



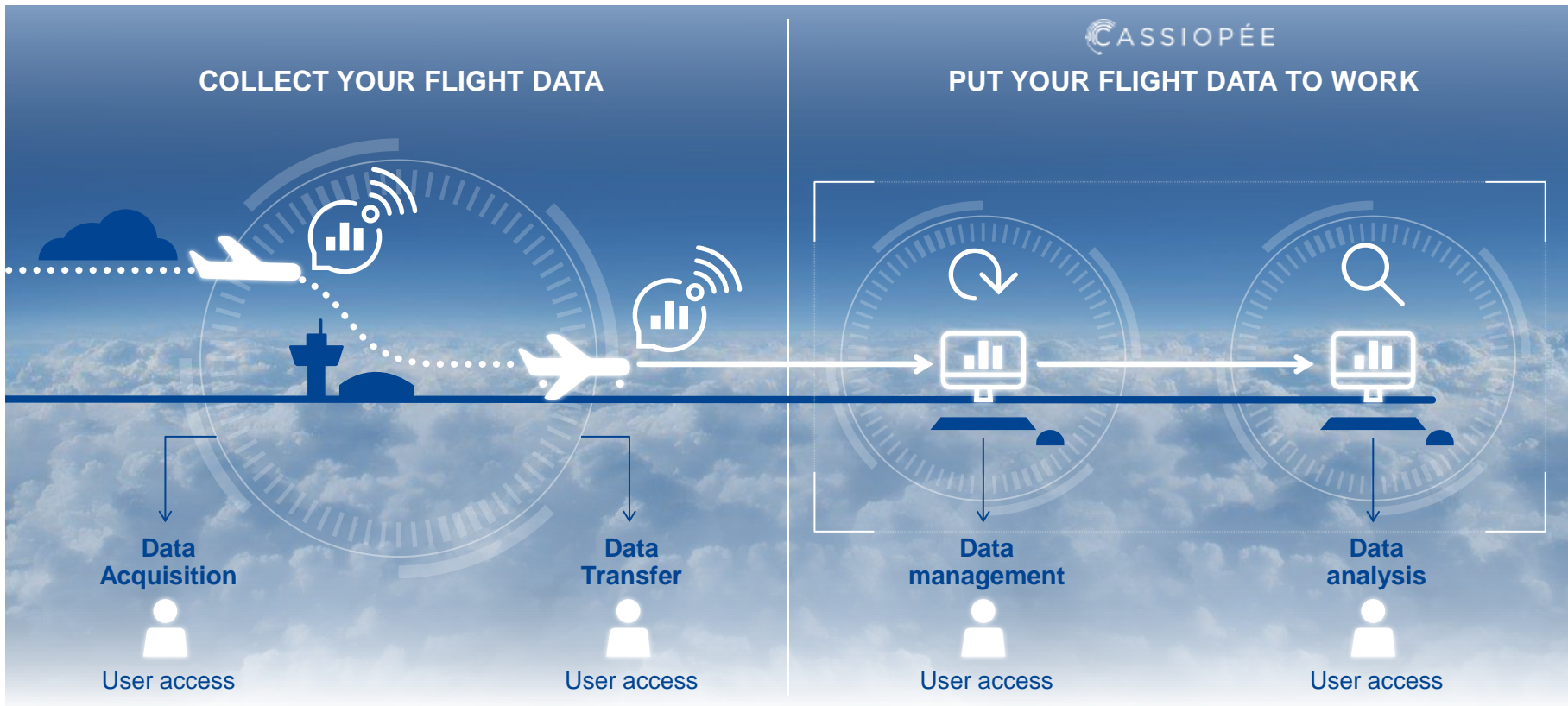
ELECTRONICS & DEFENSE

## DATA MANAGEMENT & CONNECTED SOLUTIONS

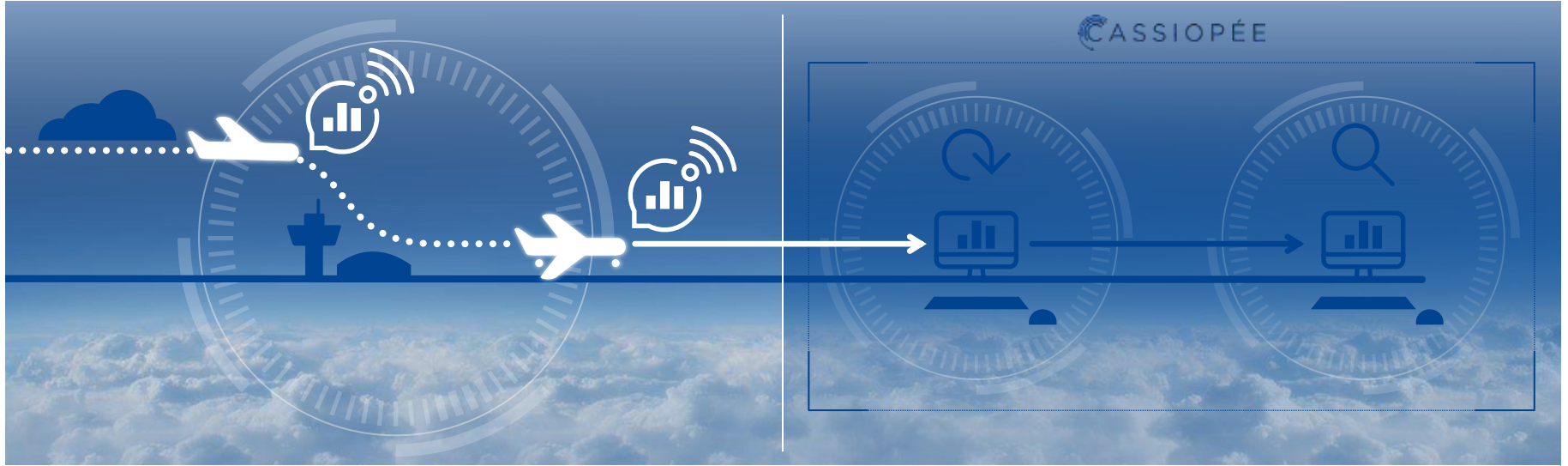
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# The flight data journey – Solutions to help improve operations efficiency



## “Massive” Flight Data Acquisition



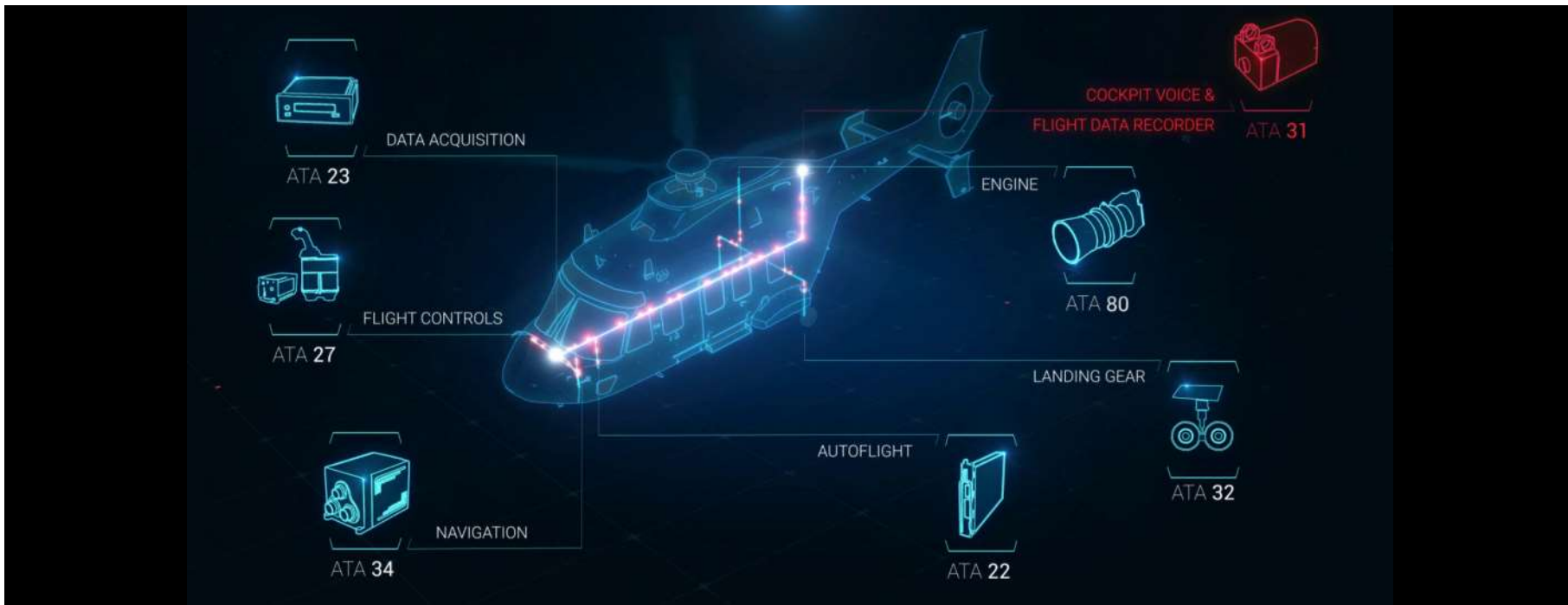
**Data collection** is the first step in understanding the behavior of aircraft and systems

