

ASIA-PACIFIC & MIDDLE EAST AIRPORTS

THE OFFICIAL MAGAZINE OF ACI ASIA-PACIFIC & MIDDLE EAST



IN THE SPOTLIGHT: AIRPORT COMPETITIVENESS

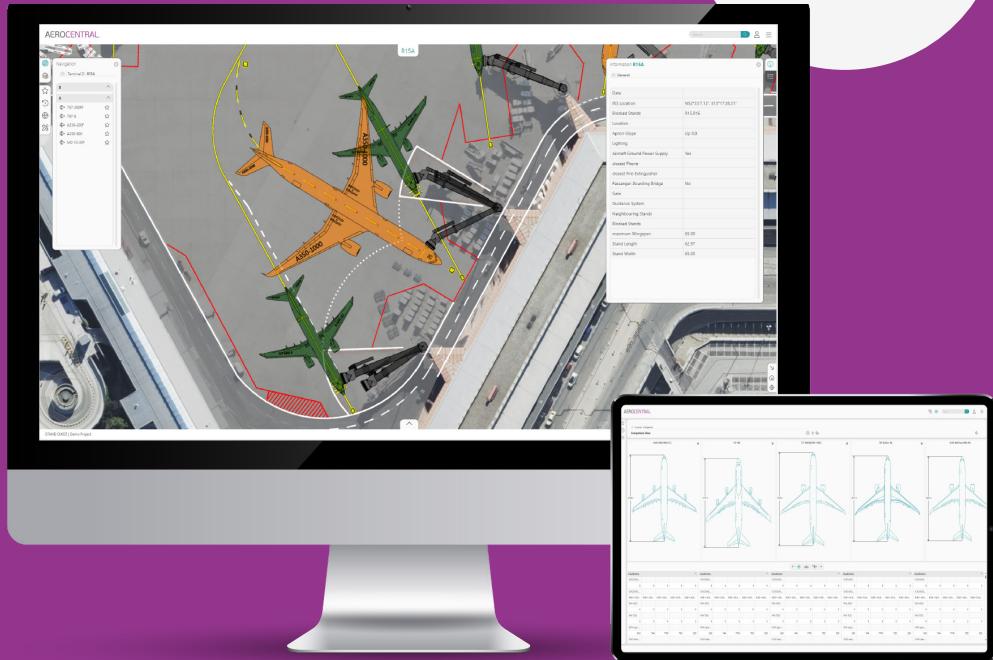
Issue 1, 2024

- ● ● Airport profile: Auckland
- ● ● Special report: Infrastructure Development
- ● ● Plus: ASQ Awards, Sustainability and Kempegowda's T2





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Asia-Pacific Airports
www.aci-apa.com

Editor
Joe Bates
joe@aci-apa.com
+44 (0)1276 476582

Design, Layout & Production
Mark Draper
mark@aci-apa.com

ACI Asia-Pacific & Middle East
Sunil Subbaiah
Head, Communications & Brand

Published by
Aviation Media Ltd
PO BOX 448, Feltham,
TW13 9EA, UK

Managing Director
Jonathan Lee
jonathan@aci-apa.com
+44 (0)208 707 2743

Advertising Manager
Jonathan Lee
jonathan@aci-apa.com
+44 (0)208 707 2743

Subscriptions
subscriptions@aci-apa.com

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ACI Asia-Pacific & Middle East (ACI APAC & MID) serves as the voice of 133 airport members, operating 623 airports across 47 countries/territories in Asia-Pacific and Middle East. ACI Asia-Pacific & Middle East is head-quartered in Hong Kong and has a Middle East office in Riyadh (Kingdom of Saudi Arabia). ACI Asia-Pacific & Middle East represents the collective interests of airport members to promote professional excellence in airport management and operations. ACI Asia-Pacific & Middle East's mission is to advocate for policies and provide services that strengthen its members' ability to serve their passengers, employees and stakeholders.

ACI Asia-Pacific & Middle East key facts:

133 AIRPORT MEMBERS

5 AFFILIATE AIRPORT MEMBERS

624 OPERATED AIRPORTS

9 ASSOCIATE MEMBERS

47 COUNTRIES/ AREAS

102 BUSINESS PARTNERS

In 2022, Asia-Pacific and Middle East airports handled 2.09 billion passengers and 49 million tonnes of cargo.



49 MILLION TONNES OF CARGO



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VIEW FROM THE TOP

Director general, Stefano Baronci, reflects on the success of ACI Asia-Pacific and Middle East's strategic plan to date and looks forward to this year's annual Assembly, Conference & Exhibition in Riyadh.

After a year of significant progress in traffic recovery, the aviation industry is on the brink of growth and transformation in 2024. Yet, despite the optimism, challenges and opportunities persist due to various macro-economic factors.

The outlook for 2024 is bright, especially in the Asia-Pacific region, where a full recovery to pre-pandemic activity levels is expected. Similarly, the Middle East anticipates continued growth, with passenger numbers anticipated to exceed a record 450 million.

However, against the backdrop of these bright prospects, geopolitical tensions in Eastern Europe and the Middle East cast a shadow over the industry's trajectory.

The potential for prolonged conflicts poses a challenge, demanding a heightened level of adaptability from stakeholders across the board.

In light of these developments, I'm proud to share the successes of ACI APAC & MID's Strategic Plan for 2020-2023.

Our achievements include strengthened relationships with other ACI regional offices, setting the first stones for future enhanced resource sharing with ACI World, and increased engagement with members and stakeholders. These achievements not only underscore our resilience but also pave the way for our next strategic leap.

STRATEGIC PLAN FOR 2024-2026

Building on this momentum, we are excited to launch our new strategic plan for 2024-2026 that aims to increase advocacy for empowerment and transformation, strengthen external capacity building to equip the industry with the required technical knowledge, effective communication for brand awareness, and

strengthen internal capabilities to continue to be efficient against the evolving industry landscape.

This plan is a direct response to the evolving industry landscape, ensuring we remain at the forefront of the sector's transformation.

A cornerstone of this new strategic direction is our commitment to sustainability, marked by a landmark Memorandum of Understanding with ACI EUROPE to launch a new Net Zero Roadmap Programme in 2025 after a trial phase in 2024.

This collaboration is crucial to our efforts to assist airports in the Asia-Pacific and Middle East regions in developing comprehensive roadmaps to achieve net-zero emissions.

Both ACI APAC & MID and ACI EUROPE will collaboratively work within a strategic framework to achieve ambitious sustainability goals.

Endorsed by Airport Carbon Accreditation, a programme launched by ACI EUROPE, ACI APAC & MID will leverage the new initiative to facilitate airports to have their own sustainable roadmap.

We are determined to assist airports in the region in their journey towards net-zero emissions, paving the way for a sustainable aviation industry.

ADVOCACY AND ENGAGEMENT

The first quarter of 2024 has already seen intensified engagement efforts with our members and regulators in Australia, New Zealand, Malaysia, India, Vietnam and Laos aimed at keeping them abreast of recovery trends, environmental practices, and best industry practices.

Our engagements with policymakers and national media alongside various industry forums emphasised the importance of improving connectivity and advocating for a balanced relationship between the industry and regulatory bodies.

In addition, I had the honour of speaking at various events across the region. In India, for example, at the Wings India 2024, I stressed the importance of enhancing international connectivity as well as placing a greater focus on sustainability.

At Routes Asia in Malaysia, I emphasised that aviation extends beyond mere transportation; it is critically linked to global politics and policymaking.

Indeed, the need for a harmonious relationship between the industry and regulatory bodies has never been more critical, especially in advocating for the sector's liberalisation and enhancing air connectivity.

While at the APTRA India Conference, I continued to stress the need for even greater international air connectivity while tackling pressing challenges such

as regulatory constraints, infrastructure limitations, supply side hurdles, high travel costs, and the macroeconomic outlook.

THE TRINITY FORUM TO BE HELD IN VIETNAM

We are proud to announce that Vietnamese airport operator, Airports Corporation of Vietnam (ACV), is to host The Trinity Forum 2024 in Ho Chi Minh City on November 5-6, 2024.

This year's event, organised by The Moodie Davitt Report, is being held in collaboration with ACI Asia-Pacific & Middle East, ACI World and the Imex Pan Pacific Group (IPP Group).

As usual, it will provide a platform for industry leaders to discuss the latest trends in airport retail, share best practices, and explore new opportunities for growth.

I had the pleasure of visiting Ho Chi Minh City recently for the Signing Ceremony for the event and firmly believe that the involvement of the IPP Group this year shows the commitment to fostering innovation and collaboration within the global airport retail sector.

Indeed, the signing of the MoU reaffirms our mutual commitment to continue enhancing the value of the event for both the aviation industry and travel retail stakeholders.

While ACV's active participation in ACI events and the presence of its deputy general director on ACI APAC & MID's Regional Board certainly demonstrates ACV's dedication to international aviation standards and best practices.

Ho Chi Minh City is a popular tourist destination and provides an ideal backdrop for the event that revolves around the overarching theme of improving passenger experience with retail offerings at airports.

We thank our hosts, Airports Corporation of Vietnam and IPP Group for their exceptional support and commitment to this event.

ALL ROADS LEAD TO RIYADH

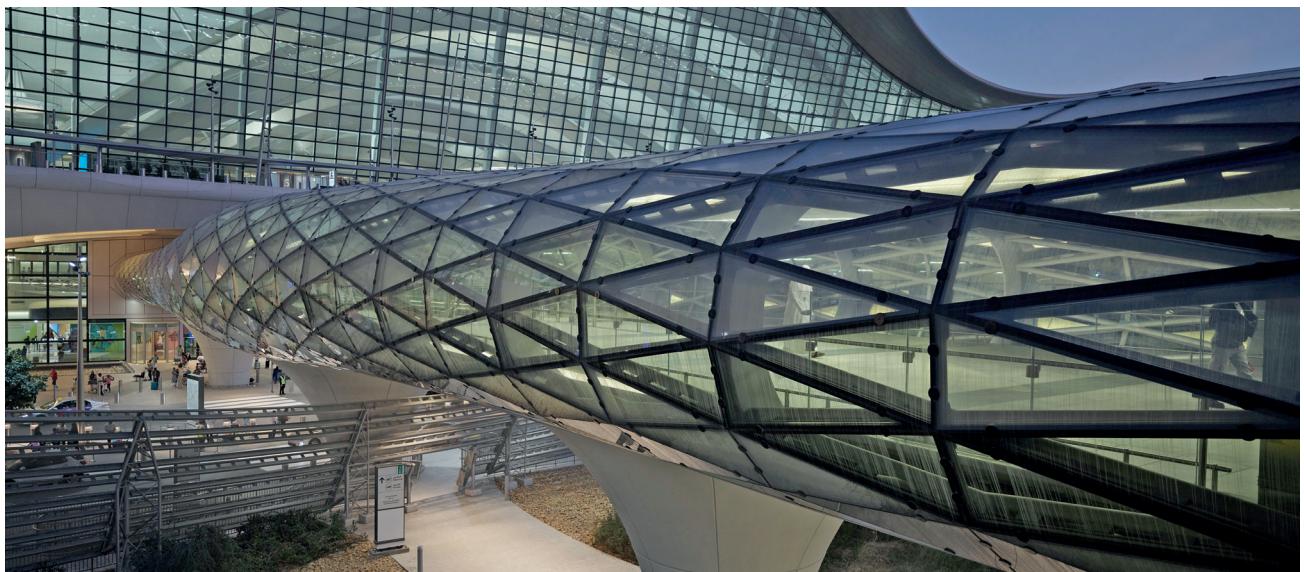
Looking ahead, our next global conference, ACI Asia-Pacific & Middle East/ ACI World Annual General Assembly, Conference and Exhibition, also known as WAGA 2024, is scheduled to take place in Riyadh between May 21-23 and, as you would expect, promises to be a significant gathering.

It will be the first time we have held our annual Assembly in the Kingdom of Saudi Arabia. We are, of course, no strangers to Riyadh or our kind hosts, Riyadh Airports Company, which operates King Khalid International Airport where our newly opened Middle East office is located.

I am excited to share that more than 50 influential personalities from aviation industry will be speaking on a wealth of topics at WAGA 2024. I look forward to seeing you in Riyadh.

INDUSTRY NEWS

We report on some of the news stories making headlines across Asia-Pacific and the Middle East.



EXCEPTIONAL TRAFFIC GROWTH IN ABU DHABI

Abu Dhabi Airports, the operator of five airports across the Emirate, has released what it is calling “exceptional” passenger traffic results for the first quarter of 2024.

The high praise for its Q1 performance is based on a 35.6% upturn in passenger numbers across its airport network between January and March 2024 compared to the same period a year ago.

