ICARUS
The Information Catalyst
for Aviation Services
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ICARUS

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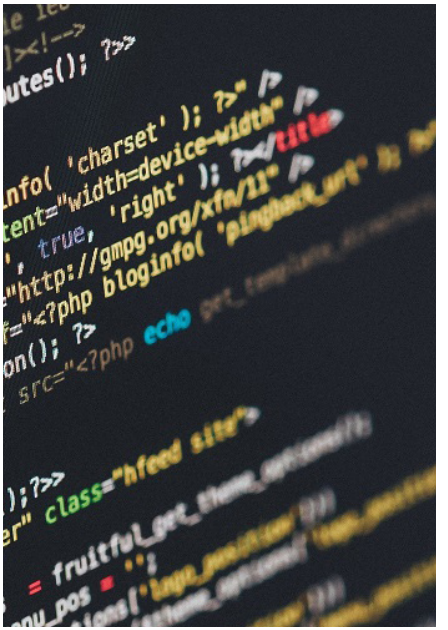
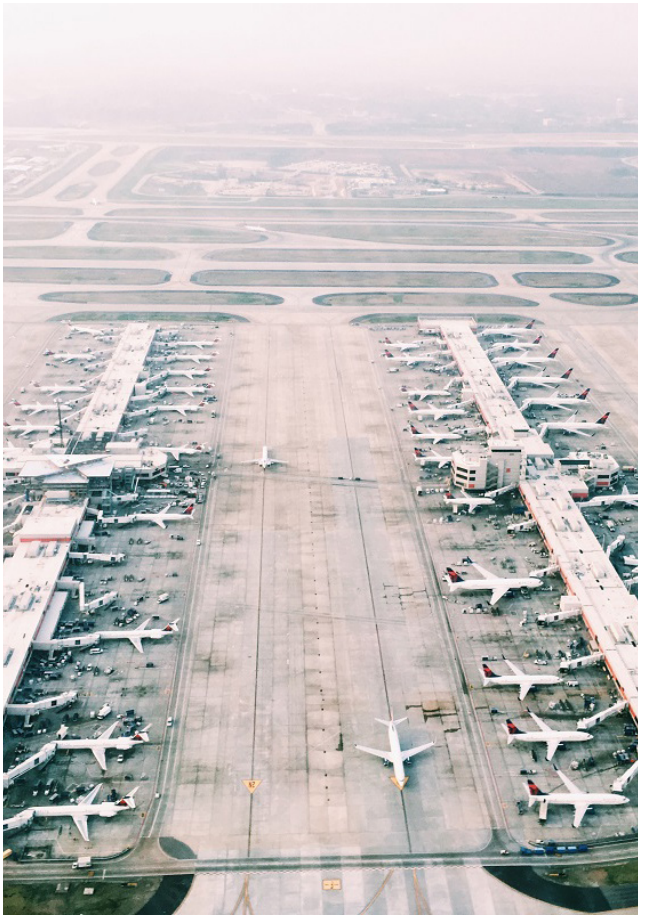
## ICARUS Introduction

# In a technology-driven era where the volume of data is soaring and the user-generated content is proliferating, creating value from data requires a new mindset in any industry.

ICARUS aims to deliver a novel framework and architecture that leverages data, primary or secondarily related to the aviation industry, to help companies and organisations (whose operations are directly or indirectly linked to aviation) to simultaneously enhance their data reach, as well as to share / trade their existing data sources and intelligence, in order to gain better insights into airplanes', airports' and passengers' quantified selves and contribute to improving their operations and increasing passengers' safety and satisfaction.





