



ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 26: Other high-level policy issues to be considered by the Executive Committee

STATE OF THE AIRPORT INDUSTRY: WORKING FOR A MORE SUSTAINABLE AIRPORT BUSINESS

(Presented by the Airports Council International (ACI))

EXECUTIVE SUMMARY

In this paper Airports Council International (ACI) reviews the global airport industry's efforts to respond to the challenges of meeting current and future air traffic demand in a safe, secure, sustainable, and efficient way, while delivering a high quality of customer service. The paper includes traffic results, economic and financial performance and recent developments in safety, security, facilitation, and environmental sustainability.

Airports have evolved over the past thirty years from being public sector infrastructure providers into sophisticated business oriented services, under a variety of ownership and governance models and operating in a variety of regulatory environments. Air service liberalization and airline competition has become common and has had an impact in all aspects of the airport business, including traffic development, commercial revenue generation, and infrastructure financing. ACI and the International Air Transport Association (IATA) forecast that global air traffic will more than double in the next 20 years which highlights the need for airports, airlines and governments to make best use of existing infrastructure and to plan for new infrastructure in the most efficient way.

The economic characteristics of airports are such that larger airports demonstrate solid financial performance, but they often operate under capacity constraints with limited growth prospects. On the other hand, smaller airports, which represent the overwhelming majority of the number of airports in all parts of the world, are struggling financially and in many cases do not fully utilize their existing infrastructure.

In terms of optimizing existing capacity, the reformed governance of the Worldwide Slot Guidelines paves the way to regularly review the slot allocation process. The new framework reflects the evolving realities of the industry in line with an increasingly competitive and a highly connected global network.

Financing the modernization of the industry to create sustainable infrastructure capacity is crucial. Environmental protection including the reduction of carbon emissions based on industry goals, goes hand in hand with this modernization. Investment in practical solutions and technologies that support the efficient management and flow of passengers, baggage and cargo is also of paramount importance for a seamless journey.

The industry is committed to ensuring the highest levels of safety and security, implementing best

practices, and continuously working towards improvement. ACI leads airport capacity building initiatives in safety, security, environmental protection and virtually every other discipline in airport operations and management, and fosters learning and development programmes for current and future airport professionals.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives: Economic Development of Air Transport.
<i>Financial implications:</i>	None
<i>References:</i>	<i>ACI Airport Economics Report</i> <i>ACI World Airport Traffic Forecasts 2018-2040 (WATF)</i>

1. INTRODUCTION

1.1 In 2017 the industry experienced its highest growth rate in 10 years which at 7.5 per cent translated into 8.3 billion passengers. (To note that because of the nature of the airport business ACI counts both passenger enplanements and passenger deplanements). Passenger traffic remained resilient in 2018 and reached 8.8 billion, growing by an estimated 6 per cent as compared to the previous year. This increase was above the 4.3 per cent compound annual growth rate (CAGR) for passenger traffic from 2007 to 2017.

1.2 Air cargo also set records in 2017, emerging from stagnation to a 7.7 per cent year-over-year increase from 2016. In 2018, the air cargo market did not fare as well as passenger traffic, with a year-end growth figure of 3.2 per cent against a backdrop of global trade tensions.

1.3 *ACI World Airport Traffic Forecasts (WATF)* project that passenger traffic will double by 2034, based on a projected growth rate of 4.3 per cent per annum. By 2040 air traffic expected to grow at an annualized rate of 4.1 per cent, reaching 20.9 billion. Rising incomes in emerging markets with sizeable population bases are key drivers of this demand.

1.4 Considering such growth, the airport industry is required to operate its assets in a way that ensures safety and security, is sustainable and efficient, and satisfies the service expectations of its customers.

2. AIRPORT ECONOMICS AND INFRASTRUCTURE

2.1 Global airport revenues remained steady in the 2017 financial year growing in line with growth in traffic volumes, as measured by the number of aircraft movements, passengers and cargo tonnage. Industry revenue grew by 6.2 per cent over 2016, reaching USD 172 billion in 2017. Aeronautical and non-aeronautical incomes, represented 56 per cent and 44 per cent of total revenues respectively.