In total, 6.9 million passengers passed through its gateways, almost all of them passing through Abu Dhabi’s Zayed International Airport, which welcomed 6.8 million travellers during the quarter.

Abu Dhabi Airports notes that in Q1 2024, Zayed International Airport expanded its airline network with the return of Turkmenistan Airlines and the launch of Hainan Airlines operating to Haikou, China, bringing the total number of regular scheduled operators to nearly 30 carriers.

Elena Sorlini, managing director and CEO of Abu Dhabi Airports, said: “These figures demonstrate the continued success of our airports, which are increasingly attracting a growing number of airlines and passengers from around the world.

“Abu Dhabi Airports remains committed to investing in its facilities and services to enhance the passenger experience and wider value proposition to satisfy our existing airline partners and our common customers, as well as attract new ones. With these strong Q1 results, the airport group is well-positioned for further growth and success in the future.”

In addition to passenger growth, cargo traffic also registered significant expansion in Q1 2024, with 162,000 tonnes of air freight (+25.6%) handled across all airports. Abu Dhabi Airports says that this “impressive performance” accentuates the Emirate’s role in facilitating global trade and commerce, driven by increased shipments of general cargo and specialised products such as express deliveries, and pharmaceuticals.

NEW OPERATOR FOR SRI LANKAN GATEWAY

According to a statement released by the Sri Lankan government on April 26, an Indian/Russian consortium has been awarded the concession to operate Mattala Rajapaska International Airport for the next 30 years.

Constructed with funding from the China EXIM Bank, the airport has struggled to make an impact since its 2013 opening, and it is hoped that its fortunes can be revived, and the financial debts of the Sri Lankan government eased, by the new operators.

The statement named Shaurya Aeronautics (Pvt) Ltd of India and Russia’s Airports of Regions Management Company as the winning bidder for the concession. The Adani Group was previously linked with the airport.

With tourism once again on the rise in Sri Lanka – foreign tourist arrivals doubled to 1.48 million in 2023 – the government is looking for private investors to manage and develop the country’s airport infrastructure over the coming decades.



NEW JV TO BOOST NON-AERO REVENUE AT WUXI AIRPORT

Changi Airport Group subsidiary, Changi Airports International (CAI), has established a joint venture to manage the non-aeronautical business at China's Wuxi Shuofang International Airport (WUX).

The new JV is with Wuxi Sunan International Airport Group Co Ltd (Wuxi Airport Group), a company wholly owned by Wuxi Municipal People's Government of China.

Under the terms of the agreement, the joint venture will operate and manage five key areas of the airport's non-aeronautical business on an exclusive concessionary basis for 20 years.

According to CAI, these comprise retail (including duty-free shops), food and beverage, advertisement,

car park and passenger services at the airport's passenger terminals. The scope also includes the future Terminal 3 and ground transportation centre.

CAI CEO, Eugene Gan, said: "CAI will leverage its deep knowledge of the Chinese market and industry expertise to enhance the non-aeronautical performance of Shuofang airport.

"Among other things, we will improve the airport's commercial layout and design, introduce more diverse and international retail and food and beverage selections, as well as create better leisure and entertainment options to enrich the passenger experience."

INCHEON AND MUNICH SIGN NEW TRAINING INITIATIVE



Incheon International Airport Corporation (IIAC) and Munich Airport are embarking on what they describe as an "intensive cooperation in the field of aviation training".

Both have their own training academies and under the terms of a newly signed Memorandum of Understanding (MoU) have agreed to form a partnership that will focus on joint initiatives to develop and implement innovative training programmes that address the changing needs and requirements of the aviation industry.

The MoU calls for new levels of communication between the two academies as well as the exchange of modern training methods. The agreement also allows for the exchange of training courses and instructors to provide a varied and comprehensive learning experience.

Hag Jae Lee, CEO of Incheon International Airport Corporation, and Jost Lammers, CEO of Munich Airport, signed the MoU at Munich Airport's Airport Academy earlier this year.



PLANNING THE FUTURE DEVELOPMENT OF MADINAH AIRPORT

TAV Airports is to invest \$275 million on expanding the existing terminal and building a new domestic terminal at Madinah Airport (Medina) in Saudi Arabia.

It says that the investment is needed to ensure that the airport is equipped to handle 18 million passengers per annum, allowing it to meet "surging passenger traffic", which last year jumped by just under 50% to 9.4 million passengers.

The gateway, officially called Prince Mohammad Bin Abdulaziz International Airport, was Saudi Arabia's first airport privatisation project.

The signing of the 'Head of Terms' agreement was attended by Saudi Arabia's Minister of Transport, Saleh bin Nasser Al Jasser; president of General Authority of Civil Aviation (GACA), Abdulaziz Al-Duailej; TAV Airports CEO, Serkan Kaptan; and executive board member and chair of excom, Franck Mereyde.

Kaptan enthused: "We have been successfully operating Madinah Airport, the gateway to the Holy Land, together with our partner Al-Rajhi, for the last 12 years. The passenger traffic is increasing on a very fast pace following the lifting of travel bans brought in during the pandemic.

DEDICATED SECURITY LANES FOR FAMILIES AT HAMAD

Hamad International Airport (DOH) has introduced dedicated screening lanes for families with younger children transferring through the airport as it believes that they will boost customer satisfaction levels, reduce wait times at security checkpoints, and provide staff assistance to aide families with their personal belongings.

According to the airport, the initiative reflects its commitment to minimising stress and wait times for passengers, in the process "elevating the travel experience for all passengers."

It notes that it will closely monitor the success of the new lanes, which have initially been introduced in the transfer screening area, to ensure that they are tailored to meet travellers' needs, before they are expanded to other security checkpoints.

"This new investment programme will help accommodate increasing demand and is fully supporting Saudi Arabia's Vision 2030, which aims to attract more visitors into the country."

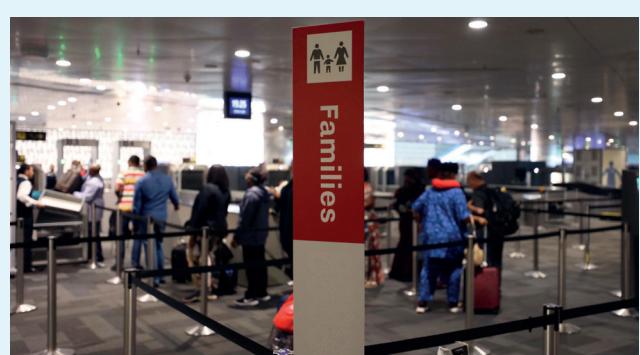
The consortium of TAV Airports and Al-Rajhi Holding holds the concession rights to operate Madinah Airport until May 2041.

The planned investment includes building a new domestic terminal with an area of 40,000sqm, which allow the existing terminal to concentrate on the further development of international traffic.

According to TAV Airports, which is a member of Groupe ADP, the airport will also benefit from new connecting roads and more car parking spaces.

TAV Airports began the operation and development of Madinah Airport in 2012 and has since built a new terminal, which upon opening was the first LEED-certified building in the MENA region.

Global airport operator, TAV Airports, served 96 million passengers in 2023 at 110 airports in 33 countries across the globe.



Renowned for its family-friendly amenities, Hamad International Airport offers a range of facilities tailored to accommodate travellers with children. From play areas and baby changing rooms to family toilets designed to accommodate children, the airport insists that it prioritises convenience, privacy and comfort for families.

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75
in North America



287
in Europe



79
in Latin America & Caribbean



27
in Africa



85
in Asia-Pacific & Middle East



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* Passenger traffic data refers to 2022

REGIONAL UPDATE

ACI Asia-Pacific & Middle East's manager for communications and brand marketing, Yuman Lau, provides a comprehensive round-up of the latest developments and insights from the airport industry.

ACI REGIONS SIGN GROUNDBREAKING SUSTAINABILITY AGREEMENT



ACI Asia-Pacific & Middle East has signed a groundbreaking MoU with ACI EUROPE, marking a significant milestone in our commitment to sustainability.

We believe that the partnership is crucial to our efforts to assist airports in the Asia-Pacific and Middle East regions in developing comprehensive roadmaps to towards net-zero emissions. Both ACI APAC & MID and ACI EUROPE will collaboratively work within

a strategic framework to achieve ambitious sustainability goals.

Endorsed by Airport Carbon Accreditation, a programme owned by ACI EUROPE, ACI APAC & MID will leverage the new initiative to facilitate airports to have their own sustainable roadmap. We are determined to assist airports in the region in their journey towards net-zero emissions, paving the way for a sustainable aviation industry.

ASIA-PACIFIC AND MIDDLE EAST'S BEST AIRPORTS FOR CUSTOMER EXPERIENCE

A total of 27 airports from Asia-Pacific and four from the Middle East have received Airport Service Quality (ASQ) Awards in ACI's annual customer experience excellence programme.

The ASQ Awards are based on the most reliable global measurement and benchmarking programme for airport customer experience.

Stefano Baronci, director general of ACI Asia-Pacific & Middle East, said: "From the East to the West, airports in Indonesia, Malaysia, Singapore, Republic of Korea, China, India, Oman, UAE and Jordan have excelled to provide a best-in-class service to their customers."

You can read more about the winners, and the reaction to their ASQ success on page 28 of this issue.



POTENTIAL RELAXATION OF 100ML LIQUIDS RULE IN HAND LUGGAGE



ACI Asia-Pacific & Middle East participated at the 9th Annual Technical and Operational Meeting (ATOM) of the Cooperative Aviation Security Programme – Asia Pacific (CASP-AP) in Vientiane, Laos, in February 2024, hosted by the Department of Civil Aviation (DCA) of Laos.

CASP-AP is a regional ICAO programme that aims to provide technical assistance to States in Asia-Pacific to enhance and implement aviation security compliances. Attended by over 50 representatives from various States and industry associations, the two-day meeting discussed various training and capacity building initiatives in aviation security and the priority areas that the CASP-AP should focus on in the coming year.

WELCOME ABOARD, RED SEA INTERNATIONAL AIRPORT



We are proud to welcome Red Sea International Airport (RSI) to our network of airport members!

Located on the west coast of Saudi Arabia, RSI is a sustainable gateway to The Red Sea, a brand-new luxury and regenerative tourism destination. It is an integral part of the overall visitor experience and promises guests an easy and seamless transfer as they arrive to and depart from their stay.

Digital readers can find out more about RSI at the following link <https://lnkd.in/gpCMA7Qc>

We are committed to strengthening our members' ability to better serve their passengers, employees and stakeholders.

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ASIA PACIFIC TRAVEL RETAIL ASSOCIATION (APTRA) INDIA CONFERENCE

ACI Asia-Pacific & Middle East's director general, Stefano Baronci, took to the stage at the Asia Pacific Travel Retail Association India Conference 2024 in New Delhi to deliver insights into India's promising long-term growth trajectory.

Baronci, who addressed delegates on the '0 to 285km/h: Charting the extraordinary acceleration of Indian aviation' panel, also shed light on spending patterns and critical findings from our non-aeronautical survey.

The DG revealed that India is poised to contribute a substantial 9% to the global growth in passenger volume in the long-term, underscoring the country's key role in the aviation landscape.

POSITIVE PASSENGER TRAFFIC AND FINANCIAL TRENDS AMID MACRO-ECONOMIC IMPACT

ACI Asia-Pacific & Middle East's latest Airport Industry Outlook for the region provides a positive trend into the recovery of passenger traffic and airport finances, but macro-economic factors still pose a challenge for the overall recovery of the sector.

The report, developed in partnership with Mott MacDonald, reveals the overall seat capacity in H2 2023 was just 3% below the levels recorded in the same period in 2019.

After a positive beginning to the year 2023, with China fully reopening its borders, the overall traffic in Asia-Pacific rebounded to almost 90% of the pre-pandemic levels, the Middle East stood out, recording a growth of nearly +4% compared to the corresponding months in 2019.

Analysing the trends, ACI Asia-Pacific & Middle East's director general, Stefano Baronci, said: "As reported by

Looking ahead, Asia-Pacific and Middle East is poised to make a substantial contribution to the industry, with five countries featuring in the global top 10 markets by passenger share by 2042.

Amidst this exciting prospect, he noted that it is imperative for states to focus on enhancing international air connectivity while tackling pressing challenges such as regulatory constraints, infrastructure limitations, supply side hurdles, high travel costs, and macro-economic outlook.

Drawing from our recent survey on non-aeronautical business, the DG said sense of place, digitisation, and understanding of demographics are the key trends in the concession business.

the International Monetary Fund, overall, Asia is on track to deliver two-thirds of global growth in 2024 and remains the key engine of economic growth in the world.

"This is reflected in the consistent positive trends in traffic and finances with airports in our region, which in 2024 is expected to reach a market share of almost 40% of the total passenger and cargo traffic at global level.