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# ICARUS | Features

## Intuitive Data Exploration

Find, understand and explore aviation data

## Effortless Data Linking

Curate, map and link your data assets with external data

## End-to-End Data Security

Encrypt and check-in your data through an on-premise environment

## Secure & Private Analytics Space

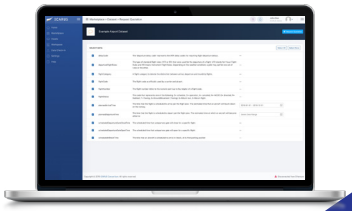
Design and execute your analytics and your “applications” in private sandbox environments, spawn on demand

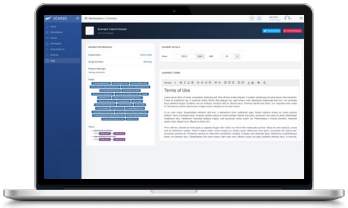
## Trusted Data Sharing

Create, Sign and Validate Smart Data Contracts in an immutable manner to acquire data

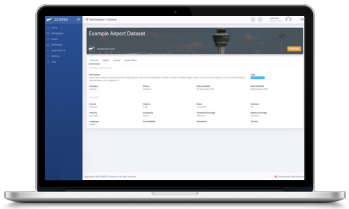
## Advanced Access Control

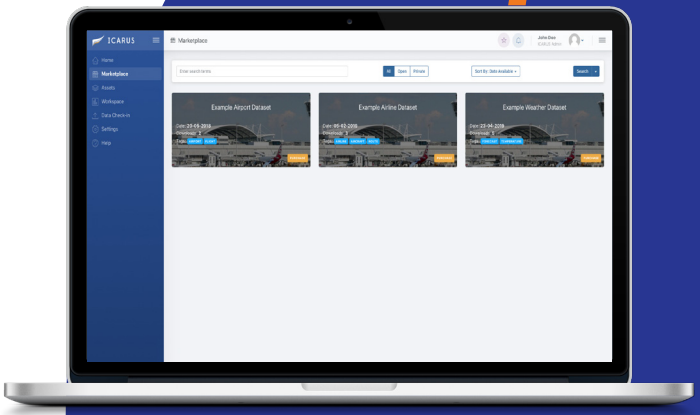
Regulate access to your data assets through declarative authorization policies

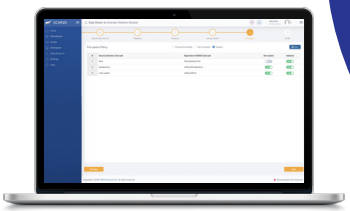


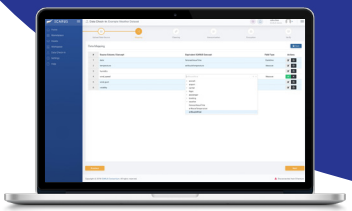


# An Aviation Data And Intelligence Marketplace.





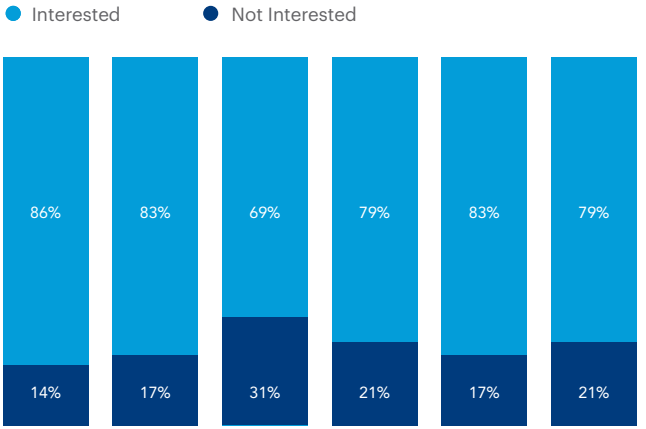


## A One-Stop-Shop

for discovery of native-aviation, extra-aviation and derivative-aviation data assets

## Market & Industry Research

# Interest in ICARUS functionalities




**86%** of the participants are interested in a platform that contains a secure experimentation playground for experimenting with datasets before purchasing them.

**83%** of the participants are interested in a platform that contains a service that recommends similar datasets based on the datasets currently explored.

