

**58th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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**AGENDA ITEM 6: ECONOMIC DEVELOPMENT OF
AIR TRANSPORT**

**BUILDING SUSTAINABLE AIRPORT INFRASTRUCTURE TO
ACCOMMODATE FUTURE DEMAND FOR AIR TRAVEL**

(Presented by Airports Council International (ACI))

SUMMARY

This paper emphasises the need for sustainable airport infrastructure development in the Asia-Pacific region to accommodate the post-COVID surge in air travel demand. Brownfield, as well as greenfield projects and collaborative efforts among stakeholders, are proposed to address the anticipated growth of over 5 billion passengers by 2040. Incentivising green financing is advocated to support sustainable airport development and mitigate climate impacts.

BUILDING SUSTAINABLE AIRPORT INFRASTRUCTURE TO ACCOMMODATE FUTURE DEMAND FOR AIR TRAVEL

1. INTRODUCTION

1.1 The COVID-19 pandemic and the resulting full-scale transportation crisis brought the global aviation industry under an existential threat over the past three years. Nonetheless, as the pandemic subsided and borders reopened, we began the transition into the post-COVID era.

1.2 In recent months, we have witnessed the pent-up demand for air travel, driven by the relaxation of international travel restrictions and strong demand in sizeable domestic markets in the region. However, ACI data shows that Asia-Pacific had a slower recovery compared to the global average in the year 2022, with 1.8 billion passengers or 53.8% of the 2019 level. In 2023, it is expected that the region will recover 85.3% of the 2019 level.

1.3 Beyond recovery, over the next two decades, it is estimated that the fast-growing economy in emerging markets in Asia-Pacific will lead to the increase of as many as 800 million more middle and high-income consumers by 2040. Asia-Pacific is likely to become home to around 63% of the global middle-class population. Higher income, coupled with the increase in affluence, will certainly propel consumer spending and increase the demand for air travel.

1.4 ACI predicted that Asia-Pacific's passenger traffic would grow at an average rate of 4.5% per year in the next two decades from the pre-pandemic level.

1.5 By 2040, Asia-Pacific, with a forecast passenger traffic of 8.5 billion per annum, over double the 2019 passenger traffic level, will be the largest market by some distance, over two times larger than Europe (4.1 billion passengers) in second place. The region is estimated to contribute around 53% of the total global passenger traffic growth by 2040.

2. DISCUSSION

AIRPORT INFRASTRUCTURE IS ESSENTIAL FOR AIR TRANSPORT AND THE GLOBAL ECONOMY

2.1 With the robust projected economic growth in the Asia-Pacific region, the rise in income, combined with increased affluence, is expected to drive consumer spending and, consequently, create higher demand for air travel. As passenger demand grows, airports will face increased pressure to expand their capacity.

2.2 Airports and the aviation industry serve as economic engines. Before the pandemic, they generated USD 1 trillion in economic activities, representing 3.3% of regional GDP. The transport of 3 billion air passengers and 47 million tonnes of cargo also supported 56 million employments around Asia-Pacific, accounting for direct, indirect, induced and catalytic jobs generated. In the post-COVID era, the aviation industry plays a particularly critical role in economic recovery in remote and geographically challenging areas.

2.3 To meet the future demand for air travel, significant investments in airport infrastructure will be required. ACI estimated that, on a global level, between 2021 and 2040, approximately USD 2.4 trillion of airport total capital expenditures (CAPEX) will be needed to address the long-term trend in passenger demand. Among which, Asia-Pacific comprises about USD 1.3 trillion, equivalent to about 54% of the global CAPEX needs. Details of the CAPEX forecast can be found in an ACI publication available online [here](#).

2.4 In general, CAPEX projects are categorised into two types: brownfield and greenfield. Brownfield projects involve the expansion, upgrading, and maintenance of existing (and often ageing) airport infrastructure, whereas greenfield projects pertain to the development of entirely new airports constructed from the ground up on a new site. Investments in greenfield airports are particularly

necessary, especially in cases where the current infrastructure is unable to handle the increasing traffic volumes due to capacity constraints.

2.5 Failure to address the CAPEX needs could have significant socio-economic implications. Based on the relationship between passenger travel and socio-economic outcomes, for every 1,000,000 foregone passengers due to airport capacity constraints in 2040, the region's air transport industry would support 14,100 fewer jobs and US\$237 million less in GDP.