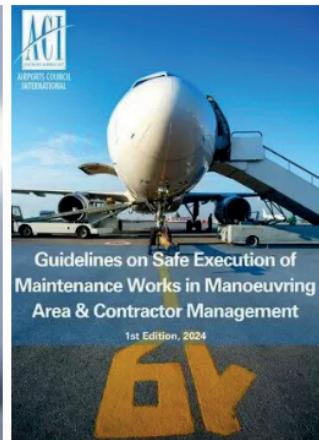
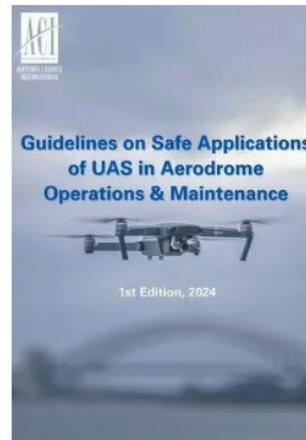
"From 2024 onwards, we hope that the expression 'pre-COVID recovery' with reference to Asia will soon become obsolete in our vocabulary.

"While still navigating macro-economic and geopolitical risks, we remain optimistic about growth prospects in the region, with our estimates suggesting Asia-Pacific to record 3% growth and the Middle East to consolidate its upward trajectory with a growth of 14% over 2019 levels."



ONE-STOP SECURITY BRIEFING TO HONG KONG INTERNATIONAL AIRPORT

One-stop Security (OSS) is a concept of removing security screening and controls at the transfer airport. If implemented effectively and appropriately, OSS will not only enhance airport operational efficiency and passenger experience with a smoother transfer process but also increase overall security standards as resources can be mobilised to other higher-risk areas.



NEW GUIDELINES ON SAFETY OF MAINTENANCE WORKS AND DRONE OPERATIONS

ACI Asia-Pacific & Middle East has added two new handbooks to its library of safety guidelines – one on the safety of airfield maintenance works and the second on the safety of the use of unmanned aircraft systems (drones) at the airport.

Both are available for free to ACI Asia-Pacific & Middle East members. Please contact the publications department of ACI Asia-Pacific at communications@aci-asiapac.aero for complimentary copies.



REGIONAL ENVIRONMENT COMMITTEE MEETS IN BENGALURU, INDIA

The 18th Meeting of ACI Asia-Pacific & Middle East Regional Environment Committee was successfully convened in Bengaluru, India, in mid-March 2024. The meeting was attended by over 40 environmental sustainability experts from airports and World Business Partners from Asia-Pacific and the Middle East regions.

The meeting highlights included a keynote speech by Satyaki Raghunath, chief operating officer of Bangalore International Airport Ltd, and a constructive discussion with guest speakers from the Coalition for Disaster Resilient Infrastructure and the International Solar Alliance on

sustainability topics, such as airport climate resilience and airport solar implementation business models, respectively.

The Committee strategised ways to assist smaller airports and Small Island Developing States' airports based on the results of the surveys. Other issues discussed were future topics for Green Airports Recognition and carbon waste management.

The Committee approved a Climate Change Adaptation Working Group to work on capacity building for airports in the region.



GROWING RESPONSIVELY

The sustainable growth and development of its facilities remains a top priority for Auckland Airport as it undertakes the biggest infrastructure upgrade in its history, writes Joe Bates.

With most international visitors to New Zealand arriving in Auckland, it should come as no surprise to learn that Auckland Airport (AKL) is the country's busiest airport by some distance.

AKL welcomed 15.8 million passengers in 2023, more than double the six million handled at country's next busiest gateway, Christchurch (CHC), and nearly three times as many the 5.4 million accommodated in Wellington (WLG).

Its 2023 passenger total represented an impressive 12% upturn on 2022, although numbers are still below the record 21.6 million that passed through its facilities in pre-COVID 2019.

KEY ECONOMIC GENERATOR

AKL's most recent financial results show that operator, Auckland International Airport Limited (AIAL), generated NZ\$440 million in revenue in the six months to December 31, 2023, during which time it handled 9.3 million passengers (+22%).

AIAL chair, Patrick Strange, notes: "Global demand for travel saw Auckland Airport deliver a solid result in the first

half of the 2024 financial year, with continued growth in our international network as airlines expanded capacity and new entrants joined the market.

"North America has been a particular highlight, where more people are now travelling to and from Auckland than ever before. While the outlook continues to remain positive, we may see the rate of growth slow over the second half of the financial year as the local aviation industry faces into economic headwinds."

Strange did, however, also acknowledge that the first half of its FY23/24 hadn't all been plane sailing, stating: "The half-year has not been without its challenges, with some customers experiencing unacceptable delays in processing.

"I'm pleased about the way our team stepped up and led the collaboration with government agencies, airlines and airline ground handlers to drive improvements. This collective effort saw the system running more smoothly in time for the summer peak, delivering a much-improved experience for travellers."



Reflecting on the half-year performance, CEO, Carrie Hurihanganui, says: "As New Zealand's gateway, strong connectivity between Auckland Airport and the world is essential for our economy, so the successful growth in international routes has been extremely positive.

"During the half year we were thrilled to welcome new airlines and destinations, with 27 airlines flying to 42 international destinations to and from Auckland Airport – only two carriers and one destination short of pre-COVID numbers.

"Auckland is now the most connected city in Australasia to the North American market, with seven airlines flying non-stop to eight destinations, including some of the world's largest commercial centres.

"In terms of benefits to customers, the increase in connectivity means more airlines to choose from and downward pressure on airfares for this market.

"There are now five airlines flying to and from six destinations in China, with leisure visitors accounting for over 60% of all inbound travellers from China during the half year, overtaking those arriving to visit friends and relatives. India and Philippines markets have also shown strength, with demand for seats exceeding pre-pandemic levels during the period.

"As services have ramped up, driving improvements in the customer journey has been a clear focus for everyone in the airport eco-system, particularly in the international arrivals area. I'm delighted to say this resulted in more than a 20% improvement in processing times for customers coming through the international arrivals process across December and January, compared to the prior two months of October and November 2023.

"We are going to keep working at it to continue to improve the experience for travellers. It's why the upgrade of Auckland Airport's infrastructure is so important. We want a better experience for travellers across the system and that's what our investment will deliver."

NEW INFRASTRUCTURE

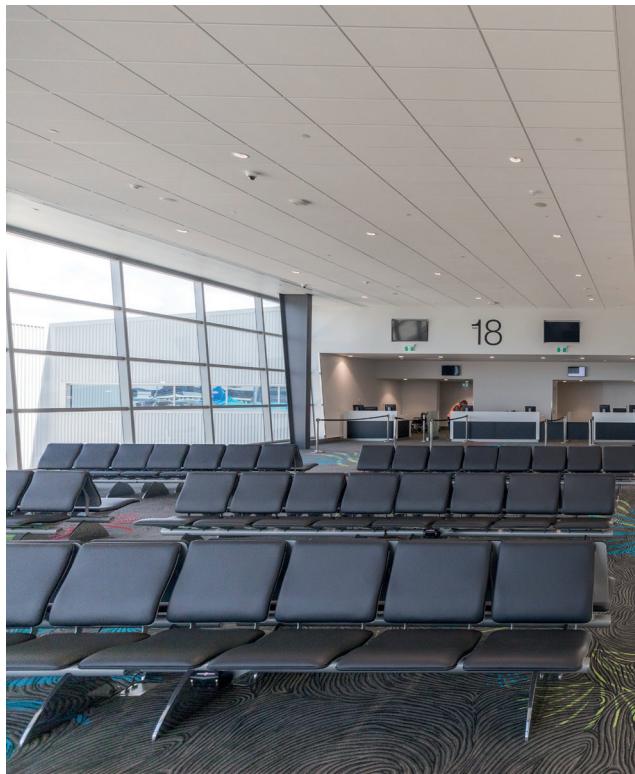
Auckland Airport's recently opened Transport Hub will serve as the new entrance and departure point for the millions of travellers who visit Auckland Airport each year.

Talking about its addition, Hurihanganui, says: "Our new Transport Hub, which will serve both international and domestic jet passengers once the new integrated terminal is built, will help travellers move between vehicles, public transport and the terminal quickly and easily.

"The pick-up and drop-off area is undercover and protected from the weather; roads have been configured to provide a seamless one-way system for transport, and a new landscaped pedestrian plaza provides for a real uplift in the overall customer experience.

"Like many of our projects, we've delivered the Transport Hub with sustainability at the forefront. A giant solar array will help to power the facility, and we've set aside a corridor of land right next to the Hub to allow for the development of future mass rapid transit.

"Elsewhere on the aviation precinct, aeronautical construction projects continue to advance as a priority as Auckland Airport works to build greater resilience into New Zealand's busiest gateway and transform the customer experience."



"Critical enabling works to prepare for a new domestic terminal connected to the existing international terminal are well advanced," explains Hurihangau.

"This includes construction of the new eastern bag hall with three baggage carousels providing not just a step change in technology and energy efficiency, but the first elements of the future baggage handling system.

"A major airfield expansion is also underway, delivering seven new remote stands for international aircraft and including construction of 3,500m of new stormwater pipes to increase the resiliency of the airport and protect it from extreme weather events. The project is on track for completion in late calendar year 2025.

"Travellers are also seeing the benefits of work to improve facilities at the domestic terminal, which is now almost 60 years old and reaching capacity. While we build our new domestic terminal, we want to make sure customers have an enjoyable and comfortable experience in the existing domestic terminal.

"So far, new women's and men's bathrooms have opened near regional arrivals and departures, and customers are loving the fresh, new facilities and extra space. We will soon begin working on the bathroom blocks near the Air New Zealand bag reclaim, with a new parent room, upgraded accessible toilet facilities, and gender-neutral toilets being delivered."

Other improvements are underway across the aviation precinct, upgrading the experience for visitors and the 20,000-plus people that work at the airport and helping the airport reach its sustainability goals.



Hurihangau says: "Our new Park & Ride South facility, due to open before the end of the 2024 financial year, will create easier travel connections for anyone arriving from the south.

"With about 40% of all precinct traffic arriving from the south, we recognise the importance of upgrading the southern access point to the airport. Our new parking facility will offer convenient parking options and easy connections to the terminals via a bus service that will transition from fossil-fuel to electric next summer.

"Elsewhere on the airport campus, we saw Te Arikirui Pullman Auckland Airport Hotel, our joint venture with Tainui Group Holdings, open its doors for the first time in December, providing a 5-star accommodation experience to visitors on the doorstep of the international terminal.

"Mānawa Bay, which aims to be New Zealand's first 5 Green Star premium outlet shopping destination, is on track to open in September 2024, and has experienced strong demand from tenants."

GREEN CREDENTIALS

With Auckland Airport achieving Level 4 'Transformation' status in ACI's Airport Carbon Accreditation last year, and a host of other environmental initiatives receiving global attention, there is little doubting the gateway's commitment to reducing its carbon footprint and developing in a sustainable manner.

Hurihangau is certainly proud of the airport's recycling efforts that have included the opening of a new \$5 million transitional waste facility to enhance the collection and recycling of waste from international flights and across the terminals.

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**ADB
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"In terms of waste, we are having a meaningful impact on the environment with several initiatives underway," enthuses Hurihanganui. "One of these is a successful trial to separate organic waste in the international and domestic terminal landside food courts. This is already saving eight tonnes of waste from the landfill each month and is being turned into valuable compost.

"Alongside this, the new NZ\$5 million transitional waste facility is improving the way waste from international flights, airline lounges, as well as all waste from the domestic terminal and airside waste from the international terminal is managed. This purpose-built facility sees the waste manually sorted to separate low-risk, clean recyclables and diverts them from biosecurity treatment and disposal in landfill."

The airport's chief sustainability and master planning officer, Mary-Liz Tuck, notes that AKL's Level 4 status in the Airport Carbon Accreditation programme makes it one of the leading airports in the world when it comes to reducing its carbon footprint.

And she is confident that the airport will be able to hang on to its lofty Airport Carbon Accreditation status, and actually improve its green credentials, upon completion of the biggest airport development programme at Auckland Airport since it was built in the 1960s.

"As we upgrade our infrastructure, it is providing opportunities to tackle carbon emissions at the same time, whether that's saving truck journeys by reusing concrete from runway repairs as the base material for our airfield expansion or targeting low-carbon and sustainable building practices for our terminal development," says Tuck.

"Decarbonising aviation is challenging, particularly for a country like New Zealand where airlinks provide vital connectivity to the regions and its nearest international neighbour is more than 2000km away, but we recognise it is going to take a team effort.

