



ASSEMBLY — 42ND SESSION

TECHNICAL COMMISSION

Agenda Item 23: Global Aviation Safety and Air Navigation Plans

STRENGTHENING ALIGNMENT BETWEEN GLOBAL PLANS: TOWARDS USER-CENTERED EFFICIENCY IN AVIATION STRATEGIES

(Presented by Brazil)

EXECUTIVE SUMMARY

While the Global Air Navigation Plan (GANP) has evolved to address gate-to-gate operational efficiency through a comprehensive performance framework, security, facilitation and other pre-boarding processes still lack indicators to assess or incentivize efforts to reduce inefficiencies. This gap may obscure unnecessary delays, causing both direct and reactionary impacts on gate-to-gate efficiency and increasing pressure on the air traffic management (ATM) system. Although ICAO has developed important initiatives under the ICAO Facilitation (FAL) and ICAO Traveller Identification (TRIP) programmes, the absence of globally harmonized indicators related to passenger experience and pre-boarding travel time continues to represent a blind spot. In addition to enhancing the user experience and system resilience, improved performance monitoring in this domain is also expected to generate positive economic impacts by reducing inefficiencies and relieving pressure on the ATM system. This paper invites ICAO to initiate a discussion on aligning the efficiency principles of GANP with GAsEP (ICAO Global Aviation Security Plan), and other programmes, including the development of key performance indicators (KPIs) that highlight the impact of pre-boarding procedures on the aviation system as a whole. The proposal is also aligned with the discussions and recommendations of AN-Conf/14, where States supported increased harmonization across GANP, Global Aviation Safety Plan (GASP) and GAsEP.

Action: The Assembly is invited to:

- recommend that ICAO conduct a comprehensive study to assess where pre-boarding processes most significantly impact efficiency and suggest related key performance indicators (KPIs) to Global Plans interrelation;
- recommend ICAO to provide Member States with technical material and tools to support the collection, analysis, and reporting of pre-boarding efficiency indicators; and
- encourage Member States to promote voluntary sharing of pre-boarding efficiency metrics.

<i>Strategic Goals:</i>	This working paper relates to: <i>Every Flight is Safe and Secure and Aviation Delivers Seamless, Accessible, and Reliable Mobility for All.</i>
<i>Financial implications:</i>	The ICAO activities referred to in this paper are expected to be undertaken within the resources available in the 2026-2028 Regular Budget.
<i>References:</i>	ICAO Strategic Plan (2026-2050) GANP - Global Air Navigation Plan Global Aviation Security Plan (GAsEP Second Edition, 2024)

1. INTRODUCTION

1.1 The aviation sector is undergoing unprecedented transformation driven by rapid growth in demand, emerging technologies, and evolving threat scenarios. ICAO projections almost triple the levels observed in 2019. To accommodate this growth, States and regions are called to adopt innovative, performance-based strategies that ensure both operational resilience and efficiency.

1.2 The Global Air Navigation Plan (GANP) responds to this challenge by offering a globally harmonized framework for air navigation performance, including key performance indicators across the key performance areas such as efficiency, predictability, and capacity. These indicators enable benchmarking, identification of bottlenecks, and informed investment decisions.

1.3 Conversely, while the Global Aviation Security Plan (GASeP) and other Programmes effectively guide global aviation security and facilitation strategies, they do not yet incorporate performance indicators related to passenger processing time, aviation security (AVSEC)-induced delays or the uniformity of procedures in the pre-boarding process. This may create a disconnect between landside-airside interface strategies and overall system efficiency, potentially resulting in direct or indirect impacts on both passengers and airlines.

1.4 It is important to emphasize that this proposal is not aimed at reducing passengers' time in the commercial areas, nor at interfering with airport revenue streams. The focus is strictly on unnecessary inefficiencies that may occur prior to the real security checkpoints and other pre-boarding procedures, such as excessive queuing, procedural redundancies, and passive waiting time — none of which offer commercial value and may hinder the overall system performance.

1.5 This proposal is also aligned in principle with the discussions and recommendations of the AN-Conf/14, where States and ICAO acknowledged the need to develop a common performance framework across GANP, GASP, and GASeP¹.

2. DISCUSSION

2.1 The GANP promotes a structured, data-driven approach that guides operational improvements based on measurable outcomes. The GASeP, in turn, has made progress in pursuing greater operational efficiency through initiatives focused on the use of technology and innovation; however, it still lacks performance indicators to objectively assess the impact of these efforts on the pre-boarding process.

2.2 The GANP indicators offer valuable insights into operational delays and inefficiencies. For instance, some KPIs capture the time spent taxiing on the ground, the extension of flight paths beyond the optimal trajectory, or delays encountered in terminal airspace. Others assess inefficiencies in vertical flight profiles, such as unnecessary level-offs during climb or descent. Together, they form a coherent and data-driven picture of how aircraft move through the airspace system. These standardized indicators allow air navigation systems comparisons in many levels of granularity².

¹ See AN-Conf/14-WP/211, Agenda Item 1.2, *Alignment of Global Plans*, discussions and recommendations.

² See comparison reports related to GANP indicators: <https://www4.icao.int/ganpportal/ASBU/KPI>, <https://ansperformance.eu/global/> or <https://ansperformance.eu/global/brazil/bra-eur-2024/06-efficiency.html>.

2.3 While these indicators are instrumental in identifying performance gaps in air navigation services and airspace structure, they remain focused on aircraft operations after boarding (gate-to-gate) and do not address how security-related procedures impact air travel.

