

SafeOPS

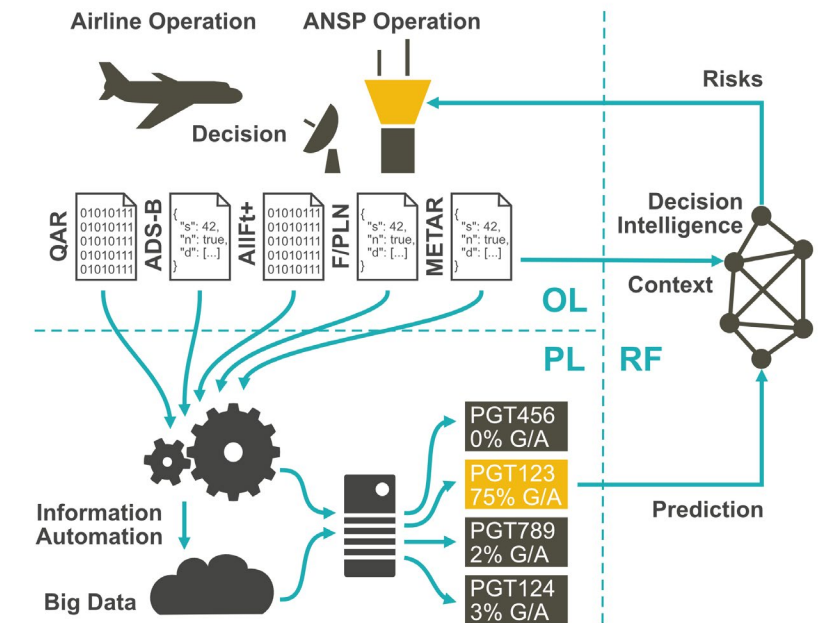
FROM PREDICTION TO DECISION SUPPORT
 Strengthening Safe and Scalable ATM Services through Automated Risk Analytics based on Operational Data from Aviation Stakeholders.

PROJECT MOTIVATION

- ATM is pushed towards digitalisation, aiming at an increase in capacity, cost-efficiency, safety and resilience.
- Go-arounds cause high-workload that challenge the capacity and safety of the airport ATM.
- SafeOPS investigates data driven solutions that predict go-arounds, to give ATCOs more time to prepare, alert other airspace users, coordinate necessary actions and make decisions.

R&D OBJECTIVES

- Determine and outline the benefits of data-driven decision support tools on the safety and resilience of ATM operation.
- Investigate the risks for ATM operations associated with the provision of probabilistic information to ATCOs, by data-driven tools.



SafeOPS ARCHITECTURE



OPERATIONAL LAYER

SafeOPS organizes workshops where ATCOs, pilots, flight data analysts and researchers come together and they:

- Define Scenarios, Use Cases and Requirements for a data driven decision support tool.
- Design and perform validation exercises to test the impact of the decision support tool on safety and resilience of the ATM operations.



PREDICTIVE LAYER

The Predictive layer addresses all big data and AI related tasks. It leverages on the DataBeacon platform for the creation of the necessary data processing pipelines as well as for the training of the developed AI/ML models. One key component will be the evaluation and improvement of the human interpretability of the solutions developed.



RISK FRAMEWORK

SafeOPS Risk Framework aims to determine:

- How the Predictive Tool impacts operations and how ATCOs interact with it.
- The Human Factors involved in the provision of probabilistic information to ATCOs.
- The changes in the workflow/workload caused by the tool and the best way to convey information to reduce human errors.



SafeOPS From Prediction to Decision Support

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<https://safeops.eu>

11th SESAR Innovation Days