"No organisation can do it alone and we are ready to play our part to address Scope 3 emissions. Whether it's having our airfield fuel network ready for SAF, providing electric ground power units for aircraft to run off when at the gate, EV charging for airside vehicles, or contemplating future low-emission fuel technology in our infrastructure planning, we are constantly considering how we can support the low-carbon ambitions of the wider aviation system.

"Auckland Airport has targeted getting to net zero for our own operations by 2030, which will see Auckland Airport reduce direct emissions by 90%. After four years we have already made some significant cuts to our carbon emissions with a 27% reduction in comparison to our 2019 baseline. The next six years will see us undertaking substantial projects to achieve net zero."

Key initiatives include the phasing out of gas-powered boilers in favour of energy efficient heat pumps within the terminal — and the addition of rooftop solar generation to power two new airport developments, the Transport Hub and the Mānawa Bay outlet shopping centre.

Tuck adds: "This is a journey we've been on since 2008 when we introduced our first sustainability policy. In the 15 years since we've been making significant progress not just across our own operations, but also recognising the role we must play in supporting airlines and other airport partners to reduce their carbon footprint."



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MAXIMISING THEIR POTENTIAL

In this two-part article, Marnix (Max) Groot, managing editor of the Momberger Airport Information newsletter, reports on a selection of infrastructure development projects that are either underway or planned across Asia.

While Asia has been slower to recover from COVID-19 than other regions, the future looks bright, with hundreds of airports either being built, upgraded or expanded across the region.

In the first part of a two-part article, we focus on a number of projects in Nepal, India, Bangladesh, Cambodia, Vietnam and Thailand, that are either already under construction or being planned, including a handful of ambitious long-term developments.

NEPAL

In November 2023, local media announced that the government of Nepal decided to proceed with the project to develop **Nijgadh International Airport**, a second international airport for Kathmandu. The decision came after the Supreme Court nullified a previous government decision regarding the airport's construction in 2021 on environmental grounds.

According to the existing master plan, the airport will initially boast one runway and a passenger terminal with a capacity of 15mppa. With the addition of a second runway and future terminal expansions the airport could ultimately

be capable of handling upto to 60 million passengers yearly. The project is now going through an environmental impact study.

In the meantime, plans still exist to build a new international passenger terminal at Kathmandu's **Tribhuvan International Airport** at a cost of \$374 million. According to plans released in 2016, the 9,300sqm terminal will have six contact stands and a capacity of 7.5 million passengers per annum.

If completed, the current international terminal will be converted into a domestic terminal, enabling the airport to serve 12 million annual passengers. According to local media, the plan is still very much alive, although it will likely have to be executed as a PPP project considering Nepal's chronic money problems.

INDIA

India is going through an incredible airport construction boom, similar to that of China in the 2000s and 2010s, with dozens of existing airports being expanded across the country and new ones planned or being built to to ensure that the country has the capacity to meet future demand.



Just focusing on India's biggest cities arguably reveals some of the most ambitious airport development projects across the globe.

Phase 1 of the greenfield **Navi Mumbai International Airport** is scheduled to open in March 2025. With an investment of \$1.8 billion, the airport will initially boast a single 3,700 metre runway and a 523,000sqm passenger terminal capable of handling up to 20 million passengers per annum.

Being built by the Adani Group, the new gateway will officially be known as D.B. Patil International Airport and also boast cargo facilities with the capacity to accommodate up to 800,000 tonnes of freight annually.

A second runway and two additional terminal modules can later be added at the Maharashtra state located gateway, potentially raising its capacity to 60 million passengers and 1.5 million tonnes of cargo annually.

Meanwhile Mumbai's existing **Chhatrapati Shivaji Maharaj International Airport** is planning to demolish and rebuild its Terminal 2 due to structural and safety concerns.

The demolition is scheduled for next year, coinciding with the operational start of Navi Mumbai International Airport in March 2025, to ensure minimal disruption in passenger traffic. A new terminal is expected to replace T1 within three years of construction, featuring an underground tunnel connection to Terminal 2 (T2).

Elsewhere in India, with the recent opening of the rebuilt Terminal 1, Delhi's **Indira Gandhi International Airport** (DEL) now has three passenger terminals offering a combined capacity of 100 million passengers per annum.

The 2016 master plan calls for the development of a new domestic terminal (T4) with an annual capacity of 40 million passengers. The airport, located in India's National Capital Territory, is expected to decide on the project in the next few years.

Developments at DEL have arguably been overshadowed in the media by expected late 2024 opening of **Noida International Airport** near Delhi. The airport has been given the IATA code 'DXN' and will initially be equipped with a single 3,900-metre runway and a 12 million passengers per annum capacity terminal.

However, according to the airport's master plan, four more runways can be built, and the airport's capacity can be gradually raised to 30 million passengers per annum, then 50 million, and ultimately 70mppa. But, with DEL's ambitious expansion plans and its location much closer to the city, one can wonder if Noida will grow to be a huge airport anytime soon.

Viewed as an alternative to Delhi's Indira Gandhi International Airport, Noida is being built, and will be operated by Yamuna International Airport Private Limited (YIAPL), a special purpose vehicle set up for the job and 100% owned by Zurich Airport International.



In Karnataka state, Bangalore **Kempegowda International Airport** opened its new 255,000sqm Terminal 2 last September (See page 34). With a capacity of 25 million passengers per annum, it has effectively equipped the airport to handle in excess of 50 million passengers yearly.

The airport is currently refurbishing its Terminal 1, raising its capacity from 26.5 million to 35 million passengers. This entails transforming the international areas into domestic zones and upgrading baggage, security, and other facilities.

Additional development phases involve completing the second phase of T2, which would raise the airport's capacity by a further 20 million passengers, meaning that Kempegowda would be able to handle around 80 million passengers annually.

Longer-term developments include a new Terminal 3, the location of which will be determined in the late 2020s. Additionally, plans are underway to connect T1, T2, and eventually T3 with an automated people mover system (APM).

In the meantime, there is talk about building a second airport for Bengaluru to relieve the pressure on Kempegowda. One option is to revive the city's old **Hindustan Aeronautics Limited** (HAL) Airport. HAL Airport, located in the city centre, was shut down in 2008 when Kempegowda airport opened.

Elsewhere, in Telangana state, Hyderabad's **Rajiv Gandhi International Airport** has just completed a terminal expansion, raising its capacity to 34 million passengers annually.

The airport's master plan foresees a second parallel runway and passenger terminal, increasing the total capacity to 80mppa. The new infrastructure will be developed according to demand. Other key developments include additional cargo terminals, landside commercial developments, and a metro rail connection to the city.

Another interesting project to highlight is **Dholera International Airport**, a new gateway planned for the Dholera Special Investment Region (DSIR) in Gujarat state in north western India.

It will also be a supplemental airport for Ahmedabad, located 80 kilometres away. If the project really takes off, the airport could ultimately have two parallel runways (3,800 and 4,000 metres long respectively) and the capacity to accommodate up to 50 million passengers annually.

Phase 1 of the project, which involves an investment of \$165 million, is now underway and is scheduled for completion in 2026.

Interesting things are also happening in the southern Indian state of Tamil Nadu, where there are plans to build a second airport to serve the city of Chennai. The proposed site for new airport is near Parandur, which is around 70 kilometres from Chennai and 60km from the city's existing Chennai International Airport.

Phase 1 plans for the new airport at Parandur include a single 4,040 x 45-metre runway, a 345,758sqm passenger terminal with a 20mmpa capacity, and a cargo terminal and truck docking area covering 230,500sqm.

The new airport will be connected to Chennai by an expressway and light rail connection. Construction is scheduled to start in January 2026 and be completed in 2028. Three additional phases, adding a parallel runway and two more passenger terminals, are to be developed through the 2040s.

Its potential construction seems to have had little impact on **Chennai International Airport's** own development plans, as it is currently expanding its passenger terminal to allow it to handle 35 million passengers annually. And looking a little further into the future, the airport has outlined proposals for a 15mppa capacity boarding concourse that would raise its annual capacity to 50 million passengers.

Finally, in the Indian state of West Bengal, **Netaji Subhash Chandra Bose International Airport** in Kolkata is currently carrying out the \$200 million expansion of its passenger terminal. It is anticipated that a 5,600sqm extension to the terminal will allow the airport to handle an extra two million passengers annually, raising its capacity to 28mppa.



In the medium-term, the airport will build a new 11 million passenger capacity terminal and, in the long-term, has plans for a third terminal capable of accommodating 22 million passengers annually, enabling the airport to reach a capacity of 61 million passengers.

BANGLADESH

Dhaka's **Hazrat Shahjalal International Airport** (DAC) is currently close to completing the construction of a new Terminal 3 at a cost of \$2 billion. Set to open in October 2024, the new 542,000sqm terminal will have 12 close contact stands and a 12mppa capacity, allowing the airport to handle up to 20 million passengers annually.

In addition to the new terminal, a 63,000sqm cargo complex is also under construction at the airport. When complete, DAC will be capable of handling 500,000 tonnes of freight annually – 300,000 tonnes more than today.

In March 2024, local media reported that the Civil Aviation Authority of Bangladesh (CAAB) was moving forward with plans to construct a second runway at Dhaka, which will function as a backup runway. The feasibility study has recently been completed.

A second runway is necessitated by the expected increase in aircraft movements once the third terminal of the airport becomes operational in October 2024. In addition, plans exist to lengthen the existing runway from 3,200 to 3,658 metres.

Elsewhere in Bangladesh, the runway at **Cox's Bazar International Airport** is being lengthened to 3,566 metres. The airport, which serves the resort town of Cox's Bazar, also intends to build a new passenger terminal, apron, taxiways, cargo building, ATC tower, and other support facilities. A feasibility study will be undertaken in 2024.

Meanwhile, **Saidpur Airport**, located in the north of the country, wants to be upgraded to an international airport. For it to happen, the airport's runway would have to be extended from 1,800 metres to 3,700 metres. Authorities have had trouble finding funding for the project, which

has been budgeted at \$456 million. A feasibility study will get underway in the coming weeks.

CAMBODIA

The new **Pnomh Penh-Techo Takhmau Airport** is expected to open in 2025. Built at a cost of \$932 million, Phase 1 facilities will include a single 4,000-metre runway, a 243,000sqm passenger terminal with the capacity to handle 13 million passengers annually, and an airport city development. The airport will be connected to the city by means of expressway and a light rail line.

The addition of a second 4,000-metre runway and expansion of the passenger terminal in the Phase 2 development of the airport in 2030 is expected to raise its capacity to 30 million passengers per annum.

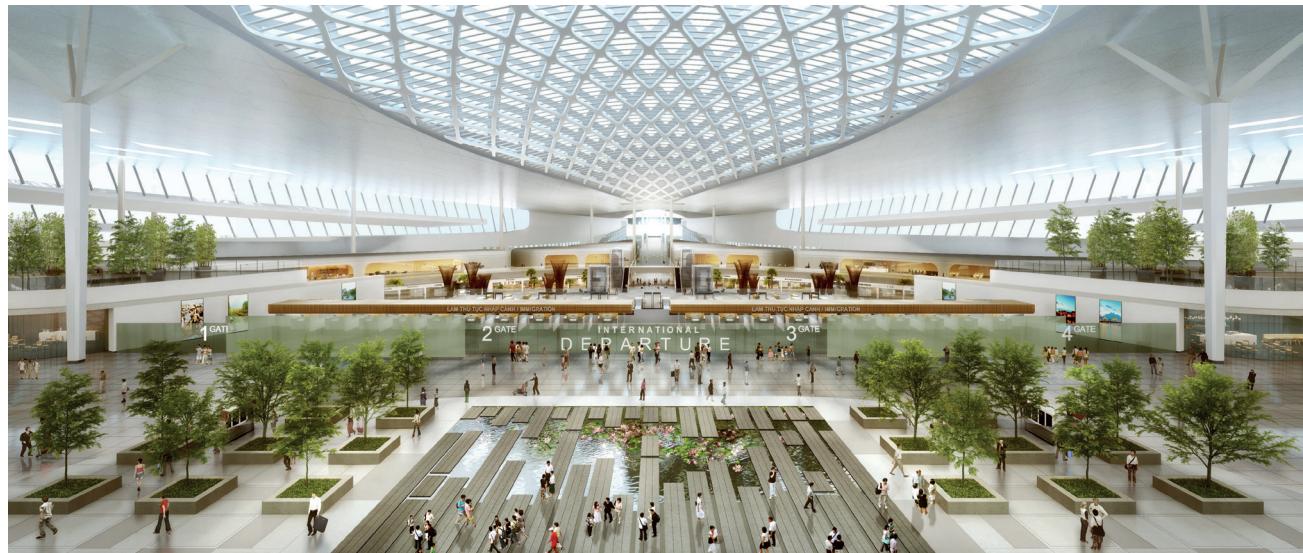
Phase 3, which will be built by 2050, will see the construction of a satellite concourse, raising the airport's capacity to 50 million passengers per annum.

