



# Flight Safety Analyzer

Evolving flight safety data into actionable insights.

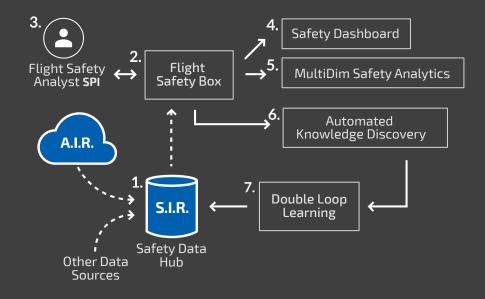
In the last two decades, the level of safety in aviation has dramatically improved, making commercial flying the safest way of transportation with less than 1 major accident in over 4 million flights. Unfortunately, this great development also leaves the flight safety department and the accident investigators with fewer learning opportunities to create barriers and counter measures and to prevent the rare cases in which something still does go wrong. Common sense and public perception, in the context of the continued strong increase in air travel, create a demand for new tools for monitoring and increasing flight safety.

avialytics' Flight Safety Analyzer is the toolbox to tackle this challenge. It includes tools to make information relating to safety visible, report on revised and aggregated data, and make use of Big Data analytics for learning and improving.

### Benefits:

- Single data repository for all safety relevant data
- · Automated data capture from a variety of sources
- · Analyze single flight events in historic context
- Overview, comparison and drill down features
- Enhance standardized measures with company specific indicators
- Customizable and extendable

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### How it Works

### 1. Safety Data Hub

avialytics' Safety Information Repository (SIR) serves as the central data hub for all safety relevant information. Data is retrieved through a constantly growing number of specialized agents.

It can be sourced from FDM/FOQA, operational flight crew planning and training systems, messages (e.g. ACARS, LDM), webservices (e.g. weather), company proprietary systems as well as other available sources.

Optionally, the data can be discretized and (pseudo) anonymized based on the operator's discretion or legal requirements.

# Data Retrieval & Capture Agents discretization Safety Information Repository (S.I.R.) Flight Safety Data Mart (FS DM) MOLAP Store (Cube)

# 2. Access Data: Flight SafetyBox

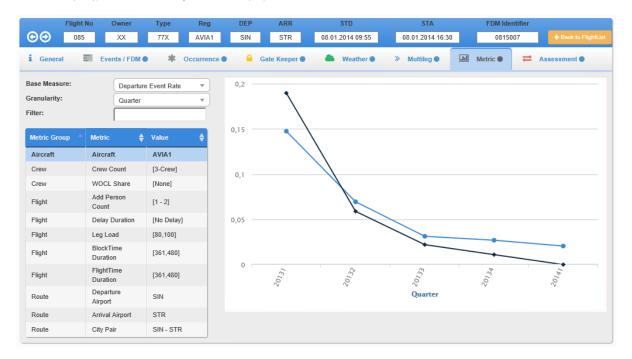
The Flight SafetyBox serves as the single point of access to every individual flight event in the SIR. It can be configured to indicate specific events and conditions

(e.g. Hard Landing, Occurrence Report). Equipped with a variety of filter and sort options, it enables easy access to the data for the safety analyst.



### 3. Definition of individual Safety Performance Indicators

In addition to a number of predefined Safety Performance Indicators (SPI), individual Safety Indicators (iSI) can be defined by the analyst and tested online against historic data in the SIR



### 4. Safety Dashboard

The safety dashboard can be configured to display SPIs and iSIs in their historic context with drill up and drill down options visualized through a variety of charts and graphs. Color-coded indicators help to recognize areas where further improvements could be necessary at a glance.

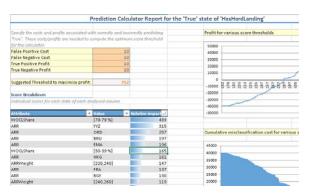


### 5. Multidimensional Safety Analytics

The Data in the SIR is aggregated in a multidimensional OLAP cube that can be accessed through OLAP-enabled applications like Excel or Power BI. This enables the safety analyst to dig even deeper into the data and create individual reports and risk evaluations.

### 6. Automated Knowledge Discovery

Inbuilt data mining algorithms and predictive methods make it possible to allow to correlate information in order to gain additional knowledge, serving as a starting point for in-depth and root-cause safety analytics.



### Double Loop Learning

Findings and assumptions that have been implemented can be followed up and validated by feeding the results back into the data hub. (e.g. by indicating which crews went through a specific evidence-based training and if and how their performance was affected.)





Evolving aviation data into actionable insights. avialytics is focused exclusively on the information value chain relevant for airlines, providing solutions for all steps along the way.

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- Airline Safety Analytics
- Airline Performance and Operational Management
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