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ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 12: Facilitation Programmes

SEAMLESS PASSENGER EXPERIENCE

(Presented by Airports Council International (ACI))

REVISION NO. 1

EXECUTIVE SUMMARY

Global air passenger traffic is expected to reach 18.7 billion by 2045, approximately doubling the 2024 level. This growth risks exacerbating airport congestion and capacity constraints, creating urgent challenges for aviation stakeholders. Airport operators, in particular, must optimize terminal operations, make efficient use of limited workforce resources and enhance the passenger experience.

Among various solutions, digital identity management and automated biometric technologies offer scalable, efficient and secure means of verifying passenger identity, while supporting national security and facilitation objectives. However, their full potential is constrained by fragmented border processes, varying entry/exit requirements across States, and inconsistent adoption of supporting policies.

This paper calls upon the International Civil Aviation Organization (ICAO) and its Member States to accelerate global efforts in enabling seamless passenger travel. Key actions include supporting the deployment and acceptance of Digital Travel Credentials (DTCs), encouraging interoperable identity management frameworks and ensuring digital facilitation tools are integrated into airport infrastructure planning and border control strategies.

Action: The Assembly is invited to:

a) call on its Member States to coordinate their internal policies, processes and collaborate across national authorities and with industry partners to ensure the delivery of a seamless passenger experience that fully complies with data protection frameworks;
b) request ICAO to accelerate the development of DTC and to provide technical assistance and capacity building to support States in adopting digital infrastructure for seamless travel; and
c) invite Member States and ICAO to actively engage with Airports Council International (ACI) and relevant industry bodies to focus on the implementation of digital identity management and biometric systems for more effective border processes.

Strategic Goals:	This working paper relates to Strategic Goal *Aviation Delivers Seamless, Accessible and Reliable Mobility for All.*

[1] Arabic, Chinese, English, French, Russian and Spanish versions provided by Airports Council International (ACI).

Financial implications:	No
References:	ICAO Strategic Plan 2026–2050 Doc 10184, *Assembly Resolutions in Force (as of 7 October 2022)* Annex 9 — *Facilitation*, 17th Edition Doha Declaration on Facilitation of International Air Transport FALP/12-WP/26, *Fostering innovation to enable contactless processes* UN Sustainable Development Goals Doc 9303, *Machine Readable Travel Documents* ACI Airport Service Quality (ASQ) 2023 Global Traveller Survey ACI World Airport Traffic Forecasts 2024–2053

1. INTRODUCTION

1.1 Following the COVID-19 pandemic, the sector has largely recovered and is expected to exceed 2019 traffic levels with renewed momentum. Global passenger traffic is forecast to reach 18.7 billion by 2045[2], approximately doubling the 2024 level. This surge presents growing challenges for airport capacity and terminal operations. With staffing constraints and infrastructure limitations, airports and border agencies must adopt scalable and efficient solutions to ensure a seamless passenger experience, avoid congestion and unbearable queues.

1.2 The aviation industry is already leading innovation, accelerating the use of automation, advanced analytics and biometric technologies to improve passenger flow and operational efficiency. Artificial intelligence is also emerging as a powerful tool to enhance capacity utilization and decision-making. Digital identity management solutions offer a vital pathway to support this transformation. The technology solutions are there to be utilized to provide a more secure travel environment and a more efficient and pleasant passenger journey, but government policies may restrict the use of such solutions.

1.3 The International Civil Aviation Organization (ICAO) Strategic Plan 2026–2050 includes the Strategic Goal "Aviation Delivers Seamless, Accessible and Reliable Mobility for All". This is defined as the need, inter alia, to "*Ensure that regulations, procedures and systems facilitate seamless […] travel through airports and borders for all flights, passengers […] with easily understood, well-coordinated, predictable and affordable access to quality international travel services*". Facilitating seamless travel through airports and borders requires the mobilization of a high number of diverse stakeholders, and it should be prioritized.

1.4 At the ICAO Facilitation Conference 2025 (FALC2025), participants expressed broad support to the Doha Declaration that seeks to, among other elements, "*actively engage in the development of relevant international legal and administrative frameworks that support the evolving needs of international civil aviation and facilitation, particularly in the areas of civil registration, digital identity, biometric recognition, advance passenger information, passenger name record data, and seamless passenger*", and a call for more global cooperation to "*strengthen ICAO's leadership role in the ongoing implementation of the ICAO Traveller Identification Programme (TRIP) Strategy*" and "*support ICAO Public Key Directory (PKD) and its active use internationally*".

[2] ACI World Airport Traffic Forecasts 2024-2053 Executive Summary

2. ADOPTION OF DIGITAL IDENTITY MANAGEMENT SOLUTIONS

2.1 Digital identity management and automated biometric technologies allow border authorities to verify integrity of digital documents, and biographic and biometric identities securely and efficiently before boarding—without requiring manual identity verifications on arrival and proportional increases in staff. These solutions improve throughput, reduce wait times and support national security objectives. Digital processes are no longer optional but essential. They help avoid breakdowns in passenger facilitation, particularly in high-growth scenarios. Moreover, their adoption supports broader goals such as reducing the physical footprint of airport infrastructure, limiting walking distances, reducing environmental impacts, reducing inadmissible persons and associated costs and optimizing capital expenditure.