Elsewhere, **Battambang Provincial Airport**, inactive as a commercial gateway for over three decades, is set for a major rehabilitation and expansion to accommodate international flights, aiming for a 4C classification. The project will require rehabilitating the airport's 1,600-metre runway.

The airport originally opened in 1967 but ceased operations in 1975 due to the Khmer Rouge regime. It briefly served military and UN helicopter operations until its closure in 1991. Currently, parts of the facility are used as a food market, with no confirmed timeline for the reopening.

In March 2024, it was announced that Focus Consortium, in collaboration with the State Secretariat for Civil Aviation (SSCA), had initiated a feasibility study for **Mondulkiri Airport**. Authorised in January, the study aims to assess the viability of constructing a new airport and a multi-purpose satellite city on a Build, Operate and Transfer (BOT) basis.

The consortium, comprising investors from Cambodia, Malaysia, China, Europe and the Middle East, will determine the projects' feasibility and potential investment requirements.



This initiative follows a previous unsuccessful attempt by China Power, halted by the COVID-19 pandemic, to develop the airport on a 300 hectare site near Senmonorom city, with an estimated cost of over \$80 million.

VIETNAM

According to the government's Masterplan on National Airport Development, Vietnam will expand its airport system from 22 airports to 30 airports by 2030, and to 33 airports by 2050. In the meantime, many existing airports are slated for expansion, a selection of some of the biggest projects are listed below.

After the completion of the new Terminal 3 at Ho Chi Minh City's **Tan Son Nhat Airport** in April 2025, the airport will focus on expanding the existing Terminals 1 and 2. The expansion, expected to cost \$1 billion, will raise its capacity from 46 to 76 million passengers per annum.

It is, of course, almost impossible to talk about airport development in Vietnam without providing an update on Ho Chi Minh City's eagerly awaited **Long Thanh International Airport**.

Phase 1 of the new greenfield gateway is due to be completed in the first half of 2026, at which time it will have a 25 million passengers per annum capacity terminal building, single 4,000-metre runway, and cargo facilities capable of handling 1.2 million tonnes of cargo yearly.

The Airports Corporation of Vietnam (ACV) is planning to build a second runway for Long Thanh International Airport directly after the first runway becomes operational. For this, ACV will utilise an estimated VND4 trillion (\$162 million) saved from the first phase of the airport project.

By the mid-2030s, two more runways and three more terminals will be added taking the total cost of the new airport to in excess of \$18.7 billion. By this time, the airport will have a total capacity of 80-100 million passengers and five million tonnes of cargo annually.

More imminently, in Hanoi, work starts this year on a project to expand Terminal 2 at **Noi Bai International Airport** and

raise its capacity from 10 million to 15 million passengers annually, and subsequently the total capacity of the airport to 50mppa. Construction is to be finalised in 2026.

Looking further into the future, the airport's master plan includes proposals for a new Terminal 3, third runway, and new cargo and MRO facilities. The extra additions will raise the airport's capacity to at least 60 million passengers and two million tonnes of cargo annually.

And with demand for air travel expected to soar in Vietnam over the coming decades, the Hanoi city government has approved plans to construct a second airport for the city, with work on it anticipated to begin in 2040 and be completed by 2050. It is provisionally expected to have two runways and a capacity of 50 million passengers per annum.

The new airport will be located in Ung Hoa District in the south of the city and serve as back up to Noi Bai International Airport as growing demand is being matched by Hanoi's growing population, which is forecast to reach 23 million by 2050.

Vietnam's big build also includes upgrading the facilities at **Da Nang International Airport**. The current plan is to raise the airport's capacity to 25mppa by 2030 and 30mppa by 2050.

To achieve these targets, the airport will need to expand its domestic terminal and have its runway extended by 142 metres to 3,190 metres. After 2030, the airport is expected to construct a new 15mppa capacity third terminal (T3), renovate T1 and combine it with T2 to handle international operations, build another 3,190-metre runway and construct additional cargo and MRO facilities.

Cat Bi International Airport is also getting an upgrade. The airport, which serves Hai Phong, the country's fourth largest city, is building a new domestic terminal. The new and extra cargo facilities which will help raise the airport's capacity to five million passengers and 100,000 tonnes of cargo annually.

With passenger numbers to Hai Phong predicted to hit new heights going forward, there are plans to further increase the airport's capacity to 13mppa by the mid-2030s and 27.6mppa by 2045.

The region's blueprint for the future involves the opening of a new international airport in Hai Phong by 2050 after which Cat Bi International Airport will be converted to a gateway.

THAILAND

Bangkok's **Suvarnabhumi International Airport** (BKK), Thailand's gateway to the world, is set to more than double its capacity to ensure that it is equipped to meet future demand.

The Thai hub is currently capable of handling around 60 million passengers per annum and handled 51.6 million passenger in 2023.

The plan is to expand the airport's capacity to 150 million passengers per annum by 2030 through the expansion of the current terminals, construction of a new terminal and addition of two new runways, the first of which is set to open this year.

The city's former main airport, **Don Muang International Airport** (DMK), is also being upgraded. The airport, located around 20 kilometres north of downtown Bangkok, is to get a new \$1.3 billion international Terminal 3 (T3).

The 160,000sqm complex at DMK will feature 12 additional aircraft stands, of which 11 will be equipped with boarding bridges. Meanwhile, Terminals 1 and 2 will be rehabilitated and turned to domestic use.

There are plans for a new Automated People Mover (APM) system to connect the three terminals. Landside expansion will create 100,000sqm of extra space for retail/F&B outlets and car parking. Other developments include new MRO facilities, a cargo warehouse, and an office building.

Construction of the new Terminal 3 is scheduled to start in 2025 and be completed by 2029, at which time Don Muang will have an annual capacity of 50mppa – 20 million more passenger per annum than today.

In addition to transforming BKK and DMK, there is talk of a possible third airport for Bangkok being built 50 kilometres west of the capital in Nakhon Pathom province. The project is currently in the feasibility stage airport, and is expected to come with price tag of close to \$700 million.

If it does happen, the new airport would have a single terminal and a 2,500 metre long runway and effectively function as a reliever airport for Bangkok's main airports.

Outside of Bangkok, Thailand is to start construction of its \$9 billion U-Tapao aviation city this year. It involves turning the Vietnam war-era **U-Tapao Airport**, located 130 kilometres south-southwest of Bangkok, into the country's third main international airport.

The plans are currently being updated with a new master plan set to be unveiled later in 2024, but confirmed plans today include the construction of a new midfield terminal complex, parallel runway, cargo centre, an MRO boulevard and an airport city development.

It is anticipated that the airport will be connected to Bangkok and Suvarnabhumi airports by means of a high-speed train.

In southern Thailand, work on the expansion of **Phuket International Airport's** international terminal is due to start later this year. Scheduled for completion in 2027, the new terminal will increase the airport's capacity from 12.5 million to 18 million passengers per annum.

Airports of Thailand (AOT) is also conducting a feasibility study to decide whether it is worth building a new \$2 billion airport in neighbouring Phang Nga province to support operations at the existing Phuket and Krabi airports. The proposed new gateway, **Andaman International Airport**, could open as early as 2031.

Its Phase 1 development plans call for the construction of a 15mppa capacity passenger terminal and a single 3,300-metre runway. Later development phases, timed according to demand, would include a second runway and expanding the terminal to allow it to accommodate up to 40 million passengers annually.

In northern Thailand, **Chiang Mai International Airport** is being expanded to handle 20 million passengers annually, and AOT is preparing a feasibility study for the construction of a second airport for the city and region.

If it happens, the new **Lanna International Airport** will be built on an 11 square kilometre plot of land in the Ban Thi district of the adjacent province of Lamphun about 25 kilometres from Chiang Mai city. It is estimated that the new airport would cost around \$2 billion to build and could be completed in seven years.

In part two of this article in the next issue of *Asia-Pacific & Middle East Airports* magazine we will focus on Malaysia, Singapore, Indonesia, Mongolia, Greater China, South Korea, Japan, and the Philippines.

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Momberger Airport Information is a bi-weekly executive newsletter that provides market intelligence on airport projects around the world. Founded in 1973, it is currently the world's oldest independent airport publication. You can sign up for a free, two-month trial [here](#).



EVERYONE'S A WINNER!

Airports from Asia-Pacific and the Middle East once again shine in ACI's annual Airport Service Quality (ASQ) Awards for customer experience excellence in 2023.

Airports from across Asia-Pacific and the Middle East have earned themselves a reputation for providing outstanding customer service over the years, and this trend continued in 2023 with 31 different gateways winning Airport Service Quality (ASQ) Awards.

The winners, which included 27 from Asia-Pacific and four from the Middle East, were among a total of 90 airports from around the world to be honoured in the 2023 ASQ Awards.

As usual, the winning airports ranged from small domestic airports handling only a few hundred thousand passengers a year to megahubs welcoming in excess of 100 million passenger per annum.

The big hubs winning at least one ASQ Award included Singapore Changi; Incheon in South Korea and China's Guangzhou Baiyun, Shenzhen Bao'an and Beijing Daxing airports.

While Salalah and Muscat in Oman and Queen Alia International Airport (Jordan) can count themselves as the high-flyers in the Middle East along with Abu Dhabi's newly renamed Zayed International Airport (Abu Dhabi), which was named Best Airports at Arrivals in the Arrivals Survey.

Among the 11 Indonesian airports recognised, Sultan Hasanuddin International Airport and Yogyakarta International Airport both won five out of six award categories they entered. Oman's Salalah Airport stood out in the Middle East, winning five awards. Chinese and Indian airports each won six airports.

ACI Asia-Pacific & Middle East's director general, Stefano Baronci, enthused: "From the East to the West, airports in Indonesia, Malaysia, Singapore,

Republic of Korea, China, India, Oman, UAE and Jordan have excelled to provide a best-in-class service to their customers.

"Although the Asia-Pacific region has been the hardest hit by the pandemic, airports in the region have invested significantly in technology, human resources, and infrastructure to ensure that passengers continue to have a memorable and seamless experience."

The award categories for the Departures Survey included 'Best Airport by Size and Region' as well as the newly introduced categories of 'Airport with the Most Dedicated Staff', 'Easiest Airport Journey', 'Most Enjoyable Airport' and 'Cleanest Airport'.

While the Arrivals Survey had just one category, The Best Airport at Arrivals Globally, and was awarded to the three airports with the top 20% overall satisfaction scores at arrival – Bengaluru-Kempegowda (BLR) and Thiruvananthapuram (TRV) in India and Zayed International Airport (AUH) in the UAE.

Talking about BLR's success in the Arrivals Survey, an honour it has won every year since it was introduced, Hari Marar, the managing director and CEO of Kempegowda operator, Bangalore International Airport Ltd, noted: "We extend our heartfelt gratitude to the government authorities – Immigration, Customs, CISF and the Airport Authority of India – for their unwavering support in ensuring a seamless arrival process.

"We also thank our passengers for their continued trust and confidence in us. Recognition such as this serves as a driving force, motivating us to continually pursue excellence and solidify our position as the gateway to South and Central India."



Also, eight airports have been inducted into the ACI World Director General's Roll of Excellence – a recognition given to airports that have won multiple ASQ awards over a five-year period in the last 10 years.

The new inductees include five from ACI's Asia-Pacific & Middle East region – Shenzhen Bao'an International Airport (China), Chandigarh Airport (India), Muscat International Airport (Oman) and Sultan Mahmud Badaruddin II Airport and Sultan Hasanuddin International Airport (Indonesia).

BEST BY SIZE AND REGION

The winners were most straightforward in the Middle East, where once again Salalah (SLL) in Oman, Queen Alia (AMM) in Amman, Jordan, and Oman's Muscat International Airport (MCT) won the Under 2mppa, 5-15mppa and 15-25mppa categories respectively.

Reflecting on Queen Alia International Airport being named 'Best Airport by Size and Region: Middle East' for the second successive and eighth time in its history, Nicolas Deviller, CEO of operator, Airport International Group (AIG), believed the award served as a testament to the airport's "steadfast commitment to delivering a seamless and memorable customer experience in line with our strategic goals for 2023-2025".

He added: "This recognition would not have been possible without the dedication of Airport International Group teams, partners and stakeholders to excellence, alongside our close partnership with the Government of Jordan, represented by the Ministry of Transport. Together, we shall continue to innovate and push the envelope, exceeding the expectations of those at the heart of everything we do; our passengers."

Finding outright winners proved much more difficult in the Asia-Pacific region, where the six Best by Size Awards were shared by a total of 25 airports. Five and six airports respectively won awards in both the 5-15 million and Over 40mppa categories in Asia-Pacific, for example.