2.2 The airport cost structure is characterized by high fixed costs for the operation and maintenance of major infrastructure components, such as runways, taxiways, aprons, parking stands and terminal buildings. Total airport costs can be divided between operating expenses and capital costs. Operating expenses make up 65.3 per cent of total outgoings with the remaining 34.7 per cent being capital costs. Even though total airport costs have risen in absolute terms, costs on a per passenger basis have continued to decrease over the past six years and reached their lowest point in 2017 at USD 13.69 per passenger.

2.3 Return on invested capital (ROIC) is a robust measure of profitability, because it considers the effective management of total revenues and total costs in a financial year, while also taking invested capital into account. A global ROIC of 7.4 per cent was calculated for the industry in 2017.

2.4 Size matters in the airport business. Airports are asset intensive businesses that require large minimum investments just to accommodate a single operation. They must achieve a critical mass before they can start recovering these large investments in infrastructure. The challenge remains that most of the world's airports are small in size and high traffic volumes are concentrated among a handful of airports. Thus, the airport industry faces a conundrum: though the industry as a whole is profitable, as many as 66 per cent of all airports worldwide operate at a net loss. Most of these airports are small, with

fewer than one million passengers per year. Industry profitability is concentrated among airports with much higher passenger throughputs.

2.5 The airport network approach is frequently used to sustain small, economically non-viable airports. Built on synergies, economies of scale and scope and the pooling of revenues, costs and profits among all airports ensure that smaller airports (which are vital for both communities and an integrated air transport system) within airport networks remain in operation and continue generating sustainable benefits for all stakeholders.

2.6 ACI has a neutral position on airport ownership and does not suggest that airport privatization is the only suitable policy choice. However, there is a global need to finance new airport infrastructure to meet future demand and when government resources are not available, there is increasing recognition and ample evidence of the value created by private investment in airports around the world. ACI estimated that airports with private sector participation invested 14 per cent more in capital projects, as compared to their public counterparts, and 12 per cent more than the global average in the last five years.

2.7 In combination with creating the necessary capacity to meet future demand, the airport industry is working with the other aviation stakeholders to modernize the slot allocation system to optimize the use of existing capacity. An important pre-requisite was reform of the governance of slot allocation policies at global level, included in the Worldwide Slot Guidelines. Under the renamed Worldwide Airport Slot Guidelines (WASG), airport operators are equal partners with airlines in slot allocation governance, and consider their impact on the strategic, operational and economic interests of airports and airlines. The new industry-wide governance, also provides for the engagement of slot coordinators, and clarifies their role is as guarantor of an independent, non-discriminatory and transparent system.

3. FACILITATION AND INNOVATION

3.1 The scale of growth of aviation activity brings into sharp focus the need for systems and processes that can cope with tomorrow's challenges in the facilitation of passengers, baggage and cargo. All stakeholders in the ecosystem, in every area of airport operations, will have to become more responsive and efficient.

3.2 The industry is already taking a lead in many areas that can assist in addressing capacity issues, reducing queues and crowds, and optimizing use of resources. Some examples include adoption of automation and advanced technologies, definition of a common vocabulary to facilitate data exchange, embracing solutions such as digital identity management, and creating a common vision that encompasses all individual projects and concepts.

3.3 Coupled with the growth in traffic, is a change in social demographics. With an ageing population, and 15 per cent of people with some kind of disability, the need to provide facilities and services for passengers with reduced mobility is manifest. This will require innovative approaches and may need regulatory support for varying practical solutions that can help to address the needs of such persons.

3.4 There is a need for visionary leadership from the International Civil Aviation Organization (ICAO) in the areas of facilitation and innovation to create and drive partnerships with

industry. In order to realize the benefits for everyone, there needs to be alignment and cooperation between public and private stakeholders, and between national agencies.

3.5 Also critical is the need to work with industry towards innovative practices through trials, investment, professional development and regulatory support for the establishment of standards and innovative processes for digital identity management, as well as support for automated, digital and mobile solutions for customs and immigration, and better data sharing across all stakeholders.

3.6 With this shift towards automation, integration and better use of data, there is an increased risk of cyber-attack. It is vital that cybersecurity becomes an integrated part of the industry's thinking and is designed into all aspects of aviation systems as we move into a new digital era. A joined-up approach is the only way that cybersecurity can be properly addressed, with cooperation between security, safety, operations, facilitation and air navigation. This will require a new way of working for industry, States and ICAO, but is critical for the continuity of the air transport system.

