

1 LATEST ACHIEVEMENTS



2 OPINION



3 EVENTS



12:15	NEW YORK	CANCELLED
12:30	TOKYO	CANCELLED
12:50	PARIS	CANCELLED
13:35	FRANKFURT	CANCELLED
14:05	LONDON	CANCELLED

ABOUT ICARUS

Full Title:

Aviation-driven Data Value Chain for Diversified Global and Local Operations

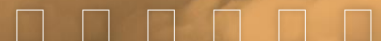


Co-funded by the European Commission, Horizon 2020 - Grant #780792, ICT-14-2017: Big Data PPP: cross-sectorial and cross-lingual data integration and experimentation



THE INFORMATION CATALYST FOR AVIATION SERVICES

WWW.ICARUS2020.AERO



LATEST ACHIEVEMENTS

The ICARUS beta platform is now officially launched. We have come across many challenges and learnt many lessons from the ICARUS journey. To this direction, we are sharing our experiences! Here is a quick sneak peak of our perspectives in 3 challenges related to data safeguarding in the Aviation industry that the ICARUS platform is addressing:

ICARUS Data Safeguarding: Encryption Challenges

Data encryption is a cryptography process that has been developed and utilised in multiple areas in order to provide enhanced security in the transmission of data between the senders and the legitimate receivers. The scope of data encryption in ICARUS is to address the critical issues of leakage or eavesdropping of sensitive data during the communication with the ICARUS Platform (data in motion) or during the storage of data (data at rest). Hence, data encryption aims to eliminate data disclosure or illegal data interception by malicious users or tools and the preservation of the security, privacy and integrity of data that is stored in any digital form. However, the design and integration of encryption for a big data platform comes with some key challenges.... [\[READ MORE\]](#)



ICARUS Data Safeguarding: Access Policies Challenges









Access control is the method that defines and enforces the selective restriction of access to critical or valuable data assets, encompassing authorization mechanisms (in a narrower view) and authentication mechanisms (from a broader view). At a higher level, an access control mechanism is composed by two core parts, namely the access policy lifecycle management and the access policy enforcement. An access policy is the rule based on which access to any type of resource of the ICARUS platform such as data, services, tools, any kind of system resources, as well as all other relevant objects is defined. The access policy enforcement is realised by employing the access policies on an authorisation engine that implements the access control mechanism and by enforcing the access policies to prevent unauthorised access to these resources... [\[READ MORE\]](#)

ICARUS Data Safeguarding: GDPR and Data Anonymization Challenges

In the era of big data, data privacy is one of the difficult challenges whose complexity and importance is increasing with the new data regulations such as the European Union's General Data Protection Regulation (GDPR). To effectively address this rising challenge, a variety of techniques are employed towards effective data anonymization. Data anonymization can be viewed as a technique to remove an individual's identifying information from a dataset so that the remaining data cannot be linked to that individual.... [\[READ MORE\]](#)



Key Differentiating Points

-  **A One-Stop Shop**
Discover and explore native-aviation, extra-aviation and derivative-aviation data assets
-  **Trusted Data Sharing**
Create, sign and validate smart data contracts in an immutable manner to acquire data assets
-  **End-to-End Data Security**
Encrypt and check-in your data through an on-premise environment
-  **Advanced Access Control**
Regulate access to your data assets through declarative authorization policies
-  **Effortless Data Linking**
Curate, map and link your data assets with external data
-  **Secure & Private Analytics Spaces**
Design and execute your analytics and your "applications" in private sandbox environments, spawn on demand

OPINIONS

POLLUTION DATA ANALYSIS

A Trained Model Predicted Fuel Consumption and Pollution Emissions!

The initial release of the ICARUS platform has been used to execute the first scenario defined in the PACE demonstrator: „Pollution Data Analysis“, where a trained model is used to predict fuel consumption and pollution emissions for customer defined city pairs like Berlin/Athens.

The focus of the early release of the PACE demonstrator was on the evaluation and validation of basic platform functionalities like

- Data upload and data related operations like mapping, cleaning and encryption
- Analytics definition and execution
- Result visualization and evaluation

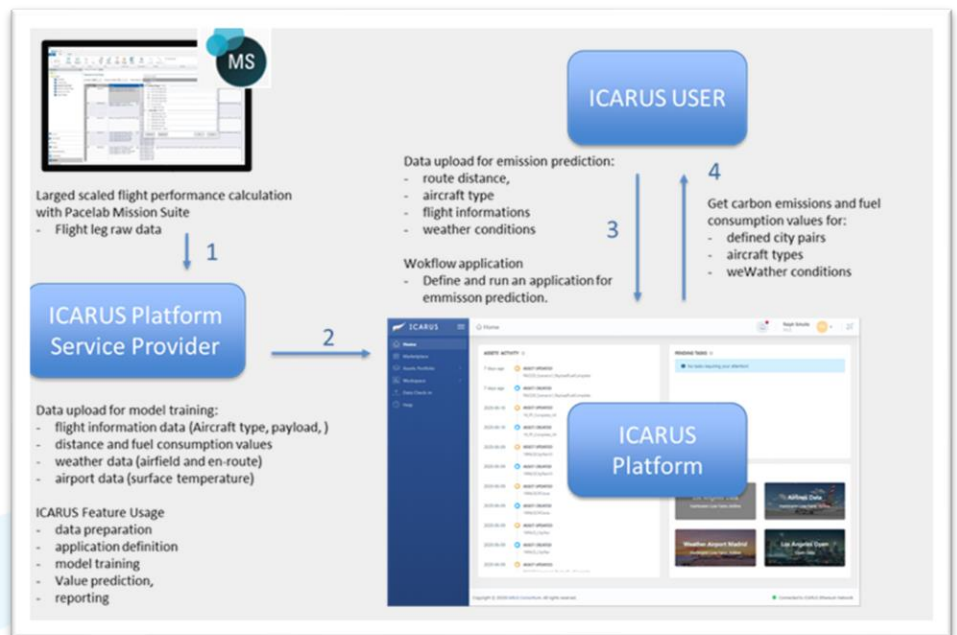
Scenario Execution Flow

As a preparation, a portion of „knowledge“ has been extracted from the Pacelab Mission Suite (PLMS), the only commercial available analysis tool which integrates a comprehensive aircraft model covering payload and performance definition and allows investigation of route network and economic investigations in a single environment, delivering reliable projections of key metrics such as payload capacity, maximum range and direct operating costs.

The knowledge is represented by the calculation of fuel consumed and pollution emitted for a set of almost 65.000 city pairs with varying conditions in distance, weather and payload factor.

Then... work starts on the ICARUS Platform as depicted in the figure above in order to check-in the data, design the appropriate analytics workflow (training and applying a linear regression model) and visualizing the results.

Prepared by PACE-TXT. Read the full article on <https://www.icarus2020.aero/icarus-enabled-scenarios-demonstrator-2-pollution-data-analysis-for-fuel-consumption-optimisation-and-awareness/>



EVENTS

PAST EVENTS



PACEDays Virtual Event
6-7 October 2020
by PACE



ICARUS @UCY CS670 Course
11 March 2021



ICARUS @BDVA Activity Group
18 – 19 March 20
by UBITECH



ICARUS @International Airport Summit (Virtual)
19-23 October by AIA



AIA @ICARUS featured in the International Airport Review @
7 April 2021

UPCOMING EVENTS

VISIT WWW.ICARUS2020.AERO FOR MORE INFORMATION



WWW.ICARUS2020.AERO



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