Changchun Longjia (CGQ) and Shijiazhuang Zhengding (SJW) in China and the Indonesian airports of Sultan Aji

Muhammad Sulaiman Sepinggan (BPN), Sultan Hasanuddin (UPG) and Yogyakarta (YIA) shared the honours in the 5-15mppa category.

While the triumphant airports in the Over 40mppa category are Mumbai Chhatrapati Shivaji (BOM), Guangzhou Baiyun (CAN), Incheon (ICN), Delhi-Indira Gandhi (DEL), Shenzhen Bao'an (SZX) and Singapore Changi (SIN).

Videh Kumar Jaipuriar, CEO of DEL operator DIAL, said: "This honour strengthens our vision to create a truly global experience for travellers at Delhi Airport. We thank all our stakeholders who have collectively helped us attain this feat and promise to deliver our best consistently."

The winners proved equally hard to separate in the 2-5mppa category where six airports won awards – Langkawi (LGK) in Malaysia, Chandigarh (IXC) in India and Indonesia's Adi Soemarmo (SOC), Jenderal Ahmad Yani (SRG), Sultan Mahmud Badaruddin II (PLM) and Supadio (PNK).

Commenting on his airport's success in the 2-5mppa category for the third consecutive year, Malaysia Airports' acting group CEO, Mohamed Rastam Shahrom, said: "In earning this prestigious recognition, the LGK airport community has demonstrated an unwavering commitment to consistently delivering exceptional service standards.

"As Langkawi Island continues to attract global tourists, we are witnessing a resurgence in travel, highlighted by the recent introduction of new airline routes such as flydubai's Dubai (DBX)-LGK route. It is imperative that we uphold a top-notch passenger experience, not only to leave a positive impression of Malaysia but also to contribute to the vision of making Langkawi an unparalleled destination."

Things were simpler in the Under 2mppa and 15-25mppa Best by Size categories for Asia-Pacific with three airports sharing top spot in each – China's Zhangjiakou Ningyuan (ZQZ) and Indonesia's Depati Amir Airport (PGK) and Pattimura (AMQ) airports in the former and India's Hyderabad Rajiv Gandhi (HYD) and the Indonesian gateways of Juanda (SUB) and I Gusti Ngurah Rai (DPS) in the latter.



NEW AWARDS CATEGORIES

Oman's Salalah Airport retained its title in the new 'Airport with the Most Dedicated Staff' category for the Middle East; while the equivalent award for Asia-Pacific was shared by Singapore Changi and five Indonesian airports – Adi Soemarmo (SOC), Sultan Hasanuddin (UPG), Sultan Aji Muhammad Sulaiman Sepinggan (BPN), Supadio (PNK) and Yogyakarta (YIA).

It was almost an identical story for the 'Easiest Airport Journey' category, with Salalah again winning in the Middle East and the only change for Asia-Pacific in terms of the Indonesian airport winners being the inclusion of Sultan Mahmud Badaruddin II Airport (PLM) at the expense of SOC.

All-conquering Salalah Airport also scooped the award for 'Most Enjoyable Airport' in Middle East, while South Korea's Incheon International Airport shared the coveted award for Asia-Pacific with Indonesia's multiple award winners SOC, BPN, UPG, PLM and YIA.

Commenting on the incredible success of Salalah and Muscat airports in the 2023 ASQ Awards, Saud bin Nasir Al Hubaishi, acting chief of operations at Oman Airports, enthused: "On behalf of Oman Airports' executive management, I would like to extend a sincere thanks to our valued passengers for their continued interest in providing their feedback on the services our airports provide, which inspires us to continuously develop and enhance our airports' infrastructure and services.

"I would also like to thank Oman Airports' strategic partners, and all the various entities working at Muscat International Airport, Salalah Airport, and the rest of our airports – for their constant cooperation in showcasing Oman Airports in the very best light."

Al Hubaishi added that the awards were a reflection of Oman Airports' commitment to enhancing the travel experience in Oman, which is guided by the company's key strategic principle of 'Customer Satisfaction is a Primary Goal.'

He noted: "Since transferring the operations at Muscat International Airport to the new passenger terminal in 2018,

Oman Airports and its dedicated workforce have worked to invest in this remarkable edifice to make it one of the most important airports in its category regionally and internationally. And today – praise be to Allah – Muscat International Airport is present in the list of top airports in the Middle East.

"At Salalah Airport, since the transfer of its operations in 2015, we have had much success in emulating the best services and comfortable travel experiences provided by Muscat International Airport to passengers; as well as the ease and harmony with which it conducts its operations.

"This excellence in airport operations is achieved by providing all what the passenger needs on their travel day. It is also the result of the speed of our check-in procedures – which is a key to guarantee passenger satisfaction."

Indonesia's domination in the Asia-Pacific awards was slightly less apparent in the 'Cleanest Airport' category, where China's Beijing Daxing (PKX), Guangzhou Baiyun (CAN), Shijiazhuang Zhengding (SJW) airports and Singapore Changi (SIN) triumphed alongside SOC, UPG, PNK, YIA and Bali's I Gusti Ngurah Rai Airport (DPS) and Pangkal Pinang's Depati Amir Airport (PGK).

ACI World director general, Luis Felipe de Oliveira, said: "We are delighted that in 2023 the ASQ programme surpassed 400 participating airports in a historical record – reflecting our members' commitment to placing the passenger first. Likewise, we thank the guests that dedicated their precious time by providing feedback in close to 600,000 surveys.

"The global growth of the programme underscores the trust placed in its scientific and live approach, making ASQ the go-to standard for airport customer experience assessment in the aviation industry."

Worth noting is that in 2023 over half of the world's travellers passed through an ASQ airport, underscoring the programme's credibility and influence in shaping the standards for exceptional airport services.

[View full list of winning airports here](#)

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JEWEL IN THE CROWN

Singapore is celebrating the fifth anniversary of Jewel Changi Airport, the now iconic nature-themed entertainment and retail complex.

Singapore Changi's impressive Jewel complex turns five this year, and according to all the latest visitor figures, continues to go from strength to strength.

Indeed, airport operator Changi Airport Group, notes that Jewel Changi Airport enters its fifth year on a strong footing, welcoming more visitors as travel recovers and passenger numbers are up by 26% year-on-year at Changi Airport.

For Jewel, the upturn amounts to a 12% growth in total visitor numbers and a 35% rise in sales as its unique attractions located in the sprawling 14,000sqm Canopy Park continues to wow all those lucky enough to experience it.

To mark its fifth anniversary, the iconic lifestyle destination will present a year-long calendar of special events and retail offers as well as new experiences under the celebratory theme of 'What A Feelin5'.

According to CAG, the celebrations seek to evoke "a myriad of positive feelings" from visitors through the diverse experiences that Jewel offers.

James Fong, CEO of Jewel Changi Airport Development, says: "Five years ago, our shareholders – Changi Airport Group and CapitaLand – embarked on a bold mission to redefine the airport experience.

"Today, we stand proud as a global icon well-loved by both local residents and travellers. As Jewel celebrates five years of creating the sparkling experience for its visitors, we continue to stay true to our commitment to deliver

world-class visitor experiences with our attractions, retail and dining offerings.

"We are thrilled to announce that a series of new flagship store openings and new-to-market brands, as well as a behind-the-scenes tour for the Jewel Rain Vortex that has long captured the imagination of our visitors.

"New experiences and a series of events and Jewel-exclusive offerings will also be introduced throughout the year.

"As we look forward to more exciting years ahead, we wish to thank Singaporeans and guests from around the world for their love and extend our appreciation to our tenants and partners who have stood shoulder to shoulder with us all this time."

NEW EXPERIENCES AWAITS

Without doubt, Jewel's Light & Music showcase has become a signature, captivating visitors with its dazzling displays. These nightly spectacles bathe the Jewel Rain Vortex in a kaleidoscope of colours, transforming it into a canvas for music and light.

To commemorate its fifth anniversary and evoke feelings of celebration, wonder and anticipation, Jewel recently launched a brand-new Light & Music showcase called 'What A Feelin5'.

The new five-minute show is created by world renowned water feature designer WET and features elements of Jewel's offerings, such as its iconic façade and lush floral



and greenery, in a crescendo of uplifting tunes that celebrate the vibrancy of Jewel.

Visitors can also look forward to a new behind-the-scenes tour 'In the Eye of the Jewel Rain Vortex' from the second half of this year.

It will offer guests a glimpse into the intricate workings of the world's tallest indoor waterfall, participants will get exclusive access to never-before-seen views of the Jewel Rain Vortex from the inside.

A part of the programme will also introduce participants to the work behind getting Canopy Park ready for operations every morning.

EXCITING MARQUEE EVENTS

To extend the celebrations throughout the year, Jewel is gearing up for a series of exciting marquee events. Kicking off during the June school holidays, 'Jewel Blooms' will make a return after a successful run last year.

To be held from now until to August 11 at Canopy Park, according to CAG "this floral showcase will feature installations inspired by emotions such as happiness, peace, love, passion and a touch of adventurous discovery that are synonymous with the feelings that can be experienced by visitors at Jewel".

It even goes as far to promise that a series of larger-than-life displays and enchanting kinetic flowers will take visitors into a world of floral fantasy.

A special collaboration with award-winning Singaporean garden designer Andy Eng and Japanese floral artist Megumi Shinozaki, known for her sustainable works, will also see the Petal Garden house a large-scale floral artwork made from fresh and preserved flowers.

REDEFINING THE RETAIL EXPERIENCE

Jewel is also set to welcome a wave of new store openings in May and June, including flagship stores.

True to its proposition of 'where the World meets Singapore, and Singapore meets the World', visitors can look forward to a mix of local and international brands.

For example, CHARLES & KEITH, Singapore's homegrown fashion label, is expanding its current footprint at Basement 1, with its first Singapore flagship store at Jewel.

Other flagships that are due to open this year include FILA's first flagship store in Singapore, taking up a duplex store at Level 2, Bimba Y Lola (Level 1) with its largest store in Singapore at more than 1,600sqft, and New Era (Level 2) with its unique customisation services.

Other new-to-market brands that will make their debut at Jewel include IPOH TOWN, Nai Xue, SETIROM, Satellite Paris, and Royal Host, one of Japan's most beloved family restaurants, which will be opening its first outlet in Singapore.



BENGALURU'S GREEN TERMINAL

The new Terminal 2 at Bengaluru's Kempegowda International Airport puts nature and biodiversity at the heart of the passenger experience, writes Andrew Haines, senior associate at Grant Associates.

The lush landscapes within its walls make Terminal 2 at Bengaluru Kempegowda International Airport one of the most unique and greenest airport buildings on the planet.

Indeed, India's 'Garden City' airport wanted it this way with operator, Bangalore International Airport Limited (BIAL), promising that it would deliver an 'airport terminal in a garden' that would reinvent the idea of a traditionally stressful and bustling airport landscape.

The lead architect for the showpiece project was Skidmore, Owings & Merrill (SOM), with Grant Associates, designers of the iconic Gardens by the Bay in Singapore, in association with SOM, taking the lead on the green landscaping.

As a result, the new terminal at Bengaluru Kempegowda (BLR) is unlike any other in the world. Its innovative design offers passengers an immersive and authentic nature-focused experience, with the flora throughout the complex meticulously sourced from diverse ecological habitats in the state of Karnataka and across India.

We believe that the chosen plants that the terminal's interior help showcase the splendour of nature and Karnataka's vibrant culture.