# Aircraft Flight Data Acquisition



Safran provides solution to massively collect & record flight data

# Helicopter Flight Data Acquisition



Safran provides solution to collect & record flight data

## ACMS and WEFA, its Wireless Extension



A system with fully automated data acquisition & transfer capabilities



### Aircraft Conditions & Monitoring System

- Massive data acquisition capability (200,000 param/sec on A380)
- Many ACMS reports (routine or customized) available
- Programmable for FOQA & MOQA needs

### WEFA card

- Plug & play Wireless Extension For existing ACMS unit
- No extra weight, no additional equipment
- Automated secured 3G+ data transfer

### WEFA station

- Web based dashboard to monitor aircraft data transfer
- Automatic user notification of new available data
- Dispatches the downloaded data to the final Users

## Helicom V2+



Compact design  
with multiple  
capabilities



Small size  
  
W165  
x D156  
x H57

Low power  
consumption  
  
6W

Low weight  
  
<900g

- **Automatic transmission capabilities:** Cellular, WIFI, Bluetooth and Iridium
- **Up to 64** parameters monitored
- **150 flight hours** capacity storage in the transmission memory
- **Unlimited triggers** (thresholds) and possibility to implement embedded algorithms
- **Compliant with IR-OPS** for Helicopter Flight Data Monitoring (HFDM), Usage Monitoring System (UMS) and Helicopter Operation Monitoring Program (HOMP)
- **Fully automatic** from storage to alert

# Big data management softwares



**Data process automation** for the benefits of your operations



# Cassiopee NODE



High volume data  
management solution



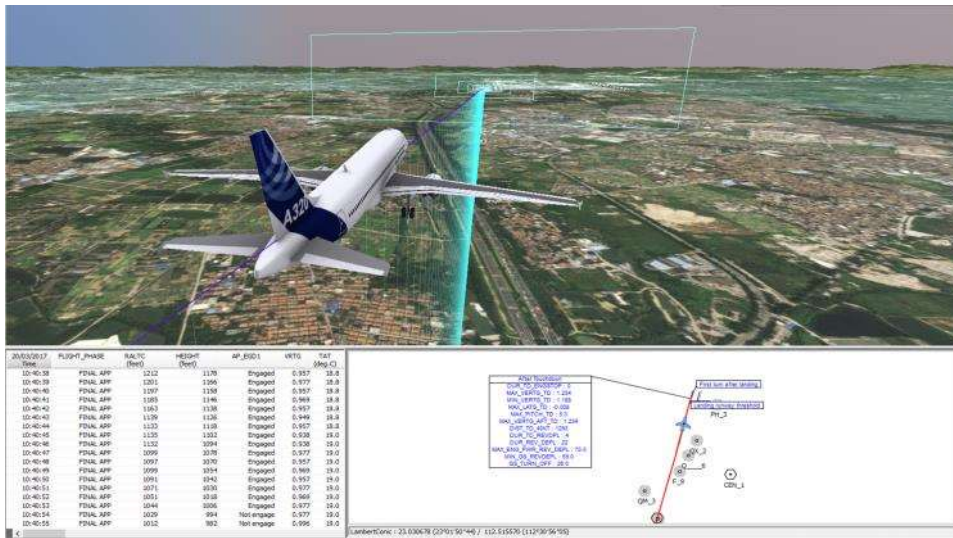
## Solution for automatic processing of a large volume of data