2.2 This aligns closely with United Nations Sustainable Development Goal 9 (SDG 9), which calls for building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. Seamless travel technologies directly contribute to SDG 9 by enabling more secure, accessible, and technology-enabled travel experiences that are essential to sustainable economic development.

2.3 ICAO has taken leadership in this space through the technical specifications contained in Doc 9303, *Machine Readable Travel Documents* and the development of the Digital Travel Credential (DTC), which enables trusted identity verification for international travel. The ICAO TRIP Strategy, including the Technical Advisory Group (TAG), further reinforces multilateral cooperation on border identity standards. The importance of compliance with Doc 9303 specifications by States to ensure uniform implementation is key.

2.4 The Airports Council International (ACI) Airport Service Quality (ASQ) Global Traveler Survey also confirms strong passenger support. In 2023, 66 per cent of travelers supported using facial recognition to make journeys contactless, up from 57 per cent in 2021. Furthermore, 59 per cent said digital identity to replace physical passports would improve their travel experience[3].

3. SEAMLESS TRAVEL CHALLENGED BY DIVERSE ENTRY AND EXIT REGIMES

3.1 Despite promising advancements, seamless travel remains constrained by inconsistent national border policies, procedures and entry/exit requirements. Immigration and visa processes vary significantly across States, introducing complexity, uncertainty, and inefficiencies into the passenger journey.

3.2 In addition, systems such as the Electronic System for Travel Authorization (ESTA) in the United States, Electronic Travel Authorization (ETA) in Canada and the United Kingdom, and the upcoming European Union Entry/Exit System (EES) demonstrate the potential of digital processes, while paving the way for global end-to-end passenger facilitation.

3.3 However, the proliferation of divergent national requirements and lack of legal framework regarding document credentialing and use of data leads to privacy restrictions and data gaps which prevents both States and industry from delivering a truly global solution, despite the availability of enabling technologies.

3.4 While harmonization across borders is essential, a major barrier to seamless travel also lies within individual States. In many cases, multiple government agencies, such as immigration, customs and health share border security responsibilities. However, these entities often operate under separate mandates, timelines and systems, leading to fragmented and inefficient border entry and exit processes. The lack of coordination within a single State can be as disruptive as international misalignment, resulting in duplicative, inconsistent or contradictory application of policies and diminished passenger experience.

[3] Source: ASQ 2023 Global Traveller Survey - https://store.aci.aero/product/asq-2024-global-traveller-survey-report/

3.5 The provisions of Annex 9 — *Facilitation* already encourage States to coordinate facilitation activities between departments, agencies and other organizations of the State. In particular, Standard 8.13 requires the adoption of a national air transport facilitation programme, and Standard 8.15 requires the establishment of a National Air Transport Facilitation Committee. However, more needs to be done to ensure that States establish clear internal governance structures that align these agencies under a unified objective: delivering an integrated, efficient and passenger-centric arrival experience. A coordinated effort is urgently needed to align legal frameworks, ensure technology compatibility and embed seamless travel capabilities into infrastructure and regulatory planning.

4. CONCLUSION: REQUIRED BUILDING BLOCKS FOR ALL STAKEHOLDERS

4.1 Member States Internal Coordination

Member States need to align their internal policies, processes and collaborate across national authorities—including immigration, customs, security and health agencies—while engaging with industry partners, such as airline and airport operators. To this effect, Member States should take measures to streamline privacy legislation to enable secure cross-border use of biometric and cloud-based identity solutions. Furthermore, Member States are invited to amend national laws to allow the use of digital identity management and automated biometric technologies in border processing. Finally, Member States should increase the level of adoption of electronic visas to eliminate paper checks and enable passengers to complete online check-in with ease. Member States are also encouraged to integrate seamless travel technologies during the planning and design of new airport infrastructure, rather than retrofitting after development.

4.2 Accelerate Deployment and Acceptance of DTCs

ICAO leadership in setting international standards for DTCs is key, and it will be critical for Member States to develop a shared vision for seamless travel, including agreed objectives and implementation milestones. Furthermore, the acknowledgement of the need to resolve the credentialing challenge, ensuring DTCs can be trusted and accepted across jurisdictions, including those issued through approved third-party platforms, will be essential to move forward.

4.3 Strengthen Institutional Support and Coordination

Member States and ICAO should actively engage with ACI and relevant industry bodies to implement digital identity management and biometric systems to make border processes more efficient for all departing and arriving international passengers at selected airports. ICAO is also requested to provide technical assistance and capacity building to support developing States in adopting digital infrastructure for seamless travel and facilitate proofs of concept based on existing and affordable technologies to drive implementation.

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