



International Civil Aviation Organization

**WORKING PAPER**

A41-WP/553  
EC/38  
13/9/22  
**(Information paper)**  
English only

## ASSEMBLY — 41ST SESSION

### ECONOMIC COMMISSION

#### Agenda Item 36: Economics of Airports and Air Navigation Services — Policy

#### **RESILIENT FINANCING OF AIR NAVIGATION SERVICES TO SUPPORT CONTINUOUS AVIATION GROWTH**

(Presented by the International Federation of Air Traffic Controllers'  
Associations (IFATCA))

#### **EXECUTIVE SUMMARY**

This paper highlights the need for a more resilient approach to the financing of Air Navigation Services (ANS), which is essential to the long-term growth of the aviation industry and in turn the global economy.

Recent decades have presented recurring cycles of traffic growth followed by downturns, each of these prompting reductions in investment and personnel by many Air Navigation Services Providers (ANSPs) due to shortfalls in revenue from traffic. These actions often contribute to capacity constraints during recovery and inhibit sustainable growth.

New research into funding methods is available and should be reviewed to identify areas for improvement and possible ways to increase resilience and sustainability of ANS.

The Assembly is invited to note the information contained in this paper.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective — <i>Economic Development of Air Transport</i>
<i>Financial implications:</i>	Nil at present
<i>References:</i>	<i>Navigating the COVID-19 Crisis: Air Traffic Charging Models and Financing of Air Navigation Service Providers</i> © 2022 by Peter Turnbull (University of Bristol), Huw Thomas (University College Dublin) & Geraint Harvey (Western University)

## 1. INTRODUCTION

1.1 The core objectives of the Air Navigation Services (ANS) are to prevent collisions between aircraft, to expedite and maintain an orderly flow of traffic, and provide information for the safe conduct of flights. While ANS may have originated as a support service, the provision of these services has become essential to the safe conduct of flight in the 21st century. The continuous provision of ANS is an indispensable part of a State's aviation infrastructure, supporting the safety of the travelling public, movement of goods and medical supplies, and promoting continuous growth of national and regional economies.

1.2 As a safety critical industry, aviation strives to implement multiple layers of redundancy, resilience, and contingency to maintain safe and efficient operations in the airspace and on the ground. However, over the past decades it has become increasingly apparent that this foundation philosophy has not been extended the funding mechanisms generally available for Air Navigation Services Providers (ANSPs).

1.3 Global disruptions such as terrorism events, pandemics, fuel price surges, and financial crises, have been observed on multiple occasions to prompt cost cutting measures that only serve to suppress the recovery of the industry. The return to normality from the COVID-19 pandemic is only just starting and the industry is already suffering from capacity constraints across the globe. It is now more than ever that aviation needs to be able to rebound, yet it is facing constraints of our own creation. There is an urgent need to review best practices to build a more sustainable and resilient system to support the future growth of aviation.

## 2. DISCUSSION

2.1 The Convention on International Civil Aviation requires under Article 28 that States provide airports, radio services, meteorological services, and other air navigation facilities in accordance with the Annexes, in order to facilitate international aviation. These ANS are usually referred to as Air Traffic Services (ATS), Communication, Navigation, & Surveillance Services (CNS), Aeronautical Meteorology (MET), and Aeronautical Information Services (AIS). It is up to the State to determine how exactly they will implement these services as long as they provide the services to the required standard.

2.2 Traditionally the provision of ANS was provided by the State itself as part of the Civil Aviation Authority (CAA), but initiatives to ensure separation of the regulator from the provider have resulted in a variety of methods to provide the ANS and more-so their means of funding to provide those services. The most prevalent means for funding ANS is as cost recovery in the form of air navigation charges levied to flights. Obviously, the income derived from such a source is directly dependent on the number of flights and is highly vulnerable to rapid and unpredicted changes in traffic levels.

2.3 States that continue to provide services as part of the government CAA or have a Service Provider financed primarily from public funds have largely escaped the initial impact of the pandemic, however they may face issues in the medium term with general fiscal constraints due to the wider economic impact of the pandemic and the general direction of the global economy.

2.4 However, it is the ANSPs that source their financing primarily or entirely from air navigation charges, that have suffered in previous crises, and in the case of the pandemic some even struggled to remain solvent. This should raise an alert that there needs to be improvements in the way this is managed to avoid another repeat of this situation at the next downturn.

2.5 We should consider ANS as a public service; they ensure the safety of the travelling public and support the economy of the State, the region, and the world. The continuous provision of services to various extents is similar nature to fire services; the absence of fires - or in our case flights - does not remove the need to maintain a minimum level of service. Throughout the pandemic as flights were cancelled, aircraft grounded or sent to storage facilities, the Air Traffic Management (ATM) system continued to function albeit at a reduced level. In some cases, there was continued demand for cargo, medical, or repatriation flights, but at no point was the global ATM system shutdown. It continued while faced with what was effectively a complete loss of revenue.