**69%** of the participants are interested in a platform that contains a data notification service that permits any stakeholder to post requests for specific datasets.

**79%** of the participants are interested in a platform that guarantees specific agreements without intermediate third parties.

**83%** of the participants are interested in a platform that contains an intuitive dashboard with interactive visualization capabilities.

**79%** of the participants are interested in a platform that contains a semi-automated negotiation service between data/service owners and prospective customers.

## Data Collection & Management

Aviation-related data that have high velocity and high volume, impose increased difficulty to SMEs, particularly with regard to their curation, linking, analysis, trading/sharing and safeguarding.

Organizations that have already started their data analytics "journey" still find the data exploration, linking and sharing processes very challenging.

Organizations have started using "data marketplaces" and "APIs" to collect data in an easier manner while organizations that use "custom in-house mechanisms" find it harder.

Aircraft, airport and aviation business data are provided through bilateral agreements by organizations related to the aviation sector, while additional data (such as city/region and health epidemics data) are much rarer to locate.

## Data Analytics & Sharing

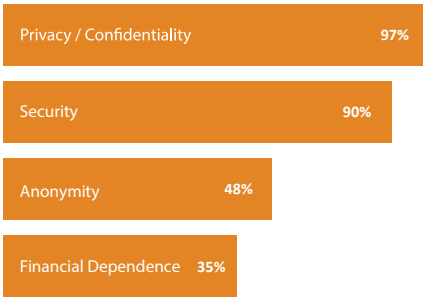
**50%**

do not have architectures/platforms for big data analysis because of budget/cost constraints and lack of experience.

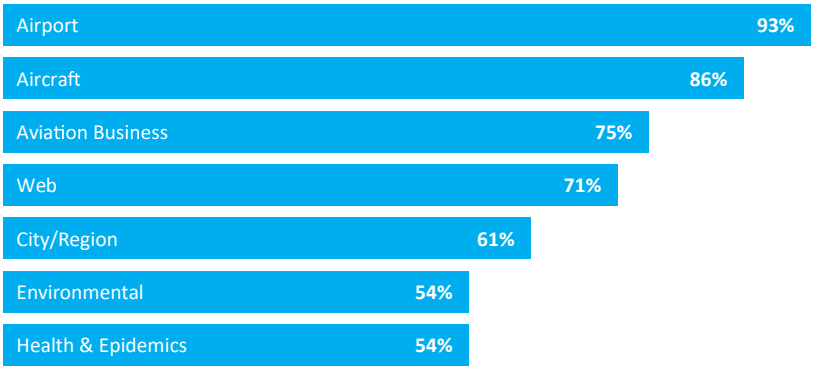
**97%**

are concerned about "privacy /confidentiality" (97%) and "security" (90%) issues when it comes to data sharing through an intermediary.

What are your concerns when it comes to data sharing through an intermediary?



What are the domains of data that you would be interested for the ICARUS Platform to contain?




ICARUS Survey

# Key findings

Almost all participants expressed their keen interest in the ICARUS platform. Particularly, the participants acknowledged the importance of the functionalities of the ICARUS platform to address their everyday “data” challenges, and were eager to join the ICARUS users’ group for early access to the beta release of the ICARUS platform.

# ICARUS

# The Information Catalyst for Aviation Services

**Project Details**

Title: Aviation-driven Data Value Chain for Diversified Global and Local Operations
Total Cost: 3,951,125 €
EC contribution: 2,999,600 €
Project start: 1st January 2018
Duration: 36 months

**Contact**

Project Coordinator: Dr. Dimitris Alexandrou (UBITECH)
Technical Coordinator: Dr. Fenareti Lampathaki (Suite5)
Scientific Coordinator: Prof. George Pallis (UCY)

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Co-funded by the European Union

Horizon 2020 - Grant #780792. ICT-14-2017: Big Data PPP: cross-sectorial and cross-lingual data integration and experimentation

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