

# Legal and economic aspects of ATM data service provision

Information paper for the Single European Sky High-Level Conference, 12th September 2019

## Context and background

The Airspace Architecture Study (AAS), published in March 2019, sets out a proposal for a future Single European Airspace System (SEAS) underpinned by optimized airspace organisation, progressively higher levels of automation and the establishment of common EU-wide ATM data services, enabling on-demand cross-border use of air traffic services. The AAS itself focused on the operational and technical dimensions of the proposed future ATM architecture. The Commission has subsequently requested the SESAR Joint Undertaking (SJU) and Eurocontrol to further define, as part of a Transition Plan, the operational and technical measures required for achieving the AAS vision.

However, a number of questions remain open in terms of regulatory aspects and service delivery arrangements required in order to drive the recommended operational and technical transformation of air navigations services. In this respect, the AAS contains the following related recommendations to the Commission:

- 1) Review policy options which could deliver a defragmentation of European skies through virtualisation and the free flow of data among trusted users across borders;
- 2) Implement a certification and economic framework for ATM data services providers taking also into account possible restructuring of ANSP services as well as an EU framework for on-demand cross-border use of services ('capacity-on-demand').

The proposed common EU-wide ATM data service layer, which purpose is to enable all air traffic service providers to benefit from the cross-border sharing of data, is a prerequisite for the implementation of capacity-on-demand. In addressing the AAS recommendations, the Commission has therefore focused its initial analysis on ATM data services, in particular as regards the related legal, economic and service delivery aspects. This will pave the way for further analysis and stakeholder consultation to support the development of a legal and economic framework both for ATM data services and capacity-on-demand.

This document is a short overview of the main topics explored during the initial analyses, and an introduction to the issues identified.

## State-of-play – current operational and service delivery model

At present, ATM data services are provided in-house by vertically integrated ANSPs, who own and/or control the full information chain of ATM/ANS, from the installation and maintenance of surveillance sensors, through the operation of the various data processing system elements, to the provision of Air Traffic Services ('ATS') to airspace users. The governing rule for ATM data services is that each and every ANSP should tend for its own needs. There are, however, examples of data sharing between ANSPs, e.g. the sharing of surveillance data between neighbouring ANSPs.

## Legal and economic aspects of ATM data services

### *Organization and regulation of ATM data services*

The AAS introduced different service delivery models for the provision of ATM data services. These models – apart from the one depicting the status quo – all trigger changes in the regulation and market structure of ATM data services. It stems from the AAS that the future Airspace Architecture should be built around three service layers: ATM data production services, ATM data processing services and Air Traffic Services.

One issue raised by the AAS is the level of competition within the ATM data services market, from:

- A fully competitive market with perfect competition where monopolies are absent and the market price of a commodity is beyond the control of individual buyers and sellers; to,
- A fully monopolistic market structure.

In between, there are many models and structures, with different implications on the economic regulation and the regulator itself. The Commission will assess the full spectrum of available options, in order to identify what the socio-economic implications are and how market regulation, business models, and service delivery are affected. For example, while the setting of ATM data service providers (ADSPs) may be an option voluntarily taken up by Member States, the sharing of data between different entities and providers may have to become an obligation. The type of regulatory or market model to be chosen would depend on the incentives in place and size of the market.

### *Data underpinning ATM data services*

The Commission acknowledges the importance of clarifying the definition and scope of ‘ATM data services’ as well as the technical environment and infrastructure that can be used to transfer data between ATM data providers and ATS providers. The type of underlying data will be carefully scrutinised in this respect. Furthermore, the Commission will also assess the ownership, access to, and re-use of ATM data. This may be analysed in the context of competition law, taking lessons from existing data-sharing practices within the European data economy, and emerging legal developments concerning the sharing of public and private information and, in particular, so-called ‘high-value datasets’.

### *Common requirements*

When assessing the topic of certification and oversight of ATM data service providers, there are two fundamental aspects which the Commission will consider going forwards:

- The entity that should be entrusted with the certification and oversight of ATM data service providers (on a pan-European level by EASA); and,
- The specific certification and oversight requirements applicable, including the definition and scope of ATM data services.

The Commission’s initial analysis has also identified the following specific considerations to be further examined:

- Unambiguous definition of ADSP vs ATS providers. A key question is where to draw the boundary between the different services. The demarcation line between ATS and data services is not always clear – this should be clarified for ADS.
- Definition of the specific operational and technical requirements for ADSPs.
- Detailed interoperability requirements addressing all ADSP-ATSP and ADSP-ADSP interfaces.
- Clarification of the scope of ATM data services as a new category in the Commission Requirements Implementing Regulation.
- Clarification of liability and insurance requirements in the Common Requirements Implementing Regulation.

### *Liability and insurance*

The Commission's initial analyses have suggested that liability provision and insurance requirements for airlines are well established for international and national carriage by air. The regulatory framework for ANSPs is less comprehensive, and there are no specific liability and insurance provisions for data providers. It will thus be key to ensure that liability aspects are properly addressed as part of the future ADS provision so that a level playing field can be guaranteed, including through insurance coverage as appropriate.

### *Military aspects*

In terms of ATM data sharing, the Commission understands that there is already substantial data sharing between civil and military stakeholders, based on national arrangements or bilateral agreements. In these cases, however, military stakeholders are connected to nationally certified ANSPs and designated ATS providers often State-owned ANSPs. According to the AAS vision, this situation may be impacted by the emergence of ATM data service providers that would be decoupled from ATS providers. The Commission's initial analysis has identified that military stakeholders have specific needs as regards confidentiality, system resilience, data access, and cyber-security, which will need to be fully addressed. The Commission will work closely with NATO, EDA and any other military stakeholders to examine the requirements from the military perspective further.

## Conclusions and next steps

The Commission acknowledges that the cross-border sharing of data is necessary to enable the temporary delegation of ATS provision to an alternate ACC with spare capacity. Ultimately, capacity-on-demand will need to be supported by a common ATM data layer. This will be achieved through the progressive shift to new service delivery models for ATM data.

The Commission will examine the options for developing a legal and economic framework both for ATM data services and capacity-on-demand. In particular, this aims to address the following:

- Definition of ATM data services and markets (size, structure, access)
- Access to data, nature of the data (public or private)
- Business models and market regulation
- Technical environment and infrastructure

- Potential military challenges and specific requirements
- ATM data service providers certification and oversight, including Pan-European providers
- Liability and insurance aspects
- How can the ATM data service layers be designed to be future proof (e.g. to support U-space and higher levels of autonomy of aircraft, higher levels of automation of ATC system in the future)?
- Security and cyber security aspects
- Interoperability requirements

The Commission will follow up on the topic of ATM data services during the course of 2019 and 2020 with active stakeholder engagement.

*DISCLAIMER: The views expressed are purely those of the Commission services and may not under any circumstances be regarded as stating an official position of the Commission. Where this paper refers to the Commission, it is to be understood as the Commission services.*