- Big-data-oriented flight data decoding, cleaning, storing and contextualizing in open & engineering format
- Scalable solution for daily data management from over thousands of aircraft
- A single Windows machine is enough to start
- Data is ready for use for Flight Data Monitoring, Data Mining, Data Science...

# Cassiopée AGS



## Comprehensive flight data analysis software



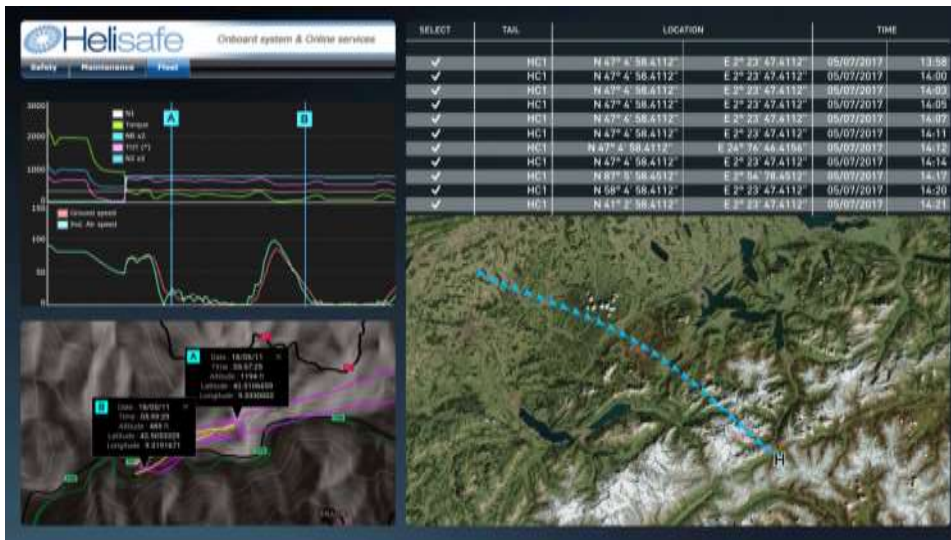
## Operational Data Management Software

- Automatic analysis of all available data from aircraft recorders (multi-fleet & multi recorders capable)
- FOQA & MOQA tool allowing aircraft behavior deep study & analysis by experts
- Highly customizable & configurable solution
- Able to run home-made algorithms
- On premise or SaaS installation and use

# Cassiopée Heliweb



## Helicopter Flight Data Monitoring System



## Helicom online back office

- Secure and personalized access to flight data through online back office
- Quick access to historical flight data and alarms triggered of your entire fleet
- Various parameters display: files, maps, plots
- 3D trajectory Replay synchronized with flight instruments
- Flight tracking display

# Cassiopée Digital Flight Report



## Electronic Technical Logbook for helicopter



## Mobile application for end-of-flight report management

- Automatic flight reports generation with avionics data
- Avoid manual typing of reports in operators infrastructure to minimize typing errors, loss of data...
- Secured end to end process with digital flight report electronic signature
- Linked with Helicom V2+