SUSTAINABLE AIRPORT INFRASTRUCTURE

2.6 According to the Intergovernmental Panel on Climate Change (IPCC), the global aviation industry produces about 2 to 3% of all human-induced carbon dioxide (CO₂) emissions, with airports accounting for approximately 2% of the total global share. Considering all transportation sources, aviation is responsible for 12% of CO₂ emissions, while road transport is responsible for the largest share, producing about three-quarters of all transportation CO₂.

2.7 It is no longer a myth that climate change has led to more extreme weather events, mountain fires, rising sea levels, desertification and land degradation, all of which have significant implications on risks against aviation. As such, developing green initiatives and decarbonisation strategies are crucial when planning investments in existing airports (brownfield) and new airports (greenfield).

2.8 The aviation industry is prioritising energy efficiency to reduce its impact on the environment and climate change. Identifying airport energy-efficiency gains have been made via a number of initiatives, such as LED lighting, electrical ground support equipment and renewable energy sources such as wind, hydro and solar.

2.9 Despite constant progress and continuous innovation, the global airport industry is setting the aspirational long-term carbon goal for the sector as follows:

- a) Goal: ACI member airports at a global level commit to reaching Net Zero Carbon emissions by 2050 and urge governments to provide the necessary support in this endeavour.
- b) Pathway: The pathway to reach Net Zero Carbon emissions by 2050 is to align with the IPCC's goal of limiting global warming to 1.5°C.

2.10 The steps to Net Zero Carbon emissions will require shared policies and collaboration with industry, government and other stakeholders. The multi-sector collaboration will play a critical role in ensuring a resilient aviation ecosystem that is capable of achieving global sustainability goals. There is an ever-increasing pressure on airports and other aviation stakeholders to deliver sustainability so as to attract and grant finance. Sharing climate-related risks is becoming a condition for investments. This requires a combination of efforts which align mitigation and adaptation initiatives to ensure a sustainable and resilient aviation ecosystem.

2.11 Delaying action or inactions can lead to airports being locked into carbon-intensive infrastructure and initiatives which may be more costly to modify at a later time. As such, airports could be paying progressively more to achieve the same decarbonisation goals and to adapt and mitigate impacts arising from climate change.

FINANCING SUSTAINABLE AIRPORT INFRASTRUCTURE DEVELOPMENT

2.12 The COVID-19 pandemic has undoubtedly shaken the financial health of the aviation industry, especially airports. The financial shortfall poses significant challenges to modernising existing infrastructure, building new infrastructure to accommodate future demand, and strengthening sustainability and resilience. The COVID-19 pandemic-induced economic recession has decimated airport revenues, adding new layers of challenges to meeting long-term capacity needs.

2.13 The aviation industry needs economic oversight frameworks that are responsive and flexible to its needs and capable of ensuring the recovery of aviation and the long-term sustainable development of airports and air transport. The need for increased airport capital investments is an economic, social, and environmental imperative. As such, the right regulatory regimes and incentives for investors must be in place to create fertile grounds for investments in airports. Moreover, airports' commitments to reducing carbon emissions, as well as government-mandated climate initiatives, mean additional green capital financing will be needed.

2.14 The pathway to achieving regional and global economic recovery and long-term growth, social benefits, and environmental sustainability involves airport capital investments. Addressing current debt difficulties and financing future large-scale airport infrastructure, especially green financing, will require public, private, and institutional investors and associated regulatory support.

2.15 The current reviewing work of the ICAO Doc 9082 on policies on charges for airports shall take into consideration the need for CAPEX and address the decarbonisation challenges so as to ensure the sustainable development of airport infrastructure. The policies and economic regulatory frameworks must be relevant and responsive to the circumstances in which airports operate.

2.16 Governments around the world play an important role in making action plans, policy frameworks and roadmaps as part of an effort to create a sustainable aviation ecosystem. As such, ACI adopted a Resolution aimed at strengthening the sustainability and resilience of airports as key players in the aviation ecosystem in the World Annual General Assembly in Barcelona, Spain, in June 2023. The Resolution called for Governments around the world to provide the necessary technical and economic support to energy transition, update the regulatory framework to accommodate the integration of alternative fuel sources at airports, and incentivise infrastructure developments with appropriate financial mechanisms in order to achieve the goal of Net Zero Carbon emissions by 2050.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) recognise the imperious need to address the capital expenditure needs and decarbonisation challenges to accommodate future demand for air travel and ensure the sustainable development of airports, and that delay in addressing decarbonisation would incur additional costs in the future;
- b) encourage States to incentivise airport infrastructure developments with appropriate financial mechanisms, support the energy transition, and facilitate access to green finance for aviation; and
- c) encourage the development of economic and financing frameworks that incentivise and facilitate CAPEX in an economically sustainable manner that involves consultation with industry stakeholders.

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