4. SECURITY

4.1 Meeting increased demand will also require new approaches to aviation security. With the collaboration of a leading group of airports, airlines and regulators, ACI is driving innovation in passenger and baggage screening with the Smart Security program. Over the past five years, Smart Security has successfully promoted solutions that transform the screening checkpoint. Such concepts that have moved from trial to mainstream include the remote processing of x-ray images; advanced technologies such as Computed Tomography; and the ability for several passengers to divest at the same time to prepare for screening.

4.2 Beyond the checkpoint, industry is looking at transforming the overall airport security experience. ACI's vision for the future of airport security will define drivers for change, emerging themes and technologies, and scenarios for implementation. Innovation should not be the preserve of the bigger airports – so ACI is also defining a number of low-cost, low-tech solutions that can provide equivalent security without the need for large investment, as well as providing capacity-building support through our Airport Excellence (APEX) programme and training towards the professionalization of the security workforce.

4.3 Significant change towards a sustainable security system will require bold leadership in terms of regulation. Current regulation is often prescriptive and inflexible. States, industry and ICAO will need to work closely in partnership to better define security outcomes to enable a genuinely risk-based, flexible and adaptable security system.

5. SAFETY AND AIRFIELD OPERATION

5.1 ACI is working closely with ICAO on the Global Aviation Safety Plan (GASP) and in particular on runway safety which is a high priority for ACI and its members. ACI fully supports the establishment of local runway safety teams, and compliance with Annex 14 and PANS – Aerodromes in terms of Runway End Safety Areas and other runway infrastructure requirements in Annex 14.

5.2 The new ICAO Global Reporting Format (GRF) for runway safety condition assessment and reporting is be an important step - aerodrome operators will play a key role when it is introduced

worldwide in 2020. ICAO and ACI co-hosted a symposium on the GRF in March 2019 and have launched an online training module for airport operators.

5.3 Aerodrome certification is supported through ACI's Airport Excellence (APEX) in Safety Programme, as well as the joint ACI/ICAO aerodrome certification training course and a new ACI/ICAO course "*Implementing Annex 14: Advanced Aerodrome Design and Operations*". ACI is also helping airport operators to introduce and improve their Safety Management Systems (SMS), through the ACI SMS Handbook, ACI training courses and the APEX in Safety Programme.

5.4 ACI has launched a safety data collection programme in compliance with Annex 19, Chapter 5 and Appendix 3. As it matures, this programme will support GASP and SMS objectives as a reliable source of airport safety data such as runway safety occurrences, wildlife strikes, etc. and provide airports with opportunities for data-driven decision making.

5.5 On emerging Safety issues, ACI published, in 2018, a policy paper on drones to promote the facilitation of "useful" drone operations without a negative impact on the safety, security, efficiency or capacity of airport operations. ACI believes in a risk-based approach to when, where and how such drones should be allowed to fly, and according to the type of drone operations envisaged, such as for airfield inspections. ACI has also published guidance to airports, in 2019, on appropriate deterrence measures against drones flown with the intent of disrupting airport operations.

5.6 Capacity is a major challenge in all regions and airports are the nodes of the air transport system vital to accommodating growth. Enhancing the global air navigation system will provide operational improvements that increase airport capacity in addition to building new airport capacity where economically justifiable. ACI strongly supports cooperation between airport operators and air navigation service providers (ANSPs) to improve airspace capacity and quality of service, by fully exploiting the capability of aircraft equipment and ANSP systems.

5.7 ACI promotes Airport Collaborative Decision Making (A-CDM) and Total Airport Management (TAM) as the next step in overcoming terminal and landside infrastructure and operational constraints. ACI has also worked closely with aircraft manufacturers to support airport operators in accommodating new high-capacity aircraft using technological innovations, such as folding wingtips, to maintain airport compatibility.

6. ENVIRONMENTAL SUSTAINABILITY

6.1 Environmental protection is one of the main pillars of aviation's ability to continue to operate and grow in a sustainable way. Considering the pace of growth of the industry, reducing the aviation sector's impacts on the environment is ever more challenging.

