



# Aeronautical Data Hub

Comply with EASA and ICAO data quality regulations

Data collection and quality assurance  
Unlock operational efficiencies  
Maximise safety

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FOR A SAFER WORLD

# Aeronautical data requirements of the current (EU) Regulations

Civil aviation authorities (CAA) and EASA demand for capabilities of an unbroken chain of precise and accurate data, from the data originator to airside operations teams, airlines, pilots, and regulators. Airports play a significant role in the ATM system and it is their responsibility to deliver crucial aeronautical data. However, many airports still rely on manual methods for aeronautical information management, driving up the cost and complexity of conforming with regulatory and industry requirements.

## Data quality challenges for airports

### Regulations

Aerodrome operators must observe Regulation (EU) 139/2014 as amended by (EU) 2020/2148 being supported by the applicable AMC/GM.

### Compliance

Airports are required to apply policies, workflows, data formats and interfaces, backed by formal arrangements and demonstrate compliance as part of their EASA audits.

### Costs

Data collection and quality assurance needs effective and efficient means to eliminate data quality issues without exceeding financial capabilities.

### Coordination

Data origination and validation involves many players, including surveyors, civil aviation authority and AIM units who must seamlessly work together and share information securely

### Validation

Datasets must comply with standards from ICAO, EASA, Eurocontrol, and FAA and automated verification is the key to check such vast amounts of data.

### Safety

All airside operations rely on the quality of this information, thus the highest standards must apply to guarantee safe and efficient flights.

Frequentis airportDATA is an end-to-end solution to minimise manual processes and empower teams to monitor their compliance against a wide range of standards, requirements and regulations, all of which essentially require airports to contribute their part of the aeronautical data, including aerodrome, obstacle and terrain data.

The obligations follow the same principles applicable to aeronautical information service providers, notably regarding data quality, protection, catalogues and data exchange, in a comprehensive data management process.

airportDATA, a standardised workflow and data quality management system that connects teams within the airport and beyond fully conforms with the industry standards and regulations around traceability and interoperability, including secure integration of the CAA and the ANSP organisations.

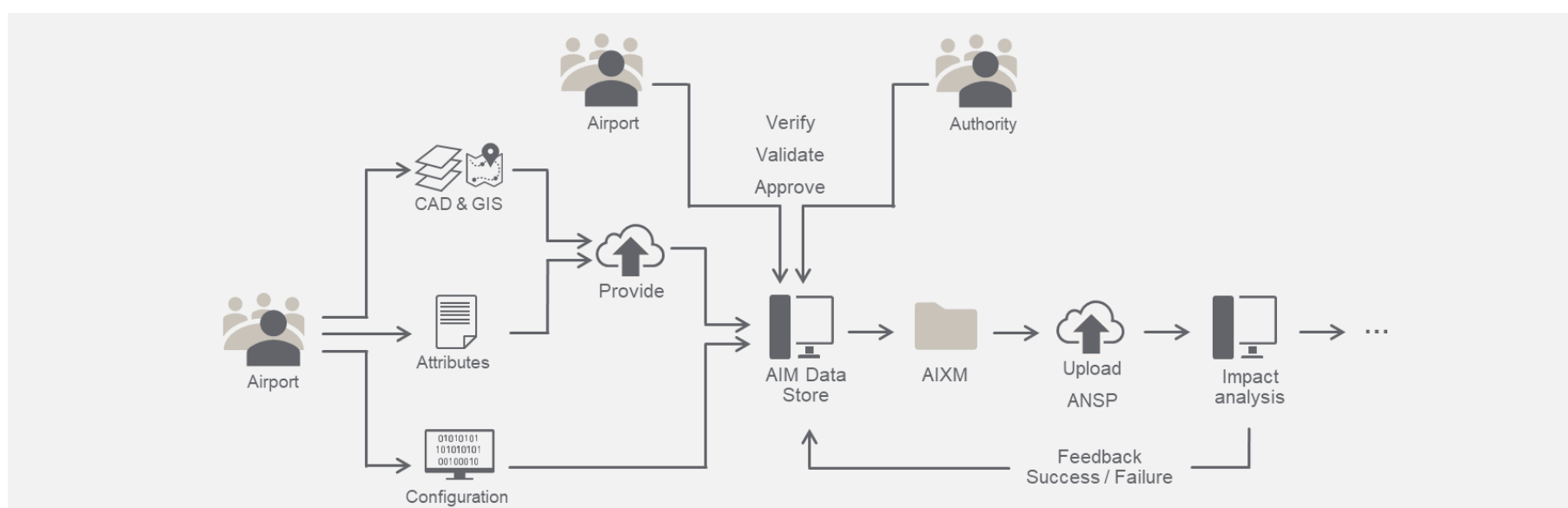
The automated workflows in airportDATA generate a fully digital aeronautical data chain, helping to ensure the highest data quality and ultimately create a higher margin of safety in aircraft movements.

