



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

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**Eleventh North American, Central American and Caribbean Directors of Civil Aviation Meeting
(NACC/DCA/11)**

Varadero, Cuba, 28-30 June 2023

**Agenda Item 4: NAM/CAR Regional Safety/Air Navigation Implementation
4.2 Air Navigation Implementation Matters**

ADOPTION OF SPACE-BASED ADS-B TECHNOLOGY BASED ON A BUSINESS CASE ANALYSIS

(Presented by IATA)

EXECUTIVE SUMMARY

ICAO's policies on charges in Doc 9082 set out the basic principles on which to base the recovery of costs for the provision of airport and air navigation facilities and services. This Working Paper describes the importance for ANSPs to adhere to such principles, while analysing the potential implementation of Space-based ADS-B technology ("SB ADSB"). It highlights the importance for the ANSP to develop a business case, discuss it in consultation with airlines, and make a collaborative decision on the possible adoption of the technology. Furthermore, the business case must also include provider options for such technology.

Action:

- a) Promote the adherence to ICAO charging principles by ANSPs
- b) Promote for ANSPs to consult with airlines before entering a contract with any provider of new technology, including SB ADSB
- c) Promote for contract terms to be competitive, cost-related (to efficient costs), and non-discriminatory. This includes the length of the contract and pricing structure
- d) Promote for proper business cases to be presented, transparently, by ANSPs and inputs from users be considered when considering the adoption of a new technology, including SB ADSB
- e) Ensure the State's CAA or assigned Regulator properly oversees these processes and interjects should it observe an abuse of dominant position/monopoly power and/or non-adherence to ICAO's charging principles

<i>Strategic Objectives:</i>	<ul style="list-style-type: none"> - Operational Safety - Capacity and Efficiency - Aviation Safety and Facilitation - Economic Growth - Environment Protection
<i>References:</i>	<ul style="list-style-type: none"> - Doc9082 - ICAO's policies on charges for airport and air navigation services

1. Introduction

1.1 ICAO's policies on charges in Doc 9082 set out the basic principles on which to base the recovery of costs for the provision of airport and air navigation facilities and services through charges. Doc 9082 emphasizes four key charging principles of non-discrimination, cost-relatedness, transparency, and consultation with the airlines. The incorporation of these four key charging principles into their national legislation, regulation or policies ensures compliance by airport operators and air navigation services providers.

1.2 To prevent abuses of dominant position/monopoly power by airports and air navigation services providers and ensure a fair, transparent and equitable recovery of the costs of providing efficient airports and air navigation services facilities and services, IATA fully supports ICAO's policies on charges in Doc 9082.

1.3 In line with ICAO's policies on charges, States and regulators have a vital role to play in maintaining vigorous oversight of charges through a robust, independent, and effective economic regulation to protect users against providers' potential abuse of dominant position and ensure that charges are cost-effective. Hence, it is important to establish robust economic regulation and to create an independent entity that assures that this regulation is complied with.

1.4 SB ADSB is a system utilizing satellite-based receivers, to monitor ADS-B transmissions of aircraft, for air traffic surveillance purposes. NACC region ANSPs have been or are expected to be targeted as potential clients by providers of SB ADSB.

1.5 IATA and its members support the modernization of airspace as it is crucial for future growth of air traffic. However, for every modernization initiative, there must be a business case to support it.

1.6 A business case provides justification for undertaking a project, program or investment. It evaluates the benefit, cost and risk of alternative options and provides a rationale for the preferred solution. A business case commonly considers: 1) impact on long-term strategy; 2) economic analysis – cost vs. benefit; 3) alternative solutions; 4) timing – is the solution needed and can it be afforded at the proposed timeframe; 5) management – roles, governance structure, life cycle, etc. To this WP, it is imperative that the business case considers the impact not only to the ANSP, but also to its users (i.e., a case can't be approved at the benefit of the ANSP and hinderance of airlines).

2. Discussion

2.1 New technology is a critical component of modernization. However, it is important that the choice of new technology, and decision as to when to introduce a particular technology, is based on two overarching conditions:

- a) First, the choice should be properly evidence-based. There must be evidence as to the need that is being addressed by the new technology, and the cost/benefit analysis for the technology as compared with alternatives.
- b) Secondly, any procurement process should be transparent and competitive – and part of that is the need to create the competitive conditions that will enable new technologies to be developed in this dynamic market.

2.2 The adoption, by an ANSP, of SB ADSB, its cost and recovery of costs (i.e., fees) should adhere to ICAO'S charging principles.

2.3 An evidence-based business case is required to properly analyse the potential adoption of SB ADSB (i.e., transparency). All affected stakeholders must be consulted, and their inputs must be taken into consideration to decide on the potential adoption of SB ADSB (i.e., meaningful consultation). Reiterating, a meaningful consultation is one where a provider and its users decide in collaboration, not one where a provider abuses its monopoly power by imposing a service on its users.

- a) A business case should include an analysis on alternative options and rationale for the preferred solution. SB ADSB service is not a unique technology. First, there are alternative technology solutions. Second, there are different companies providing SB ADSB, competing technologies, and developing similar services (i.e., there are alternative options for both technology and service providers). A meaningful consultation is one where a provider analyses the needs of its users, presents options to address such needs, and decides on the optimal option in collaboration.
- b) The cost of adopting a new technology must be efficient and the fees charged to users for this service should be related to the cost of adopting the technology (i.e., cost relatedness). The probability of achieving efficient costs increase following a proper procurement process where a provider considers competing options and negotiates the most favourable price for the ANSP and its users.
- c) User fees related to a service should be the same for all users, for the same service (i.e., non-discrimination). IATA has observed SB ADSB pricing structures to be based on perceived value to airlines. The price of adopting the service over the ocean has been observed to be eight times higher than adopting the service over land. This is a discriminatory practice, given that the service provided to an ANSP is the same, data, regardless of global location.
- d) The adoption of a new technology should not hinder competitiveness and innovation. IATA has observed SB ADSB providers promoting long-term contracts with ANSPs, which airlines believe hinder both competitiveness and innovation. The market for surveillance technologies is dynamic and SB ADSB is a nascent technology. It can be expected that the technology may have limitations or inefficiencies, and that new providers of the same or similar technologies, or new competing technologies, may enter the market in the foreseeable future and may be able to deliver similar or better services at lower or similar prices. A long-term contract does not provide service providers or ANSPs with incentives to reduce costs or innovate.

3. **Action by the meeting**

3.1 The NACC-11 meeting is invited to:

- a) Promote the adherence to ICAO charging principles by ANSPs.
- b) Promote for ANSPs to consult with airlines before entering a contract with any provider of new technology, including SB ADSB.
- c) Promote for contract terms to be competitive, cost-related (to efficient costs), and non-discriminatory. This includes the length of the contract and pricing structure.
- d) Promote for proper business cases to be presented, transparently, by ANSPs and inputs from users be considered when considering the adoption of a new technology, including SB ADSB.
- e) Ensure the State's CAA or assigned Regulator properly oversees these processes and interjects should it observe an abuse of dominant position/monopoly power and/or non-adherence to ICAO's charging principles.

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