Leverage aircraft and simulator data to fly more safely and efficiently

Business aircraft operators can improve safety, flight operations and maintenance, and training through the effective study and understanding of recorded flight data.

CAE Flightscape software tools and our expert analysis enable your Safety and Flight Operations team to:

- Monitor safety performance 24/7 from anywhere in the world via a secure web link
- Identify operational and maintenance events and trends
- Track safety actions
- Visualise complex events using interactive 3D flight animation
- Provide dynamic flight reconstruction debrief for training scenarios
- Access incident and accident investigation specialists

CAE Flightscape provides a Corporate Flight Operations Quality Assurance (C-FOQA) service to business aircraft operators. The service leverages data from a solid-state Flight Data Recorder (FDR) or Quick Access Recorder (QAR) aboard your aircraft, and is easily transferred through CAE Flightscape’s secure web connection. CAE expert analysts work collaboratively with your corporate team to analyse the data using best practices methodologies. The analysis focuses on the flight parameters you designate, and can review flight ops, maintenance events, fleet-wide trends, even track fuel consumption. Industry lessons learned can also be shared (sources de-identified) with other aircraft operators using the service.

You maintain full ownership and access to your flight data. The C-FOQA service uses a combination of software installed at your operations and CAE Flightscape developers and analysts. (No resident flight data expertise is required in your organization.) A complete line of operator-licensed software is also available for those who wish to manage their fleet data analysis program internally.

CAE Flightscape is a world leader in safety of flight sciences

CAE Flightscape is the only company in the world with significant investigative flight data analysis experience. CAE Flightscape’s Insight software is the platform of choice of virtually all air safety investigators for aircraft manufacturers and commercial aircraft operators, as well as civil government and military authorities worldwide.
Evidence-Based Pilot Training

Flight training departments can use flight data to customise training scenarios and replicate complex events. Data can be derived from a wealth of sources – Corporate Flight Operations Quality Assurance (C-FOQA), Safety Management Systems (SMS), and so forth. CAE’s application of FOQA / C-FOQA concepts to full-flight simulators (FFSs) is referred to as Simulator Operations Quality Assurance (SOQA). The system automatically identifies events of interest (similar to FOQA / C-FOQA events) during the FFS session. The CAE SOQA system enables objective feedback to instructors and pilots through a brief / debrief presentation of the simulator session combining cockpit video, and audio synchronised with a flight reconstruction of flight controls, avionics displays and a stealth view of the aircraft in flight.

SOQA connects the benefits of FOQA / C-FOQA to simulator training, utilising the same software toolset for both safety and training. Comparing long-term statistical trending of FFS flight data with aircraft trends will better enable simulator sessions to reflect real-world issues. The objective flight data used by the SOQA training system, combined with the knowledge, skill and experience of the instructor, provides a more precise picture of performance and whether the performance met the objective of the lesson plan.

Dassault Falcon FDM Service

CAE Flightscape and RUAG Aviation, in partnership, are the preferred Dassault authorized provider of Flight Data Monitoring Services (FDM) for all new production and in-service Falcon aircraft. The FDM service can enhance safety by helping Falcon operators proactively detect, assess and manage their flight operations, as well as comply with certain regulatory requirements. The CAE Flightscape-RUAG FDM service provides objective monitoring and analysis of flight operations, abnormal event detection plus powerful flight debrief tools including 3D animation / reconstruction.

FDM can help operators highlight non-standard events, identify operational risks, evaluate how to tailor training programs based on specific operating environments, and also determine where flight operations can be optimised. Participating Dassault Falcon operators may also benchmark their flight operations against other operators in a secure, confidential manner. Events are professionally validated in strict confidence by a team of flight data experts and experienced pilots.

Operators of in-service aircraft fitted with a Quick Access Recorder (QAR) or Flight Data Recorder (FDR) may access the service directly through CAE Flightscape and RUAG. The turnkey Dassault Falcon FDM Service can be accessed wherever an operator has an internet connection. Together, CAE and RUAG will provide 24/7 worldwide service coverage.

CAE Flightscape Applications

- Operations
  - Flight Data Monitoring (FDM) Software
  - Flight Data Analysis (FDA) Service
  - Turnkey Flight Safety Laboratories
- Maintenance
  - Flight Data Recorder (FDR) / Quick Access Recorder (QAR) Readout
  - Condition-Based Maintenance
  - Environmental Efficiency Analysis
- Training
  - Evidence-Based Pilot Training
  - Virtual Airport Familiarisation
  - Simulator Debrief