

AGENDA FOR TODAY

10:00 - 10:10	Welcome by Guillaume Aigoin (EASA)
10:10 – 11:00	Presentation of the Case study and Use Cases
	Current status and stakeholder participation to DATAPP Identified limitations and proposed solutions Live survey and Q & A (slido)
11:00 – 11:30	Addressing the challenges of Flight Data Monitoring for regional operations– by L. Sartorius from ATR Q & A

EASA DATAPP PROJECT WORKSHOP ADDRESSING THE CHALLENGES OF FLIGHT DATA MODELS FOR FDM AND OTHER SAFETY PROCESSES

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WE NEED YOUR INPUT



Each area will have a **topic-specific live survey and Q&A session**



You can access the survey and Q&A under the Slido tab



You can participate in the survey while we answer a few questions



Remember to **hit the Send button** once finished



slido





DIGITAL TRANSFORMATION

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





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 the current situation and existing constraints!



CASE STUDY #5 FLIGHT DATA MODELS FOR SAFETY

What are the **proposed solutions for addressing the identified limitations and challenges** on the usage of flight data models for safety?



STATUS & MATURITY

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.**



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

PROPOSED SOLUTIONS

TOP 3 MAIN AREAS

DIGITAL AND DATA-RELATED SOLUTIONS TO ADDRESS THE IDENTIFIED LIMITATIONS ON THE IMPLEMENTATION AND USAGE OF FLIGHT DATA MODELS FOR SAFETY **Production of the** Data Frame Layout **decoding file**

2

Standardising FDM programmes



Knowledge management for FDM programmes PRODUCTION OF THE DATA FRAME LAYOUT DECODING FILE

LIMITATIONS

Current production process is significantly manual and very labour-intensive, resulting in an expensive final product

Operators must pay high fees to enable usage of flight data, which does not provide a direct safety benefit



2

Software vendors encounter a barrier to developing their core business, having to divert resources for production of decoding files

SOLUTION

Generalisation of DFL electronic documentation through regulatory requirement



STANDARDISING FDM PROGRAMMES

LIMITATIONS

- High variability in parameter selection and performance
- 2

High variability in FDM event definitions and algorithms

PROPOSED SOLUTIONS

Promote manufacturer definition of Data Frame Layouts with extensive selection of flight parameters

Development of Flight Parameter Reference document, containing comprehensive **list of flight parameters and recommended performance**



Promotion of the "Developing Standardised FDM-based Indicators" document

Sharing of algorithms, definitions and logics developed within the Data4Safety programme



AMC on minimum list of risk areas to be monitored by operators through their FDM programmes

KNOWLEDGE MANAGEMENT FOR FDM PROGRAMMES

LIMITATIONS

Operator lack of knowledge management systems and processes



High variability in the level of knowledge of FDM analysts

Inefficient knowledge transfer between stakeholders

PROPOSED SOLUTIONS

AMC for **minimum set of documentation and information** to be maintained by the operator



Develop a mandatory course for FDM analysts (and associated certification) on the flight data and analysis methodologies

Guidance Material on analysis of causal factors for FDM events and **definition of corrective measures** within the SRM process



Invite and **integrate manufacturers and software vendors** to the **European Operators FDM forum** (EOFDM forum)

TIME TO ADJUST THE REGULATORY FRAMEWORK

WHAT'S NEXT?

Now, our research will focus on the identification of regulatory materials and standards modifications needed to fill the existing regulatory gaps.

Afterwards, the final objective will be to develop the roadmap for smoothing the route to achieving regulatory change and to develop a detailed solution. Identify regulatory materials and standards modifications



Develop the roadmap for smoothing **regulatory change**



Develop a detailed solution for the case study

QUESTIONS & ANSWERS



ABOUT US

About Us

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

Aviation





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



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









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?



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

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