2.4 Bridging this gap would help promote a truly seamless and integrated global aviation system, one that not only ensures safe and efficient aircraft operation but also acknowledges the importance of passenger-centric metrics. As traffic volumes and security demands continue to grow, aviation players should not take the sector's good reputation and attractiveness for granted³.

2.5 In general, some bottlenecks — such as long queues due to procedures, passenger and baggage handling, technical issues and delays due to screening, border control processes, such as immigration, customs, and public health to ensure the efficient movement of people and goods across borders— are not tracked, reported, or systematically addressed through any other ICAO Global Plan or Programme.

2.6 Of course, the impact is not limited to security procedures. GANP – GAsEP comparison here is just one improvement possibility. It is important to note that some delays, primarily caused by excessive pre-boarding times, often currently classified as airline or airport delays, can significantly impact aviation efficiency. In some regions, these delays—whether direct or reactionary—can have a greater impact on overall efficiency than delays caused by ATM alone, calling for stronger cooperation among airlines, airports, air navigation service providers and the Network Manager⁴.

2.7 Also, as the need for efficiency grows, it's necessary to establish indicators to assess the travel time as a whole. As ATM can be impacted by inefficiencies in pre-boarding procedures, this phase represents a priority for monitoring. But passengers' journeys should be assessed with global indicators from the moment they enter the airport to the moment they leave it, including disembarking, customs clearances and baggage claim.

2.8 It's important to note that some modern pre-boarding concepts such as risk-based screening, advanced imaging, integrated identity management, and seamless travel programmes illustrate that it is possible to enhance both security effectiveness and processing efficiency simultaneously. Global standardization measurement could foster it all. Although some regions and countries have already begun to adopt such efficient models and other procedures⁵, these efforts need global coordination and standardized performance metrics to enable meaningful comparisons of outcomes.

2.9 It is important to acknowledge that ICAO has already undertaken significant initiatives that aim to promote operational efficiency within the security and facilitation domains. In particular, the ICAO Facilitation Programme (FAL) and the Traveller Identification Programme (TRIP) are aligned with a vision of seamless, secure, and efficient border clearance operations. These programmes emphasize the adoption of modern technologies, automation, and procedural integration to reduce passenger wait times, avoid redundancy, and enhance overall throughput — all without compromising aviation security.

³ Some local figures showing declining passengers satisfaction <https://www.caa.co.uk/publication/download/20986>.

⁴ See <https://www.eurocontrol.int/publication/eurocontrol-data-snapshot-44-causes-flight-delays>. In 2023, reactionary delays added 8.2 minutes per flight. Airline delays (such as passenger and baggage handling, cargo processing and technical issues) contributed an average of 4.5 minutes per flight. ATFM en-route delays increased to an average of 1.9 minutes per flight.

⁵ Several programmes around the world have already demonstrated that **security effectiveness and processing efficiency** can be jointly pursued. Notable examples include **TSA PreCheck** in the United States, the **Schengen Fast Track** schemes in Europe, the **Known Traveller Digital Identity (KTDI)** initiative, and autonomous screening pilots at **Avinor Autonomy Lab** in Norway. See TSA PreCheck: <https://www.tsa.gov/precheck>; Schengen smart boarders: [Smart Borders - European Commission](https://ec.europa.eu/commission/presscorner/detail/en/ip19_1910)

2.10 For instance, the FAL Programme explicitly promotes the dual objective of security and facilitation, aiming to “maximize the efficiency of border clearance formalities” while preserving high security and law enforcement standards⁶. Likewise, the TRIP Strategy calls for a “holistic and coordinated approach” to traveller identification, with emphasis on interoperable tools such as ePassports, digital travel authorizations, and the ICAO Public Key Directory (PKD), all designed to support timely, accurate, and efficient processing of passengers⁷.

2.11 Such efforts, while robust and progressive, are primarily programmatic and procedural. What remains missing is a globally harmonized performance measurement framework — one that leverages these advances and translates them into trackable, comparable indicators across States, much like what the GANP has achieved for air navigation. Therefore, the present proposal seeks not to reinvent existing ICAO efforts or anticipate any solution or standard, but rather to consolidate and align a measurable, performance-based approach that would enhance strategic planning, resource allocation, and benchmarking in the pre-boarding domain.

3. CONCLUSION

3.1 Air navigation efficiency must evolve as a whole. The current absence of performance indicators related to passenger processing efficiency represents a critical blind spot in ICAO’s global performance framework. As pre-boarding procedures become more complex and passenger volumes increase, this gap has tangible consequences: delays, passenger dissatisfaction, and inefficiencies that ripple across the broader aviation system.

3.2 A performance-based approach to pre-boarding procedures allows for smarter resource allocation, better passenger flow management, and more resilient airport operations. It also aligns with ICAO’s broader strategic vision under the GANP: a seamless, sustainable, and data-informed aviation system.

3.3 Therefore, this Assembly is invited to take a decisive step toward addressing this planning disconnect. By promoting the development of pre-boarding efficiency indicators and encouraging collaboration across domains, ICAO can help ensure future strategies deliver security while also meeting operational demands for efficiency, scalability, and user responsiveness.

— END —

⁶ ICAO Facilitation Programme – Overview. Available at: <https://www.icao.int/Security/FAL>

⁷ ICAO Traveller Identification Programme (TRIP). Available at: <https://www.icao.int/security/fal/trip>