EASA DATAPP PROJECT WEBINAR

OVERCOMING LIMITATIONS AND UNLEASHING THE POTENTIAL OF FLIGHT DATA

31st July, 2023

Guillaume Aigoin
EASA Technical Lead

Núria Alsina
ALG Project Manager

Antonio Cabeza
ALG Technical Lead

Andrada Bujor
ALG Team Leader

Carlos Cuesta
ALG Senior Consultant
DIGITAL TRANSFORMATION

Can we keep the pace in all dimensions?

THE DATAPP PROJECT
EASA’s Research Project
The DATAPP project focuses its research on three different aviation fields, structured and particularised each on a Case Study.

**CS3** Flight training data for EBT and CBTA

**CS4** Digital fuel management

**CS5** Flight data models for safety
Definition of the case study

Current status and limitations identification

Propose solutions and evaluate the impact

Propose changes to the regulation & standards

Roadmap and training material

Regulatory materials and standards

We are here
DEVELOPMENT OF THE CASE STUDY

STAKEHOLDER CONSULTATION PROCESS

Big thank you to the many organizations and experts who have invested their time and effort with us to make us aware of your situation and constraints. We still have a few more with whom we hope to close conversations in the next few days!
CASE STUDY #5
FLIGHT DATA MODELS FOR SAFETY

Flight data is of unprecedented value for safety. How can we overcome current limitations and unlock its full potential?
Flight data is a unique source of information on the aircraft and its surroundings. The aviation industry is aware, and usage has spread across segments and domains, and beyond Flight Data Monitoring (FDM).

With flight data considered an asset, operators have expanded their collection efforts. The technical challenge of processing and generating valuable outputs is significant.

A big software industry exists, constantly pushing the envelope of capabilities, the most recent iteration of which includes the adoption of cloud technologies.

Flight data recorded internally is unique as a source of information

Usage is spreading across the industry, from FDM to predictive maintenance

Regulation plays a critical role, as it mandates usage of data for many operators (FDM)

Data volumes have grown, as organisations recognise its value as an asset

Software industry supports operators and other users, with many vendors and products

New cloud technologies are being adopted to enable scalable data processing capabilities
LIMITATIONS IDENTIFICATION

TOP 5 CHALLENGES

DIGITAL AND DATA-RELATED LIMITATIONS TO THE USAGE OF FLIGHT DATA IN SAFETY-RELEVANT PROCESSES

1. Usage of the Data Frame Layout (DFL)
2. Transitioning to cloud-based software
3. Definition and documentation of FDM events
4. Fusion of flight data with other data sources
5. Data governance (access policies & integration)
TOP 5 CHALLENGES

1. Usage of the Data Frame Layout
   - Customisation of the Data Frame Layout for flight data collection
   - Management of the Data Frame Layout for decoding
   - Aircraft operators with a non-mandatory FDM programme
TOP 5 CHALLENGES

2. Transitioning to cloud-based software

→ Usage of in-house server software solutions
→ Transitioning to cloud-based software solutions
→ Usage of the Software-as-a-Service model for FDM
TOP 5 CHALLENGES

3. Definition and documentation of FDM events
   - Usage of non-standardised event definitions across the industry
   - Definition of new events by operators
   - Operator internal documentation on FDM events
TOP 5 CHALLENGES

4 Fusion of flight data with other data sources

- Fusion capabilities included in software solutions
- Access to other data sources
- Data format and utility of other data sources
### TOP 5 CHALLENGES

5. Data governance

- Impact of data access policies on the usage of flight data
- Integration of data across software solutions (FDM - SMS)
Now, our research will focus on defining potential working points or solutions (digital, standard or procedural) to the identified problems, as well as assessing their potential impact in case of implementation.

1. **Identify potential solutions** to the identified limitations

2. **Evaluate the impact** of different solutions proposed

3. **Issue recommendations for EASA** to consider in future working groups or to develop standards
WE NEED YOUR INPUTS!

This research is meaningless if we do not address the real barriers that affect your day-to-day life. Help us by explaining your limitations!

Fill out our survey to continue identifying constraints and solutions to future digital challenges.

OR ACCESS THE LINK
ABOUT US
About Us

ALG

Global strategy and business consulting firm specialized in logistics, infrastructure and transportation with 25+ years in the business

AT A GLANCE

Aviation
We provide in-depth knowledge of the industry (air transport, airport infrastructure, air navigation, UTM and drones, space and civil aviation)

Maritime
We identify opportunities to take advantages of trends in global trade, cruise markets and marina concessions, and support the development of maritime transportation and infrastructure throughout the value chain

Land
Leading players in the highway and railway sectors and public transport authorities trust us (the highest rate of client repetition) to achieve more efficient and sustainable transport

Intermodal & RE
We draw on our in-depth understanding of all modes of transport to assess and define the role of logistics zones in global supply chains and to design new strategies and modern logistics processes

OUR DIGITAL DEPARTMENT
Our team of hybrid profiles, supporting transportation organisations along their path towards digital transformation

WHAT DO WE OFFER?

Digital strategy
Digital capabilities
Digital technologies
Introducing the panellists

OUR TEAM

Núria Alsina
Principal at ALG and head of digitalisation and advanced analytics in the Transportation practice. Aeronautical engineer with specialisation in air navigation and systems, certified in project management and scrum methodology.

Antonio Cabeza
Engagement Manager at ALG. Aeronautical engineer with a MSc in Big Data and Advanced analytics. Specialises in strategical projects in airport and air traffic operations with wide expertise in digitalisation and regulatory related projects.

Andrada Bujor
Team Leader at ALG. Aeronautical engineer with a MSc in Business Intelligence and Big Data and expertise in strategic business projects, ATM research, impact assessment and digital initiatives mainly in the European context.

Carlos Cuesta
Sr. Consultant at ALG. Aeronautical engineer with a BBA in Business Management. Expertise in data analytics and digitalisation in the aviation domain, including airline operations and flight data monitoring.
THANK YOU

alg-global.com / alg@alg-global.com
nalsina@alg-global.com / acabezad@alg-global.com / abujor@alg-global.com