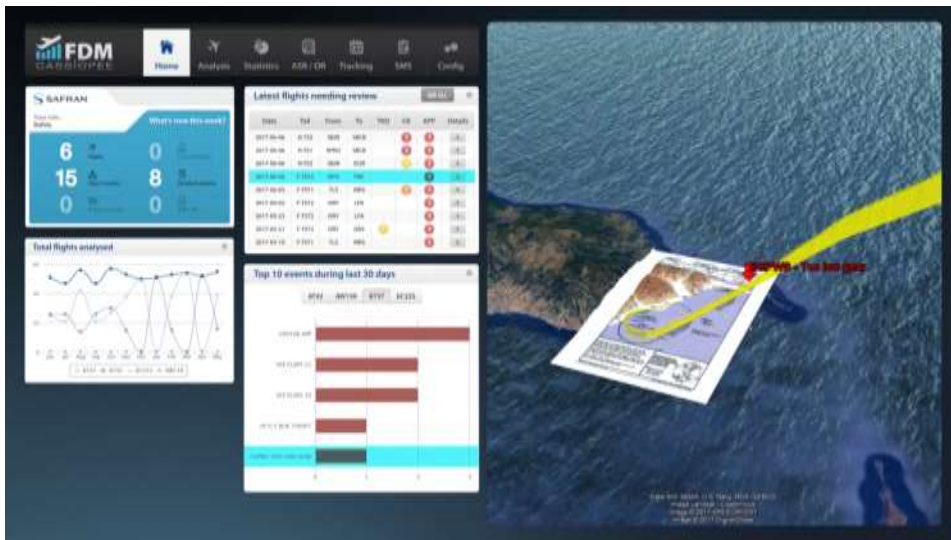
# From big data to smart data



**Data analysis services** to improve operational efficiency



## Flight Data Monitoring



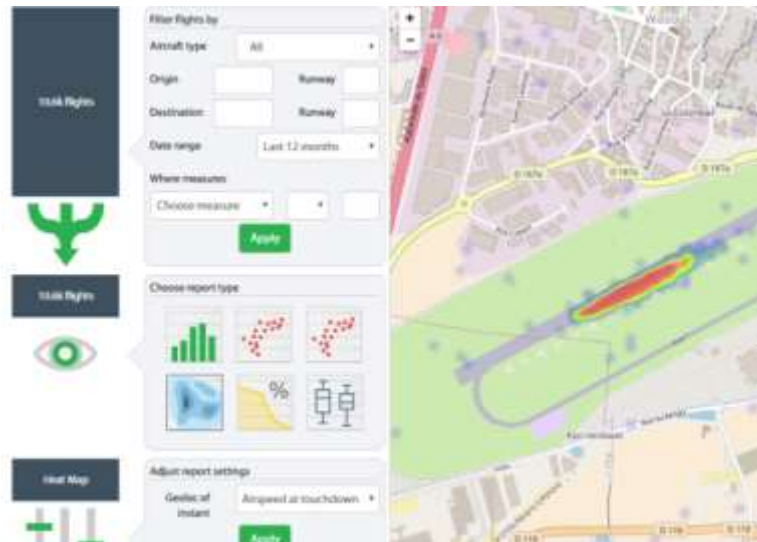
## Flight Data Monitoring dashboard for flight safety enhancement

- Comprehensive picture of operations by data visualization
- Flight operations expert team performing data analysis
- Automatic events notification
- Crew access and feedback module

## Cassiopee Smart Data



### Smart Data



### Measure oriented analysis dashboard of your flight operations to enhance flight safety

- Monitor measurements and not only events
- More than 500 measurements available for each flight
- Big Data visualization tools : from 1 flight to all of your flights
- 6 different visualization templates that respond to specific analysis needs
- Included in Cassiopee FDM

# Cassiopée SFCO<sub>2</sub>



## Smart Fuel Efficiency



## Comprehensive service package to reduce airline fuel costs

- A global operating cost approach to provide smart recommendations
- A fuel monitoring dashboard to display savings and customized KPI
- Multi-platform service, not dedicated to one aircraft type only
- Multiple modules providing analyses with details down to each flight for each initiative implemented



## Cassiopee FDR readout



### Flight Data Recorder



### Verify the integrity of your Flight Data Recorder

- In compliance with ICAO Annex 6 part regulations (once a year and by aircraft)
- Monitor the condition of your FDR system
- Available for all major FDR in the market
- Customized readout report compliant with your regulation authority



**POWERED  
BY TRUST**