilience & Healthy Buildings

## Key elements

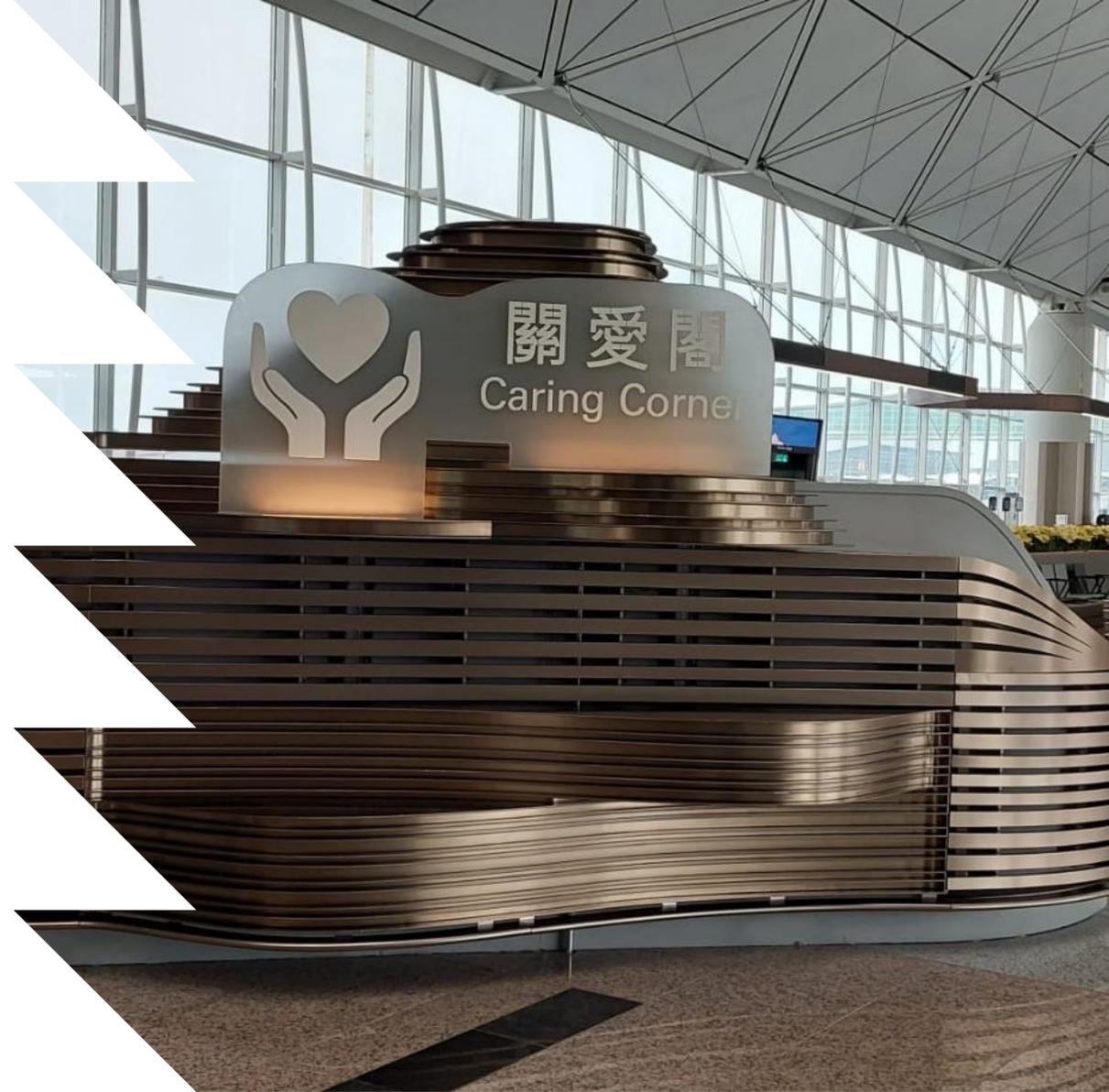
- Principles of health, well-being and pandemic resilience
- Healthy buildings standards e.g. minimize pax access, time, contact, optimize hygiene
- Design considerations e.g. ventilation and air quality, temperature, humidity and air comfort
- Touch free access, surfaces, cleaning



# Universal Design and Accessibility

## Key elements

- Principles of Universal Design
- Benefits of Universal Design
- Significantly expanded section on Passenger Terminal Accessibility including:
  - Common elements
  - Specific Supporting Facilities
  - Passenger Journey elements
  - Access and inclusion for staff



# Concept of Operations (ConOps)

## Key elements

- Importance of ConOps
- The Passenger Journey
- The Bag Journey
- The Staff Journey
- Irregular Operations