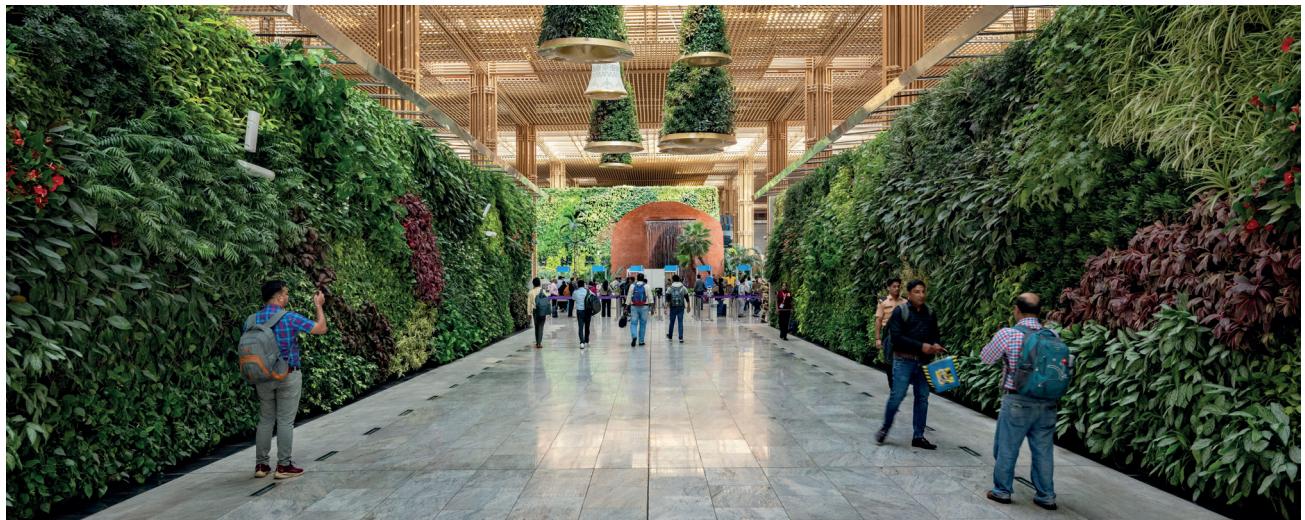
Adding to the garden-like environment is the extensive use of natural materials including bamboo cladding and

local natural stone. Lush internal and external gardens punctuate the passenger's journey, with the centrepiece being a breathtaking 10-metre-tall green wall that runs the length and breadth of the terminal adorned with over 450 extraordinary plant species.

The planting not only captivates the eye but also contributes to the terminal's environmental conditioning, all nourished by an automated irrigation system fed by harvested rainwater.

Talking about Terminal 2 prior to its opening, BIAL's managing director, Hari Marar, told *Asia-Pacific & Middle East Airports* magazine that he wanted the terminal to be a leader in its use and adoption of new technology; have so many 'green' areas that it is viewed almost as a terminal in a garden; be known for its environmental and ecological stewardship; and be a facility that celebrates and showcases the rich heritage and culture of Karnataka.

Grant Associates was appointed by Bangalore International Airport Limited (BIAL) in May 2016 to deliver on this truly unique brief. The international landscape architecture practice had to creatively overcome several sizeable challenges to make the biodiversity-focused vision a reality, including how to create a lush internal landscape whilst accommodating the day to day running of an airport, not least passenger circulation and environmental requirements.



These were achieved through the extensive use of innovative hanging planters and green walls. Externally, these challenges included creating an extensive seven-hectare forest belt that would help to passively cool the spaces around the terminal, manage surface water runoff and deliver a rich, biodiverse forest microclimate.

The challenges were overcome with a dedicated client and design team working closely together to deliver key environmental, digital, and cultural themes that were central to the project's vision.

A major aspect of the design was delivering a sustainable water management strategy to significantly reduce the terminal's environmental impact, alongside a resilient native planting framework tailored for evolving climates. This included over 600 endemic plants and over 7,700 transplanted trees from the existing airport.

"The project vision sets out an innovative reinvention of the terminal experience where nature takes centre stage and the landscape supports the project's ambitious sustainability goals," enthused Andrew Grant, founder and director of Grant Associates.

"We wanted to create a truly memorable passenger experience that captured the spirit of the place and offers a unique and extraordinary garden journey."

A focus was on delivering a project that would resonate with the city of Bengaluru, this extended to local sourcing, celebrating the essence of the city.

Collaborations with regional fabricators and suppliers of natural materials such as clay brick and stone lent a distinct richness to the passenger experience while echoing the terminal's sustainable ethos.

BIAL's Marar said: "We wanted Terminal 2 to be a celebration of the beautiful city it would become a gateway to. Bengaluru has always been known as the Garden City of India, and our goal was to provide our city's residents and visitors with an experience that feels like a stroll in a park."

"This is how the idea of 'Terminal in a Garden' became the most important of the four design principles of Terminal 2.

"Guided by this vision, we started working with Grant Associates and other partners to develop the design of a unique 'Terminal in a garden'. Along the way, we have been able to expand on that vision and have been able to make this a biodiversity hub.

"Today the airport not only boasts of one of the widest varieties of plant life in one location, but also helps to conserve many rare, endangered and threatened species.

"By making it work in harmony with the other three design principles of celebrating local art and culture, sustainability, and cutting-edge technology, we have strived to create a terminal that offers passengers a truly memorable travel experience."

BLR has already established a benchmark in sustainability with 100% usage of renewable energy across the campus. Terminal 2 was created with sustainability principles woven into the design.

"Traditionally, airports are always stressful to navigate, but with our 'Airport Terminal in a Garden' vision, we have sought to change this by creating a beautiful environment filled with incredible plants from around the world," noted BIAL's vice president of landscaping, Prasannamurthi Desai.

"This is the only airport in the world which holds 3,600 species – including almost 200 endangered species, which are part of the Indian ecosystem, native to 26 agro-climatic zones of India."

Grant Associates worked alongside a dedicated team of sub-consultants on the design and delivery of this milestone landscape architecture project.

These included Singapore's Nipek Pte Ltd (Lighting Consultant); Water Equipment Technology Pte Ltd, from Brisbane, Australia (Irrigation Consultants); and Fountains Direct Ltd in the UK (Water Feature Consultant).



ROUTES AND DESTINATIONS

We take a look at some of the milestone route launches to have taken place across the Asia-Pacific and Middle East region this year.

The heat really is on airports when it comes to route development as their airline customers, and the routes and destinations they serve, will play a major factor in their future growth and development.

With so much at stake it is a very competitive business, and with the airlines only having so many aircraft at their disposal, it invariably means that airports compete against each other to try and convince carriers to launch new services or expand their existing networks.

In fact, the market is so tough, it can take an airport many years to win over an airline when it comes to launching a new route, which is why you can be assured that the groundwork for most of the new routes mentioned below probably started prior to the COVID pandemic.

DELTA AIR LINES COMING TO BRISBANE

In another big win for Queensland, Delta Air Lines is set to spread its wings by commencing services to Brisbane from December this year.

The announcement heralds another leap forward in connectivity and, according to Brisbane Airport (BNE), is poised to further invigorate Queensland's tourism and export sector.

Delta Air Lines will launch with three weekly seasonal flights from Los Angeles to Brisbane, marking a further boost in trans-Pacific capacity. The news means that by Christmas 2024, BNE will be home to four giants of North American aviation: Delta, American Airlines, United and Air Canada.

The airport is also quick to note that including Qantas flights, from December, the number of seats between Brisbane and mainland North America will leap to 144% of pre-COVID capacity.

"We are very proud Brisbane Airport will become Delta's second destination in Australia," enthused Brisbane Airport CEO, Gert-Jan de Graaff. "Brisbane is charting unprecedented territory, witnessing an unparalleled level of interest from North American visitors. This strategic move by Delta Air Lines not only fortifies the ties between the United States and Queensland but also signifies a boost for the local visitor economy."

"American tourists love visiting Brisbane, the Gold Coast, Noosa, travelling north to savour the wonders of The Great Barrier Reef and west to experience the Outback. I'm not sure if it is the upcoming Olympics or the insatiable appetite for Bluey, but right now Brisbane is the 'must add' destination for North American carriers, and this opens a world of opportunity."

Delta Air Lines operates over 4,000 daily flights to nearly 280 destinations on six continents and will operate 306 passenger capacity A350-900s on the new Brisbane route.

BUSY START TO YEAR FOR PERTH

New routes and returning services continue to boost the route network at Perth Airport, with South African Airways becoming the latest airline to add the gateway to its timetable.

Talking about the return of non-stop flights to Johannesburg operated by A340-300 aircraft, Western Australia's deputy premier and minister for tourism, Rita Saffioti, said: "This inaugural non-stop service operated by South African Airways represents a significant milestone in our state's aviation recovery, providing direct connections for the substantial South African community residing in Western Australia.

"We're really excited this service between Johannesburg and Perth has been reinstated, which brings massive advantages for our state's tourism industry and, of course, marks the 19th international destination we have secured direct links to since the pandemic."

While Perth Airport CEO, Jason Waters, admitted that it was great to see South African Airways back after a four-year break.

He said: "Our remarkable partnership with SAA has spanned 67 years, so we are incredibly pleased to have them flying to and from our port again.

"The service will initially operate three times per week, delivering 78,936 seats to the Perth market, and we look forward to working closely with South African Airways to return this to a daily service."

BONZA DAY IN NEWCASTLE AIRPORT

Newcastle Airport recently celebrated the first anniversary of its successful partnership with Australia's newest airline, Bonza, which it reveals has significantly boosted regional aviation and connectivity.

Indeed, the airport admits that Bonza has been a game changer for the travel experience to Newcastle, connecting the people of the Hunter region to two popular destinations, the Sunshine Coast and the Whitsundays.

Newcastle Airport CEO, Dr Peter Cock, says: "We are thrilled to celebrate one year of Bonza flights from Newcastle Airport. This partnership has been an amazing addition to our route network and for our region.

"The introduction of Bonza has not only expanded our network but has also played a pivotal role in boosting our passenger numbers, with our February record, exceeding our numbers vs pre-COVID-19 for the first time. We've always known our region loved to travel, we're blown away by the overwhelming support by the wider region.

"We're excited to continue to add to our route network with Bonza and provide more options for our region to travel at a low cost."

JAPAN AIRLINES RETURNS TO DOHA

Hamad International Airport (DOH) has welcomed the first-ever flight to the Middle East by a Japanese airline following the launch of Japan Airlines' (JAL) daily B787-9 flights between Tokyo Haneda and Doha, Qatar.

Sujata Suri, DOH's senior vice president of finance and procurement, said: "The launch of Japan Airlines' daily flights from Tokyo Haneda to Hamad International Airport is a landmark achievement and a testament to the flourishing partnership between both Qatar and Japan.

"Combining Japan Airlines' latest launch with Qatar Airways' recent resumption to Osaka, is projected to result in a 50% increase in weekly flight frequency between Qatar and Japan, which underscores Hamad International Airport's commitment to advancing global travel and enhancing passenger experiences".

Japan Airlines becomes the 10th oneworld airline to serve Hamad International Airport, with the service expected to stimulate travel demand and foster stronger trade ties between Qatar and Japan.

AIR CANADA RETURNS TO SINGAPORE CHANGI

Singapore Changi has welcomed the return of Air Canada, which is now operating four weekly flights between Singapore and Vancouver International Airport. The flight is the only non-stop service operating to Canada from the Singapore gateway.

"I am pleased Air Canada has chosen YVR to host the only non-stop flight between Canada and Singapore," said Tamara Vrooman, president and CEO of the Vancouver Airport Authority.

"We welcome this new service which will grow tourism, support increased trade, and importantly, connect families and friends across the Pacific region. The launch of service to Singapore speaks to the continued investment Air Canada is making in Vancouver, which in turn benefits our community and the regional economy."

BEIJING CAPITAL TO PRAGUE SERVICE

Hainan Airlines is to resume direct services between Beijing Capital International Airport in China and Prague Václav Havel International Airport in the Czech Republic on June 24.

Talking about the significance of the service, Jiří Pos, chair of Prague Airport's board of directors, noted: "While a record 600,000 tourists from China arrived in the Czech Republic in 2019, last year there were only 90,000 Chinese visitors. I firmly believe that the resumed direct connection to Beijing will be just the right stimulus for the further development of inbound tourism from China.

"The connection to Beijing will also be a great opportunity for Czech tourists to not only explore the Chinese capital but, thanks to connecting flights, also the whole of China and Asia."



TIME TO SHARE?

Improving communication and operations through democratised data can have huge benefits for airports, writes Uri Guterman, vice president of product at AeroCloud.

Airports are busy places, with the world's busiest hubs regularly handling over 100,000 passengers per day and daily operations supported by many different stakeholders.

And the intricate workings of terminals can present significant challenges, particularly in the case of communication and operational efficiency.

In fact, according to AeroCloud's recent *Getting on the Runway to Growth* report, poor communication was cited by nearly half (48%) of global airport leaders as a key barrier to growth.

THE COMPLEXITY OF AIRPORT COMMUNICATION

Airports are complex ecosystems. From check-in personnel and ground handlers, to cleaning crews and retail staff, these different moving parts all play their own important role to provide the best possible passenger experience as they journey through the airport. For this to be seamless, teams need to communicate effectively with management, between themselves and with customers.

For larger airports, communication problems are even more rife. Leaders who say communication is a significant operational challenge rise to 62% in airports that gross more than £1 billion per year.

Not only does physical size add a layer of complexity to communicating in airports, but they are also highly dynamic environments. Adjustments at short notice are often required. From bad weather and tech malfunctions, to flight delays and cancellations – the latter of which have become 'the norm' in the post-pandemic world.

This can send airports into a spin if the storing and sharing of information is through manual methods or using outdated systems. That's because there is no single source of truth across an airport and information accuracy diminishes quickly, leading to disjointed collaboration between stakeholders.