Airfields and the airspace above them become harder and harder to navigate and new types of users such as unmanned aerial vehicles (UAVs) enter the frame, making accurate manoeuvrings critical to help maximise the number of movements in this busy area, and modern navigation technologies depend on levels of data quality that cannot be managed with pen and paper means any longer.

# Aerodrome operator is a data originator

The data collection process involves surveyors, cartographers, AISPs and regulators, making effective collaboration very difficult. With airportDATA all internal and external users can access a secure, web-based service, anywhere and anytime. The Aeronautical Information Exchange Model (AIXM) standard simplifies the data exchange with the AIS provider and the configurable provisioning process, flexible extensions and customisable reports, can be adapted to national requirements and airport specific environments. airportDATA is a service, but can be deployed on-premise upon request.

## ICAO and EASA compliant data chain



### Data collection

Cover all data about the aviation infrastructure, flight restrictions and obstacles. Automatically transform proprietary formats and coordinate systems into structured aeronautical information.

### Data validation

Millions of data quality checks with every delivery ensure the availability, integrity and usability of information so that it can be digitally processed and distributed in accordance with the aviation-specific requirements.

### Data distribution

Interface seamlessly with the CAA, AIS provider and the airport internal information systems, helping to ensure the airport community always have the latest and most accurate data at their fingertips.

## Efficient management of vital aeronautical data

Air transport has gone through different crisis and the business is under constant pressure. It is vital for the industry to exploit all options that help balance demand and capacity without compromising on safety or sending costs soaring.

By maintaining high data quality and easy, yet secure access to mission-critical aeronautical data, airports must play their part in building tomorrow's air transport network.

Modern applications rely on accurate and ready-to-use infrastructure data, including safety management, airside reporting, airport maps, construction & maintenance management as well as all airside operations.

# Unlock your data potential

The Frequentis airportDATA service ensures a high level of data quality and meets the requirements of both regulators, EASA, and industry stakeholders offering a mature workflow and data-quality management system that was designed from the ground up for regulatory compliance and safety.

Several quality gates must be passed before the data is shared with the AIS provider, allowing the teams to maintain strict control over the capture, processing and distribution of aeronautical information.

Aeronautical datasets are complex structures comprising tens of thousands of individual attributes. Relying on manual processes to capture, manage and transmit such data makes it effectively impossible to guarantee the required quality and significantly increases the risk of human error.

Repetitive task such as data collection, transformation and quality checks are automated so that the users can fully dedicate their time to valuable tasks of conducting measurements, reviewing verification and validation reports, and ultimately approving these data changes.

## Enhancing the quality of aeronautical data

Meet all regulatory and industry requirements for safe flight operations

Reduce the risk of human error by eliminating repetitive manual tasks

Share information with all aviation stakeholders fast and efficient within financial limits

Promote higher levels of data quality to support new services

## Frequentis airportDATA

- Web-based platform enables easy access for all users
- Offers end-to-end digital data chain, from measurement to AIP
- Flexible deployment options, including Software as a Service (SaaS), on-premises integration and managed services
- Conforms to the AIXM 5.1 standard used in the European AIS Database (EAD)
- Full recording and traceability of data transactions
- Easily customisable based on airport-specific workflow requirements