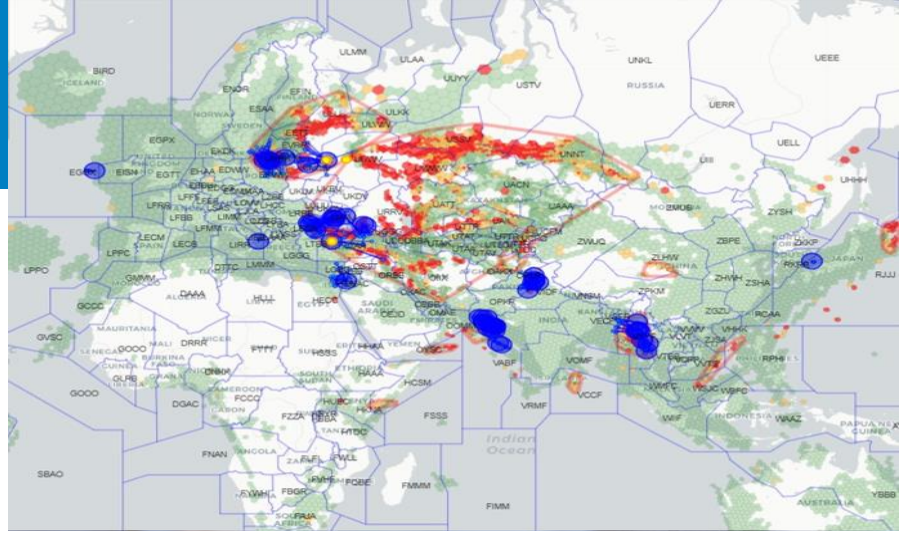


BIGDATA

*New intelligence solutions
exploiting big data
technologies and data
science*



Contractor

ALG Global Infrastructure Advisors S.L.U.

Consortium Members

Contract period

09/12/2024 - 30/09/2026

Budget

1.774.100€

Scan the QR code or click [here](#)
to visit the webpage of this project



Main objectives:

Leveraging on the D4S platform environment, the objective of the BIGDATA project is to research and develop new aviation intelligence solutions, methods and tools based on innovative big data technologies and data science solutions made available to a larger community of aviation actors and stakeholders, in view of a generalised use in aviation safety risk management.

In detail:

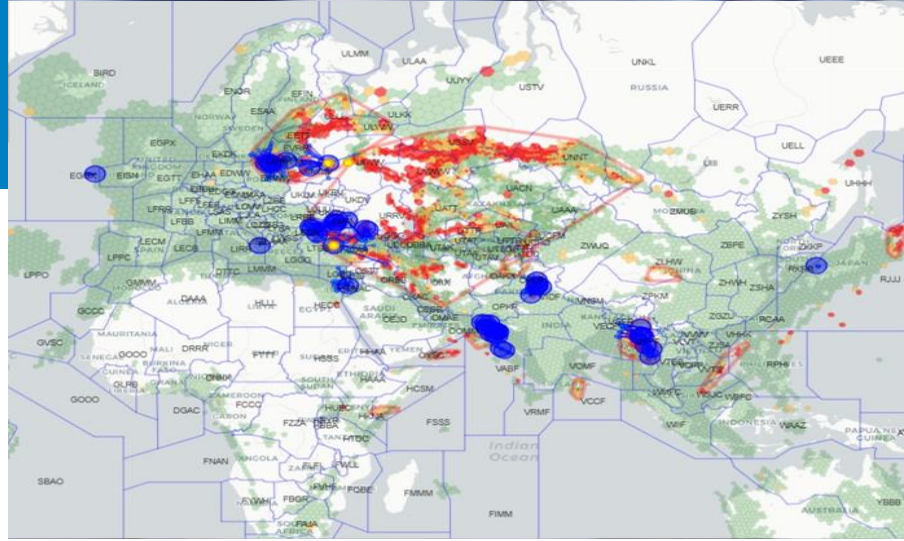
- Research and develop innovative Big Data and Data Science solutions to produce aviation intelligence outputs and deliverables and ensure the required level of quality and enhance the aviation data sources considered by the EASA and the Data4safety Members on the D4S Platform infrastructure;
- Research and develop innovative Big Data and Data Science solutions to establish new capabilities in terms of safety risk monitoring, risk detection and safety performance measurement on the D4S Platform infrastructure;
- Leverage on both the Data4Safety Platform infrastructure capabilities and the multiple aviation data sources available in the Data4Safety data lake to research and develop innovative Big Data and Data Science solutions to:
 - enable the assessment of high-profile safety risks currently at stake in the European Aviation Sector and
 - produce actionable aviation intelligence to support their mitigation by appropriate safety actions;
- in support of the development of the Data4safety Program and its further deployment within the European Aviation Sector, perform feasibility assessments and a coordination program to prepare for and assist on the expansion of D4S to new aviation domains assist on the expansion of Data4Safety to new aviation domains.

Impacts & benefits

The BIGDATA project will enable the enhancement and augmentation of the intelligence solutions and capabilities at the disposal of EASA, the EU Member States and the European aviation sector. This supports the fulfilment of their respective missions and duties in the field of Aviation safety risk management and integrated risk management.

Mid-term, the BIGDATA project will (1) enable the expansion and on-boarding on the Data4Safety platform of other aviation domains such as Training, Maintenance, Rotorcraft, General Aviation and Drones and (2) allow for its use by a broader community of aviation stakeholders and users.





BIGDATA

New intelligence solutions exploiting big data technologies and data science

Further reading

The Data4Safety Programme (D4S)

Data4Safety (D4S) is a partnership initiative led by EASA in partnership with the European Aviation Sector.

Big Data Platform and Collaborative Analysis

D4S establishes a sustainable Big Data platform infrastructure and data science capabilities at European level. It organises the collection and collaborative analysis of key aviation data sources at the disposal of EASA, the EASA Member States and the European Aviation Industry Organisations.

Integration with ECCAIRS2 and Industry Data Sources

D4S includes a structural link with the ECCAIRS2 solution that enables analytics and insights from the European Central Repository safety data (ECR) shared by the EASA Members States as per Regulation (EU) 376/2014. It includes also structural links with the Industry Organisations to collect and analyse the key aviation data sources at their disposal (e.g. flight data, traffic data).

Enhancing European Aviation Safety and Sustainability

Based on its innovative approach, D4S equips the European Aviation Sector with unprecedented aviation intelligence capabilities adapted to support and enable key processes established at European level. It ensures the highest level of aviation safety and sustainability (e.g. the EASA Safety Risk Management Process, the Safety Management Systems of the Industry Organisations).

The D4S platform infrastructure as an enabler of European Aviation Research and Innovation

Common European Big Data Platform

The Data4Safety initiative establishes a common European Big Data platform infrastructure. It offers an adequate aviation data and technology ecosystem to enable research and innovation activities in the field of aviation safety and sustainability in a timely, cost-efficient, and info-secure manner.

Facilitating Research and Innovation

Hosting such activities on the D4S Platform offers major benefits to facilitate, stimulate, and accelerate research and innovation activities in the field of aviation safety and sustainability. It provides an industrial and straightforward technology transfer path to ensure that the main outcomes and results of these research and innovation activities can be operationalized to the best extent as part of the D4S platform operations, as depicted in the figure below.

