EASA DATAPP PROJECT WEBINAR

UNVEILING KEY DIGITAL CHALLENGES IN CURRENT OPERATIONS FOR FUEL MANAGEMENT

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Can we keep the pace in all dimensions?

THE DATAPP PROJECT
EASA’s Research Project
CASE STUDIES

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
WHAT HAVE WE DONE

Definition of the case study

Case studies definition & work plan

Literature review and digital solutions identification

TO DO

Current status and limitations identification

Propose solutions and evaluate the impact

Propose changes to the regulation & standards

Open questionnaire

25 Interviews

Attendance to EASA working groups

Regulatory materials and standards

We are here

Development of the case study
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!
What are the key digital challenges towards the progressive adoption of fuel reduction schemes in our operations?
New fuel regulations, in effect for nearly a year, have sparked a revolution in the aviation industry. Many operators have already taken the leap, adopting Basic Fuel Schemes with Variations.

Now, there's willingness to embrace the next level through Individual Fuel Schemes, but...

... the adoption of these advanced schemes brings a set of challenges that need to be addressed.

**STATUS & MATURITY**

Fuel planning / In-flight replanning

+ In-flight fuel management

+ Selection of aerodromes and planning

Performance-based with prior approval required

**Fuel / Energy Scheme (after 30th October 2022)**

- Basic Fuel Scheme
- Basic Fuel Scheme with Variations
- Individual Fuel Scheme

Authority’s overall approval based on:

Fuel policy adaptation

Alternate selection

Fuel data analysis & modelling

Risk & Safety analysis

Operating conditions analysis

New procedures & training
LIMITATIONS IDENTIFICATION

TOP 5 CHALLENGES

DIGITAL AND DATA-RELATED LIMITATIONS TO THE ADOPTION OF FUEL-REDUCTION SCHEMES

1. Definition of fuel data input for fuel reduction schemes
2. Development of statistical and predictive models
3. Validation and deployment frameworks
4. Definition and monitoring of safety performance
5. Management of operating conditions data
TOP 5 CHALLENGES

1. Definition of fuel data input for fuel reduction schemes
   - Selection of fuel-related data sources
   - Definition of relevant fuel data to be recorded
   - Assessment of fuel-related data quality
TOP 5 CHALLENGES

2. Development of statistical and predictive models

- Standardization and generalization of fuel models and methods
- Definition of statistically relevant set of data
- Capitalisation of knowledge for fuel estimations and predictions
TOP 5 CHALLENGES

3. Validation and deployment frameworks

- Integration and deployment of models into daily operations
- Progression from deterministic to predictive models
- Ensure trustworthiness and learning assurance approach
TOP 5 CHALLENGES

4. Definition and monitoring of safety performance

- Comprehensive framework for the definition of Safety Performance Indicators
- Continuous reporting of fuel and safety-related data
- Integration of fuel schemes within SMS/FDM
- Flexible digital solutions’ requirements for different types of operation
TOP 5 CHALLENGES

5. Management of operating conditions data

- Reliability of operating conditions data sources
- Consistency of data along fuel management
- Governance of operating conditions data sources
TIME TO INVESTIGATE SOLUTIONS

WHAT’S NEXT?

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.

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https://ec.europa.eu/eusurvey/runner/DATAPP_Fuel_Webinar
QUESTIONS & ANSWERS

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About Us

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

**ALG 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.

Anna Feliubadaló
Consultant at ALG. Aeronautical engineer with relevant expertise in Advanced Analytics, ETL operations and Business Intelligence.