THE STATE OF AIRPORTS

While technology is transforming other sectors, airports are slow on the uptake. Our research reveals that a shocking two-fifths (40%) of leaders are still reliant on programmes such as Word and Excel to store and manage critical operational information such as gate management and remain overnights (RONs).

Critical, complicated information becomes out of date as soon as any small change occurs, and a significant margin for human error is introduced when storing, managing and sharing operational information is approached in this fashion.

In addition, outdated tools present a risk of miscommunication or missed communication if airport staff or personnel from across the broader ecosystem are unable to access the information they need when they require it. Employees whose jobs are based away from desks can particularly struggle with a lack of information visibility if it can only be accessed from desktops and not mobile devices.

Rapid digital transformation in recent years means that passengers themselves have higher expectations when it comes to tech-facilitated experiences. Timely, accurate information, whether on flight information display screens (FIDS) or through mobile phone push notifications, is a minimum requirement. This is especially so when monitoring for changing flight information.

OVERCOMING STORMY DAYS

Technological trailblazers will be able to reap the benefits every day, but investing in technology proves itself to be particularly impactful when there are major disruptions that lie outside of airports' control. Extreme weather events, which are becoming more prevalent due to global warming, are an example of this.

In the summer of 2021, many airports in the Florida region in the US had to divert and cancel flights amid Tropical Storm Elsa, which brought heavy rain and flooding to the area.

Sarasota Bradenton International Airport (SRQ) was one of these airports, and with an average of 450 inbound flights to the airport each day, the weather presented what could have been an intense operational challenge as flight diversions and cancellations needed to be tracked and communicated internally and with passengers.

However, the airport had recently invested in cloud-based management software, which automatically received all scheduling changes as flights began to be cancelled in and out of SRQ. This made it easier to track the most recent updates and communicate this with passengers, which is one of the most challenging pre-storm issues faced by airports.

CLOUD-BASED DATA DEMOCRATISATION

Communication is key in responding to disruption and for smooth day-to-day operations, but there is an apparent misalignment between the scale of communication problems reported by airport leaders and awareness of how to overcome them.

Three in five acknowledge that failing to invest in technology will significantly hinder the airport's future growth, but only three in 10 say that cloud-based operations management software could significantly improve operations. There is a limited number of proven cloud-based airport operations platforms on the market, which is potentially the reason for this knowledge gap.

Cloud-based platforms are the most effective way to create a single source of truth; fed by live data that can be accessed by all stakeholders, including baggage handlers, check-in desks, gate planners, FBOs, retail concessions, security staff and airlines.

Through such platforms, the airport workforce can access real-time information from any device, anywhere in the airport, receive instant updates such as flight statuses or long security queues and effectively communicate between themselves.

Monitoring passenger flow through a subset of AI, computer vision, for example, allows bottlenecks to be proactively solved and for passengers to pass through to concessions faster – and importantly, encourage spending.

This technology can utilise airports' existing CCTV infrastructure to track passengers anonymously and intelligently, notifying personnel in real-time if dwell time exceeds their defined parameters, which could indicate issues at security, for example.

When combined with data analytics platforms, this data fuels predictive insights for better operational and commercial decision-making.

Immediate alerts to irregular operations and diversions are a game-changer for airport staff. Without a cloud-native operations platform, tenants and ground operators may only find out about scheduling changes when shown on FIDS, putting them on the back foot when mitigating the impacts of changes and communicating with passengers.

Centralised processes through cloud-based technologies offer a viable solution for airports that facilitate data sharing in real-time, with permissions that can extend as far as external contractors.

Acting as the 'brain' of the airport, cloud-native hubs store vital details of gate management, flight scheduling and more, and put this at the fingertips of employees, whoever or wherever they are. In addition, better decision-making processes using artificial intelligence (AI) and machine learning (ML) technology are supported through shared live dashboards.

With the agility and foresight offered by cloud-native management systems, airport leaders can co-ordinate teams to plan and adapt. They can ensure the right number of staff are stationed in the right place at the right time and subsequently boost passenger journeys while managing costs more effectively.

IN CONCLUSION

The modernisation of airport operations through cloud-based data democratisation offers a transformative solution to the persistent challenges experienced by many airports.

Airport leaders who leverage such innovation, rather than overlook the technology, will benefit from prompt, effective, data-driven responses to dynamic changes – be it flight delays, gate scheduling adjustments or unexpected disruptions such as extreme weather events.

Success stories from airports such as SRQ demonstrate how investing in advanced airport management systems that give all employees easy access to accurate, real-time data can mitigate operational challenges and boost resilience, as well as improve overall passenger experiences.

With ongoing challenges in air travel, such as aircraft shortages and prevalent flight delays and cancellations, airports must enter an era of rapid digital transformation to meet the growing expectations of passengers and stakeholders alike.

WBP NEWS

The latest news and views from ACI Asia-Pacific & Middle East's World Business partners.



NOIDA INTERNATIONAL AIRPORT SET TO OPEN LATER THIS YEAR

With its construction nearing completion and navigation equipment currently being installed, India's newest gateway, Noida International Airport, is expected to open in late 2024, the exact opening date depending on how work progresses over the next few months.

The airport on the outskirts of New Delhi has been given the IATA code 'DXN' and recently announced that Indigo – one of the fastest growing airlines in the world – would be its launch carrier.

Viewed as an alternative to Delhi's Indira Gandhi International Airport, Noida is being built, and will be operated by, Yamuna International Airport Private Limited

(YIAPL), a special purpose vehicle set up for the job and 100% owned by Zurich Airport International.

DXN will initially have a capacity of 12 million passengers per annum before being expanded to accommodate 30mppa and eventually 70mppa by the end of the concession in 2061.

DXN's CEO, Christoph Schnellmann, notes: "As one of the world's largest urban agglomerations, India's National Capital Region deserves a second airport. Noida International Airport will make this long-standing dream a reality. We look forward to welcoming passengers, customers, and partners at the region's new economic and cultural hub."



ENHANCING PASSENGER FLOWS AT YVR

Vancouver International Airport (YVR) has installed Xovis' passenger flow management system (PFMS) at a busy security checkpoint.

Said to have been selected because of its high degree of accuracy and intuitive user interface, the Canadian airport reports that the new system was installed with limited disruptions to the terminal space.

"Our Digital Twin has transformed the way YVR operates and requires the highest quality, objective data to support our proactive decision-making processes," said Tamara Vrooman, president and CEO of Vancouver International Airport.

"The system provided to us by Xovis allows us to capture real-time information at critical passenger processing points, as well as providing historical data which supports our future capacity planning."

While Xovis' chief product officer, Florian Eggenschwiler, noted: "Data-based simulations are nothing short of revolutionary for many industries and businesses."

"And as more companies look to harness the awesome potential of Digital Twins, the focus necessarily shifts to the quality of the underlying data. For precise real-time and historical data resistant to light distortions, airports look to Xovis."

Vancouver International Airport handled 24.9 million passengers in 2023.



BUSY START TO 2024 FOR HEINEMANN OCEANIA

Heinemann Australia has been rebranded as Heinemann Oceania to better reflect its growing presence across the region.

The rebrand comes just over a decade after Heinemann's first entry into the Oceania, and on the heels of its announcement that the company will enter the New Zealand market with the opening of new outlets and concepts at Auckland Airport later this year.

George Tsoukalas will remain as managing director of the renamed company, which will continue to be headquartered in Sydney.

It has been a busy start to 2024 for Heinemann and Tsoukalas, who was recently at Gold Coast Airport in Australia (pictured above) for the opening of the company's new store in Gold Coast Airport's domestic terminal.

TOTAL AIRPORT MANAGEMENT SOLUTION

SITA has launched what it believes is a trailblazing airport management tool, SITA Airport Operations Total Optimizer.

According to SITA, the new solution harnesses AI and the principles of Total Airport Management to optimise holistically, across a variety of airport functions.

It notes that over the past decade, airports have managed to optimise individual airport functions, although not many are well synchronised with each other. As a result, it says, teams, systems, procedures and KPIs all conflict with one another and significantly reduce efficiencies, costing airports millions of dollars per year.

However, it says that Total Optimizer is a game changer as it allows airport teams to dynamically set the relative priority of different aspects, such as Operational performance, Capacity provision, Revenue generation, Cost efficiency, Passenger experience and Sustainability.

"This is one of the biggest innovations yet in the sphere of total airport management," says Stefan Schaffner, vice of airports at SITA, citing the platform's impressive ability to leverage AI and data analytics.

WBP PROFILES



DFS GROUP

Location: Hong Kong

Type of business: Retail & Commercial

W: www.dfs.com

DFS is the only luxury retailer with a balanced airport and downtown retail portfolio across many markets. Our strengths lie in our brand partnerships, our groundbreaking store and product development, our superior product assortments, and our targeted marketing programmes. Our unique customer insights and operational expertise, coupled with well established strategic relationships with brand, airport, and travel industry partners, will ensure that we continue to lead industry innovation in luxury retailing.

JTI INTERNATIONAL

Location: United Kingdom

Type of business: Retail & Commercial

W: www.jti.com

JTI is a member of the Japan Tobacco Group of Companies (JT), a leading international tobacco product manufacturer. It markets world-renowned brands such as Winston, Mild Seven (Mevius) and Camel. With headquarters in Geneva, Switzerland, JTI has operations in 120 countries and about 25,000 employees.

NETHERLAND AIRPORTS CONSULTANTS (NACO)

Location: Netherlands

Type of business: Consulting & Management

W: www.naco.nl

NACO, Netherlands Airport Consultants, is a world leading airport consultancy and engineering firm with over 70 years' experience in aviation. We offer tailor-made solutions from Master Planning, Building Design and Baggage Handling Systems to Civil Engineering, Terminal Systems and Airport PPPs. Contributing to sustainable airport development is at the heart of our mission.



GOING GREEN

We take a closer look at a handful of sustainability initiatives at HKG, AMM and SIN airports.

NEW RENEWABLE DIESEL MILESTONE

Airport Authority Hong Kong (AAHK) has announced the launch of a renewable diesel pilot project at Hong Kong International Airport (HKG) as part of its ambition to make it the world's greenest airport.

Hong Kong claims to be the first airport in Asia to use renewable diesel, which can reduce greenhouse gas emission by 87% compared to petroleum diesel, on ground services equipment.

The pilot project is launched in collaboration with Hong Kong Air Cargo Terminals Limited (HACTL) and Shell Hong Kong Limited.

The renewable diesel to be piloted, known as hydrotreated vegetable oil (HVO), is a drop-in fuel fully compatible with diesel engines of equipment such as tractors, rubber removal machines, apron sweeper and mobile generators.

AAHK's chief operating officer, Vivian Cheung, enthused: "The pilot project marks a significant milestone on our pathway to developing into the world's greenest airport, achieving our net-zero carbon commitment by 2050 and our midpoint target of 50% reduction in 2035".

QUEEN ALIA TO UPGRADE WATER INFRASTRUCTURE

Airport International Group (AIG) and Jordan Water Company (Miyahuna) have formed a strategic partnership to enhance the water infrastructure of Queen Alia International Airport.

The agreement paves the way for a new water pipeline spanning over 11 kilometres from Miyahuna's Al Qastal substation to the airport, of which 4.6km are outside airport premises and 6.7km are within.

AIG will fund the infrastructure development and Miyahuna will oversee the maintenance and operational

management of the pipeline segment situated beyond Queen Alia's premises.

AIG CEO, Nicolas Deviller, says: "At AIG we are dedicated not only to responsible resource management and environmental stewardship, but also to the success that can be achieved through effective partnerships between public and private entities."

NEW ROOFTOP SOLAR PHOTOVOLTAIC SYSTEM

A new solar photovoltaic (PV) system is to be installed on the rooftop areas of Singapore Changi's terminal buildings, terminal auxiliary structures, airfield and cargo buildings.

When up and running, the solar PV system will have a combined generation capacity of 43 Mega-Watt peak (MWp), of which 38MWp will be installed on rooftops, making this Singapore's largest single-site rooftop solar PV system.

The remaining 5 MWp of solar generation capacity will come from a solar PV system installed at a 40,000sqm turf area within Changi Airport's airfield outside of aircraft operational areas.

This will be the first time a solar PV system is installed in Changi's airfield – marking the first step towards maximising solar potential at Changi Airport beyond conventional rooftop spaces.

Combined, the rooftop and airfield solar PV systems are expected to generate sufficient solar energy equal to what is needed to power more than 10,000 four-room HDB flats yearly.

With the system, CAG will reduce its carbon emissions by approximately 20,000 tonnes each year, or about 10% of its consumption in 2019.

THE WORLD
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İSTANBUL



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