EASA DATAPP PROJECT WEBINAR

OVERCOMING LIMITATIONS AND UNLEASHING THE POTENTIAL OF FLIGHT DATA

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EASA
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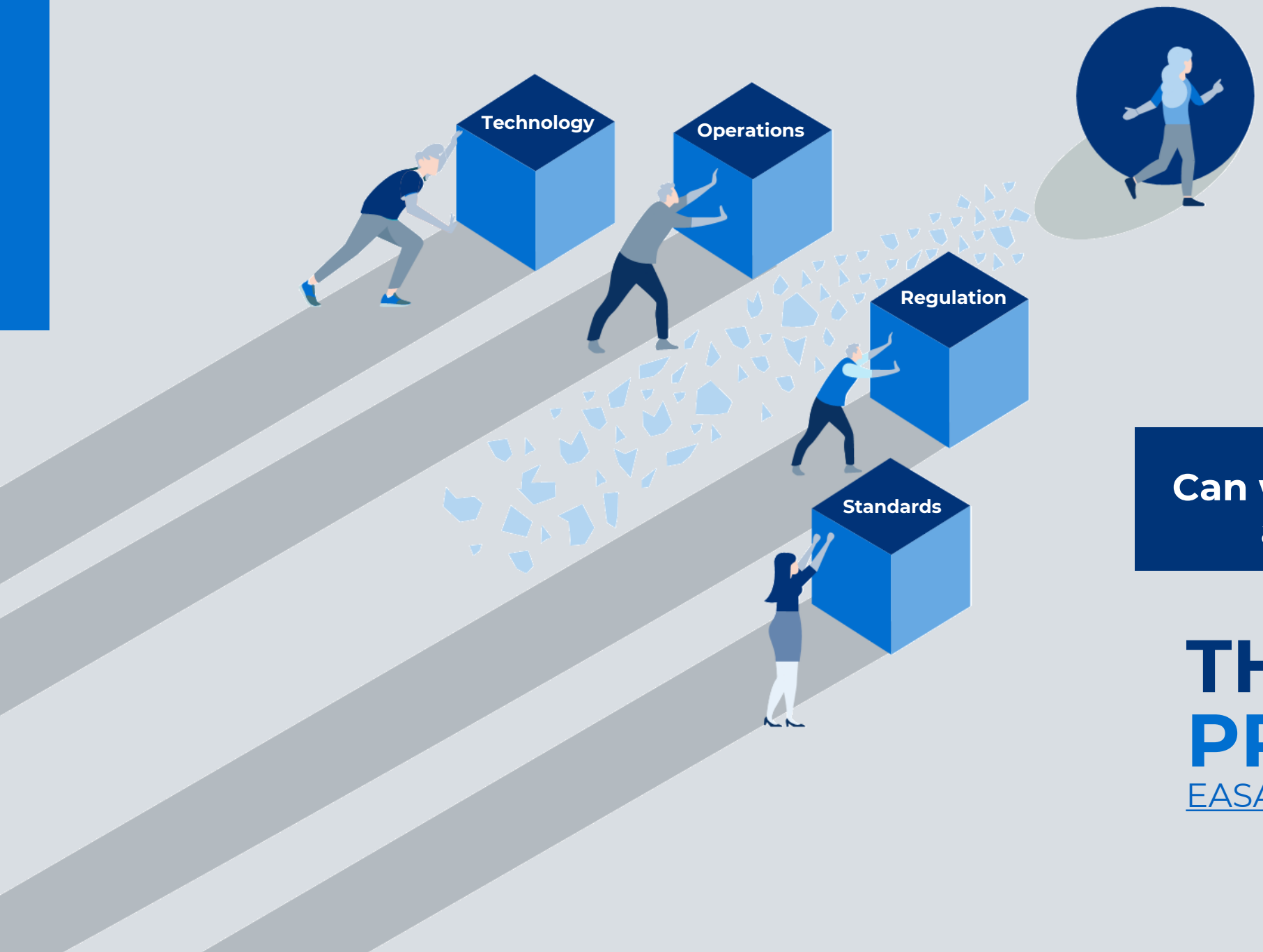

DIGITAL TRANSFORMATION

Can we keep the pace in all dimensions?

THE DATAPP PROJECT

EASA's Research Project

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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

TO DO

Literature review and digital solutions identification

Case studies definition & work plan

Current status and limitations identification

25 Interviews

Attendance to EASA working groups

Open questionnaire

Propose solutions and evaluate the impact

Propose changes to the regulation & standards

Roadmap and training material

Definition of the case study

Development of the case study

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!

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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?

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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**.

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)

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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OR ACCESS THE LINK

https://ec.europa.eu/eusurvey/runner/DATAPP_survey_FlightData_2023

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QUESTIONS
& ANSWERS

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ABOUT US

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About Us

ALG AT A GLANCE

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

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

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THANK YOU

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