2.6 In situations such as the pandemic, ANSPs cannot reduce their expenditure to a level that is commensurate to the loss of air traffic; the mechanism is skewed to work only when the situation is within the realms of normal. It is therefore understandable that when faced with the task of providing continuous services but supported by almost a complete lack of income, the Service Providers are forced to take drastic measures to reduce expenditure. The easiest to implement is the reduction of operational personnel, but these professionals are also the hardest resource to replace. This is not the best option.

2.7 Unfortunately, we have seen this several times before, albeit to a lesser extent with previous crises over the past 20 years. These are downturns that are semi-regular and result in cutting the numbers of aviation professionals as a short-term fix, which reduced the overall capacity of the ATM system. In many cases this has resulted in capacity constraints in the 3–5-year timeframe following the crisis, leading to flight delays, increased costs, and economic damage.

2.8 Aviation professionals in the context of ATM are Air Traffic Controller Officers (ATCO), Flight Information Service Officers (FISO), Air Traffic Safety Electronics Personnel (ATSEP), and these safety critical roles require specialised training and have high competency standards that must be maintained. These professionals are a valuable safety resource and are not easily replaced; in some cases, it can take up to 48 months to take one of these aviation professionals from the street to fully operational. It is these factors that make cuts to staffing numbers quick to perform but slow to correct, and therefore any personnel reduction should be supported by a technical analysis that demonstrates the sustainable operation of services in the longer term.

2.9 The future of ATM is certain to be *‘human in the centre’* supported by advanced technologies for planning and decision support tools. These advancements have shown they cannot be rapidly deployed and safely implemented in time to cope alone with exponential traffic growth. The implementation of support technologies should accompany long term investment in aviation professionals, not attempt to replace them. With this joint human-machine approach the industry will evolve more effectively over time to support sustainable growth.

2.10 This principle has been endorsed by the International Civil Aviation Organization (ICAO) Delegates during the 39th General Assembly in Resolution A39-29 regarding the Next Generation of Aviation Professionals.

*“Recognizing that in order to support growing aviation needs and ensure the safe and efficient operation of the air transportation system, qualified and competent aviation professionals, as well as a diverse aviation workforce, are required;”*

2.11 Similarly, States will recall the ICAO High-level Conference on COVID-19 (HLCC 2021) which met late last year aimed to, among other things, to ‘build a foundation to strengthen resilience in aviation and make it more sustainable in the future’.

*“confirming the importance of support provided for the aviation sector, including economic and financial support, to sustain operations and ensure the provision of essential services while safeguarding fair competition and equal opportunities;”*

2.12 The Member States have also stressed the need to ensure the resilience and sustainability of civil aviation during the HLCC 2021, committing to *“ensuring that ICAO is well positioned to support the long-term resilience of international aviation and incorporate the lessons learned from the current and past pandemics, by enhancing its crisis response capability, and regularly reviewing and updating ICAO’s Standards and Recommended Practices and guidance materials as may be required.”*

2.13 It is clear that the ATM system requires a means of funding that does not require the regular purging of its most precious resource. The ATM system requires a means of funding that supports flexibility and embraces the growth of aviation as soon as it is able, and does not hinder economies with capacity constraints or loss of transport efficiency. The ATM system should support the recovery of national and regional economies following economic disruptions. These goals are not unreasonable, but require a review of the best practices in air navigation financing taking into account what has been demonstrated to work, and a willingness to acknowledge what has been observed to fail.

2.14 The pandemic has prompted some promising studies into the resilience of the ATM industry. The University of Bristol recently published a well-researched paper into the ATM industry response to the pandemic, and various recent scenarios. The *“Navigating the COVID-19 Crisis: Air Traffic Charging Models and Financing of Air Navigation Service Providers”*<sup>1</sup> is available on the University of Bristol website for free of charge and should form the basis for initial discussions on a way forward.

### 3. CONCLUSION

3.1 Recent decades have presented recurring cycles of traffic growth followed by downturns, each of these prompting reductions in investment and personnel by ANSPs. These actions often contribute to capacity constraints during recovery and inhibit sustainable growth.

3.2 Research into funding methods is available and should be reviewed to identify areas for improvement and possible ways to increase resilience and sustainability of ANS.

3.3 The Assembly is invited to note the information contained in this paper.

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<sup>1</sup> *Navigating the COVID-19 Crisis: Air Traffic Charging Models and Financing of Air Navigation Service Providers* (2022), Turnbull, Thomas, Harvey. Sourced on 14 July 2022 from <https://www.bristol.ac.uk/media-library/sites/management/documents/2022%20NAVIGATING%20THE%20COVID19%20CRISIS%20Turnbull%20Thomas%20Harvey%202022.pdf>