Flight Data Analytics

Flight Operational Quality Assurance/Flight Data Monitoring

In a rapidly changing aviation market, Boeing is dedicated to technology, safety and quality initiatives that modern operators need to stay competitive.

As part of the Boeing Flight Data Analytics integrated suite of solutions, FOQA/FDM provides advanced safety analytics that lead to actionable insights for continuous improvement. The solution makes it easy to quickly identify and monitor leading indicators of safety-related flight events, as well as correlate multiple data sources and perform root cause analysis. FOQA/FDM also helps airlines achieve compliance with regulatory requirements and safety programs in order to run an efficient operation.

Alignment with Industry Standards and Best Practices

- Automates processing of large volumes of recorded Quick Access Recorder (QAR) flight data for efficient analysis
- Presents predefined event algorithms with customizable threshold configuration to allow for rapid setup tailored to your operation
- Provides built-in map view and flight animation to facilitate thorough event investigation
- Joins additional related data sources to every flight, such as weather, runway information, and other operational data for additional correlation and context
- Incorporates industry best practices such as those published in the UK CAA's CAP 739, EASA's AMC/GM to Annex III (Part-ORO), the FAA's AC 120-82, and ICAO's Manual on Flight Data Analysis Programs (FDAP)

Advanced Safety Analytics that are Fast, Flexible and Reliable

- Provides focus-based analytics with built-in dashboards that go beyond single-event analysis to display trends across all flights and highlight leading indicators of incidents to support proactive decision making
- Developed by safety experts, pilots and data scientists with hundreds of precise pre-defined data points per flights that users can leverage to deepen their analysis
- Delivers user-friendly and scalable solutions for all fleet types and sizes that can adapt to your operational changes

Data Security and Peace of Mind

- Complies with the latest multi-layered security standards focused on encryption and multi-factor identification to ensure the highest level of security and privacy protection for sensitive flight data
- Distributes data through highly secure role-based access control – specified data can either be granular (second-by-second) or aggregated
- Resides within cutting-edge cloud architecture with isolated single-tenant environments and dedicated firewalls for each customer

Data Integration for Expanded Scope and Accuracy

- FOQA/FDM is part of the Boeing Flight Data Analytics suite of solutions unified around a single processing core, leveraging a seamless transition to a robust and comprehensive analytics ecosystem
- Integrates and tracks safety performance indicators from multiple related data sources such as fatigue scores and flight plans for enhanced perspective
- Centralizes data sources, which offers a single source of truth, minimizing the time and frustration often required to investigate different values for the same metric prepared by multiple groups

The FOQA/FDM box chart measures trends in pitch attitude during take-off to determine if the risk of a tail strike changes over time.

The Boeing Flight Data Analytics suite is composed of advanced analytics solutions developed by aviation experts around a common flight data processing core. Built to handle recorded flight data from tens of thousands of flights along with other contextual data sources – the core technology provides secure, tailored access to a shared data set across an operation. Each solution in the Boeing Flight Data Analytics suite supports integrated data analytics capabilities, enabling better decision making based on factors that have the biggest impact on safety, efficiency, and the bottom line.

Fuel Dashboard
Pilot Insight
Emissions Reporter

FOQA/FDM

Predictive
Maintenance Insight
Accelerator

Self-Service Analytics

The Boeing Flight Data Analytics suite is part of our flight data connected airplane strategy that delivers a fully integrated end-to-end automated solution – from airplane to QAR/CPL raw data to processed data to data analysis solutions for real-time operational insight leading to increased reliability and availability and lower risk and uncertainty.