6.2 In addition, with the effects already being felt by the industry, and with the increased need to reduce the sector's footprint, addressing climate change has become a bigger priority. Although airport-related emissions are estimated to represent only 2 per cent of the global aviation emissions, airport operators have a role in influencing others. Airport Carbon Accreditation, a voluntary carbon management programme, is the global industry standard for airports, with as of July 2019, 282 accredited airports in 71 States and welcoming close to 44 per cent of global air passenger traffic.

6.3 In light of the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C and with the imminent entry into force of the Paris Agreement, ACI Europe

recently committed to net-zero airports by mid-century. ACI, while recognizing different regional circumstances, and varying ability to make particular commitments, has started to develop a credible but ambitious long-term carbon goal for the global membership. As well, airports are already facing the results of climate change and ACI is committed to continue working on climate change adaptation, encouraging airports to conduct risk assessments, become more resilient and to support ICAO's work on the matter.

6.4 Airports work in close collaboration with other stakeholders and ACI will continue to support both the Air Transport Action Group (ATAG) and ICAO to reach an agreement on a long-term carbon reduction goal for international aviation by the next Assembly. ACI also continues to support the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as the global carbon offsetting scheme for international aviation.

6.5 Aircraft noise remains one of the biggest sources of complaint from communities around airports. While the industry has made great strides in reducing aircraft noise at the source, air traffic growth and the introduction of larger aircraft in many markets has offset some of the benefits and it has become more difficult to identify new ways of improving the noise performance of individual aircraft. Moreover, research has shown that acoustic factors are only responsible for 30 per cent of noise-related community annoyance. ACI supports the need to increase research and understanding of the remaining 70 per cent of factors, so States and organizations can plan and act accordingly.

6.6 In addition, the implementation of Performance-Based Navigation (PBN) and possible re-introduction of supersonic aircraft have brought additional layers of complexity to aircraft noise management. PBN's concentration of noise over a smaller area requires aviation stakeholders to work in close cooperation with communities from a very early stage to effectively implement PBN. On supersonics, ACI supports the development of new technology, but the noise and emissions footprint cannot compromise the work done by the industry over the past few decades. As the industry prepares to accommodate air traffic growth, limiting or reducing the nuisance of significant aircraft noise must continue to be a key priority for all aviation stakeholders.

6.7 Investment in new infrastructure is essential for the industry to grow sustainably, and the availability of financing, especially for airports located in developing States, will partially define how far some airports can go in achieving environmental sustainability. It has become common practice for financial institutions to require compliance with sustainability criteria before approving investment in infrastructure projects such as at airports.

7. CONCLUSION

7.1 The airport industry has evolved over the last three decades and it continues to develop despite global economic downturns and geopolitical risks. Traffic has been growing steadily and there is continued resilient demand for air transportation in all parts of the world. Airports play a critical role in the air transport value chain and deliver economic benefits to the communities they serve.

7.2 Even though characterized by robust and stable profitability at the global aggregate level, economic sustainability of small airports remains a major challenge. The airport landscape is defined by a wide variation with respect to traffic volumes handled by individual airports.

7.3 Even though spare capacity exists at under-utilized airports, more than 300 airports throughout the world face demand that outstrips supply. The airport industry is committed to ensuring the

most efficient use of the existing capacity, as well as investing in new capacity, where circumstances permit. Apart from the questions of land availability and political will, important concerns arise from the availability of financing as well as a favourable legal and regulatory framework including stable, consistent and proportionate economic oversight.

7.4 The capacity challenge highlights the need for systems and processes that address tomorrow's security and facilitation challenges. All stakeholders including airports, airlines and governments will have to become more responsive and efficient to manage performance and growth, contain costs, make better use of resources, develop staff and find efficiencies, all while improving the passenger experience and maintaining safety and security.

7.5 The aviation business landscape is changing in all regions of the world and the way we do business needs to adapt to accommodate these changes. This will require a systematic approach that can understand, evaluate and adapt to multi-dimensional evolutionary shifts in key areas of our societal environment. This coordinated effort will help keep aviation sustainable and well positioned to handle future growth.

7.6 The airport industry will continue to work with its counterparts in the air transport industry as well as with ICAO and its member States.

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