# Construction Delivery

## Key elements

- Minimizing operational impacts
- Procurement strategy and Master Schedule
- Construction impacts assessments
- Project and construction execution plans
- Environmental and community impacts mitigation
- Interim ConOps for construction
- Project logistics
- Testing and commissioning plan
- Stakeholder Management Plan



# Other Changes

A number of other notable updates include

Airside infrastructure

Airport Simulation

Airport Collaborative Decision Making

Baggage Handling System

Forecasting

International cost variations

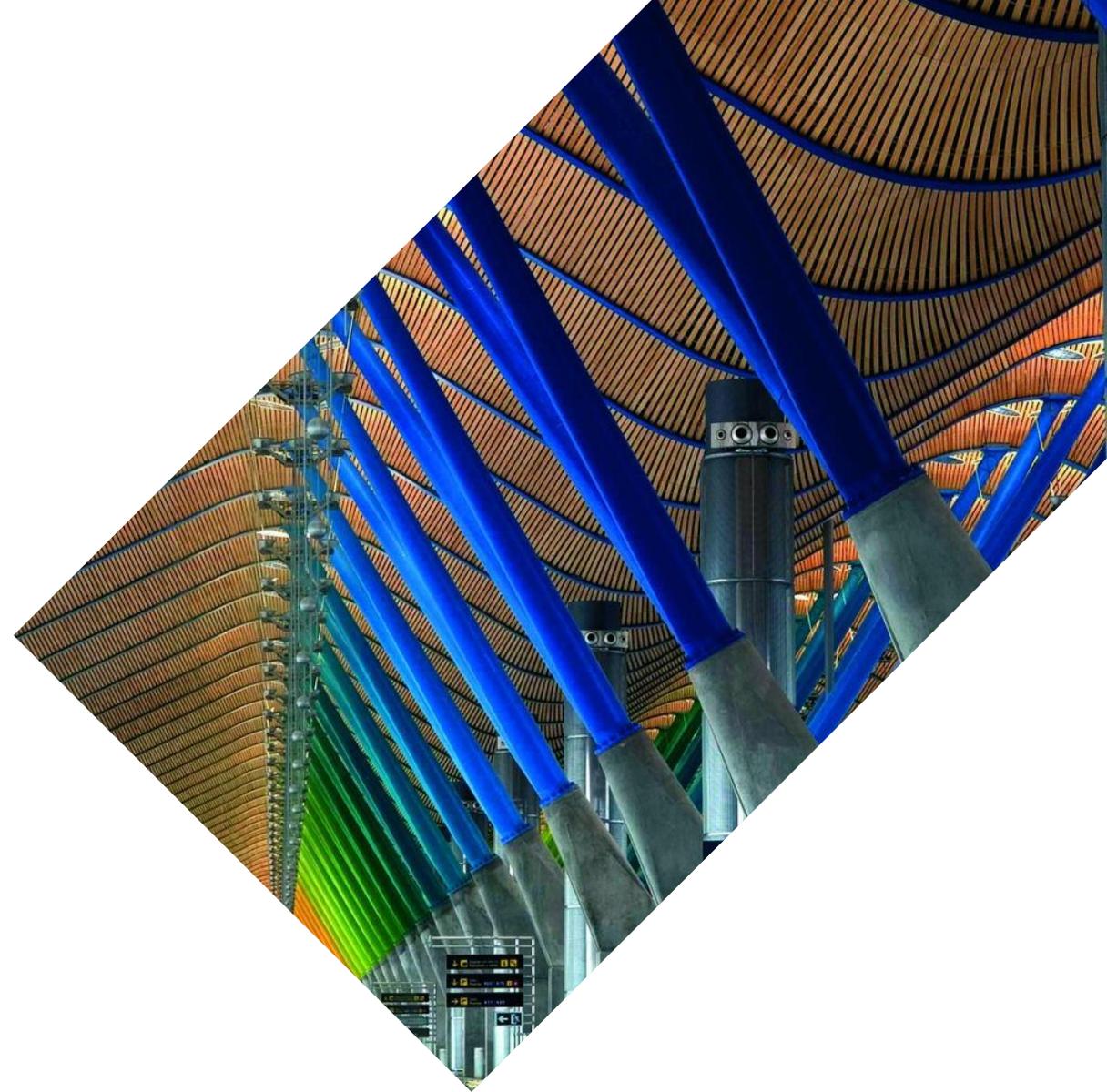
Jet Fuel Infrastructure

Landside efficiency

Passenger Terminal

Technology

Wayfinding



# Summary

12th Edition Formal release

Format options

ADRM evolution

Thank you

