IOblend

Unlocking the full potential of aviation data

Data Analytics are at the heart of the aviation industry

Real Time Analytics

Flight monitoring, real-time product bundling, live forecasting, sensor management, RMS, fraud detection, augmented reality, etc

On Demand Analytics

Performance dashboards, statutory reporting, data investigations and reconciliation, etc

However, a lot of *time, effort and expense* go into extracting the value from your data

❖ Airline data is very rich and comes from a multitude of sources, but is often siloed, difficult to access and tends to be manually collated and curated by SMEs to a larger extent

❖ Airlines work with several separate systems (Lido/AIMS/ACARS/Navitaire/AMOS/TM1/Sabre/CRM/FMS/etc), at times ring-fenced, that do not "talk" to each other and do not provide standardised access to the valuable data for analysis – *no single source of the truth!*

❖ You have created a myriad of processes and workarounds to access and work with data, often in the form of various spreadsheets or private SQL tables with non-standard formats. A good number of IT engineers and developers work overtime creating and maintaining various dataflows to ensure the data is available to the business, but their capabilities are limited by resources and cost

❖ As such, your analysts spend significant time and effort just locating, preparing and validating relevant data before they are able to focus on insights for any side projects or any analysis involving new sources of data for them

❖ Data initiatives that are harder for analysts to implement themselves, like attempting a productionised data integration (creating a single source lake/warehouse) or developing a new automated app/dashboard/report, requires extensive IT involvement, time and cost. Often, such initiatives need to go through layers of scoping, procurement, budget approvals, resource sign-offs, and lengthy development times

❖ And if you have a need for live streaming data, these projects are notoriously difficult (if not impossible) to implement and manage with legacy tools

❖ Rather than working with the powerful data insights, you are *hindered* by the available legacy processes and technologies that just *waste your time and resources and frustrate your SMEs.* But ultimately, you are missing valuable opportunities to improve revenue, reduce costs or enhance operational efficiency

Luckily, the technology is evolving fast - *DataOps*

DataOps means shifting significant custom, manual effort of data engineering and management to a smart automated middle layer to create a robust re-usable DataOps framework

All of the data issues you are facing today can be solved by this new smart technology at a *fraction of the legacy cost* and free up your people to focus on what matters – creating value with the treasure trove of data you have
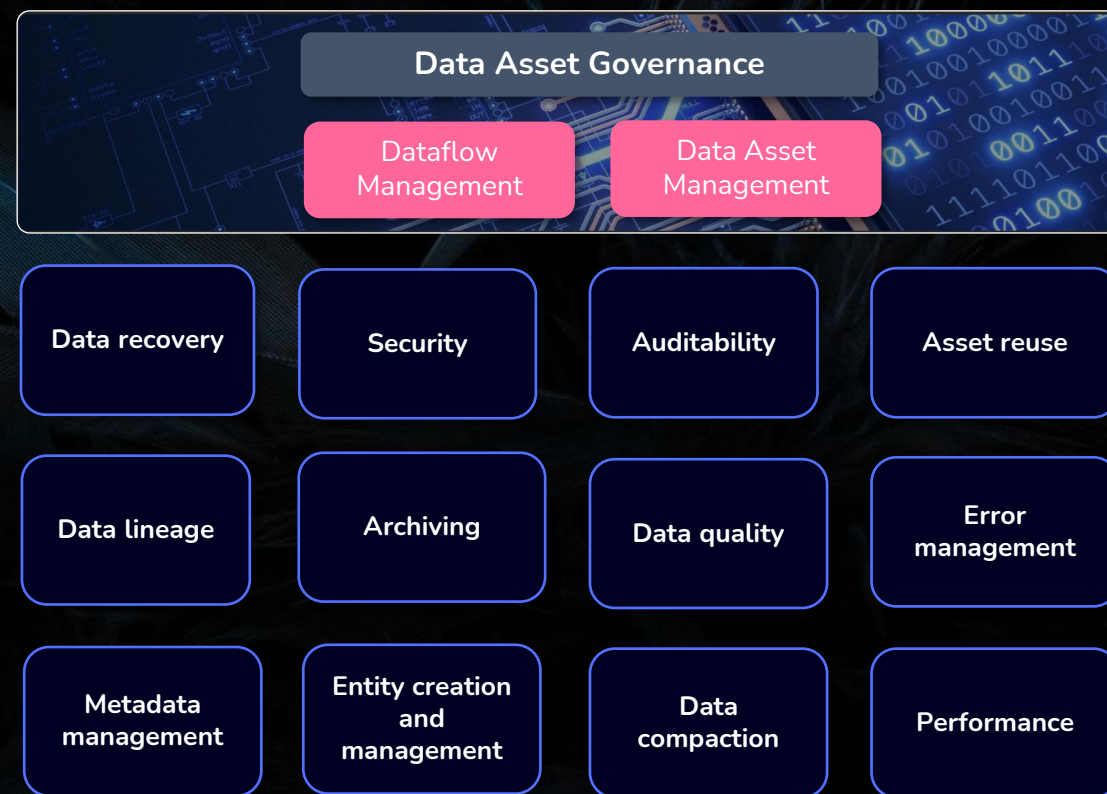
❖ Seamless migration of huge volumes of data to, from and across multiple clouds or on-prem systems

❖ Automatically building and maintaining Data lakes and warehouses – single source of the truth!

❖ Automated management of batched and continuous streaming data and dataflows

❖ Fast, code-free dataflow engineering for data analytics with Apache Spark™

❖ Vast improvement to manual and legacy processes involving data analytics

❖ Complementary to your existing systems or standalone – full flexibility of deployment

Working with your data should *never* be hard and costly!

Production grade data management and governance

IOblend fully automates and standardises *all* complex data management tasks required for *DataOps*, massively saving you time and effort on dataflow development and data estate upkeep

- Automatically build and maintain your data lakes and warehouses on any environment

- Automatically creates a searchable metadata catalogue for all schemas and dataflows encouraging reuse

- Automatic data lineage at record level, auditing metadata and determining data changes between sources

- Automatic logging and monitoring of errors and associated directed alerts

- Automatic data compaction for enhanced performance and cost reduction

- Automatic data archiving

- Automatic late arriving data management and unlimited event windows – you decide what rules you need to use and the system takes care of the rest

- Run **IOblend** entirely inside your data security protocols for a complete peace of mind

Data Asset Governance

Dataflow Management	Data Asset Management

Data recovery	Security	Auditability	Asset reuse
Data lineage	Archiving	Data quality	Error management
Metadata management	Entity creation and management	Data compaction	Performance

Cover *all your data* applications

Created in the UK and using the cutting edge latest technology, the goal of **IOblend** is to give businesses the best tools to unlock the power of their data simply, securely and robustly while not spending a fortune doing it. Any data project or initiative you undertake, you *owe it to yourselves* to discover what the art of the possible is when using our software

Data is at the heart of any airline, airport, ground ops, engineering or OEMs and getting more insight from it is the key to their success. All areas where data is employed can be covered by **IOblend**, to name a few:
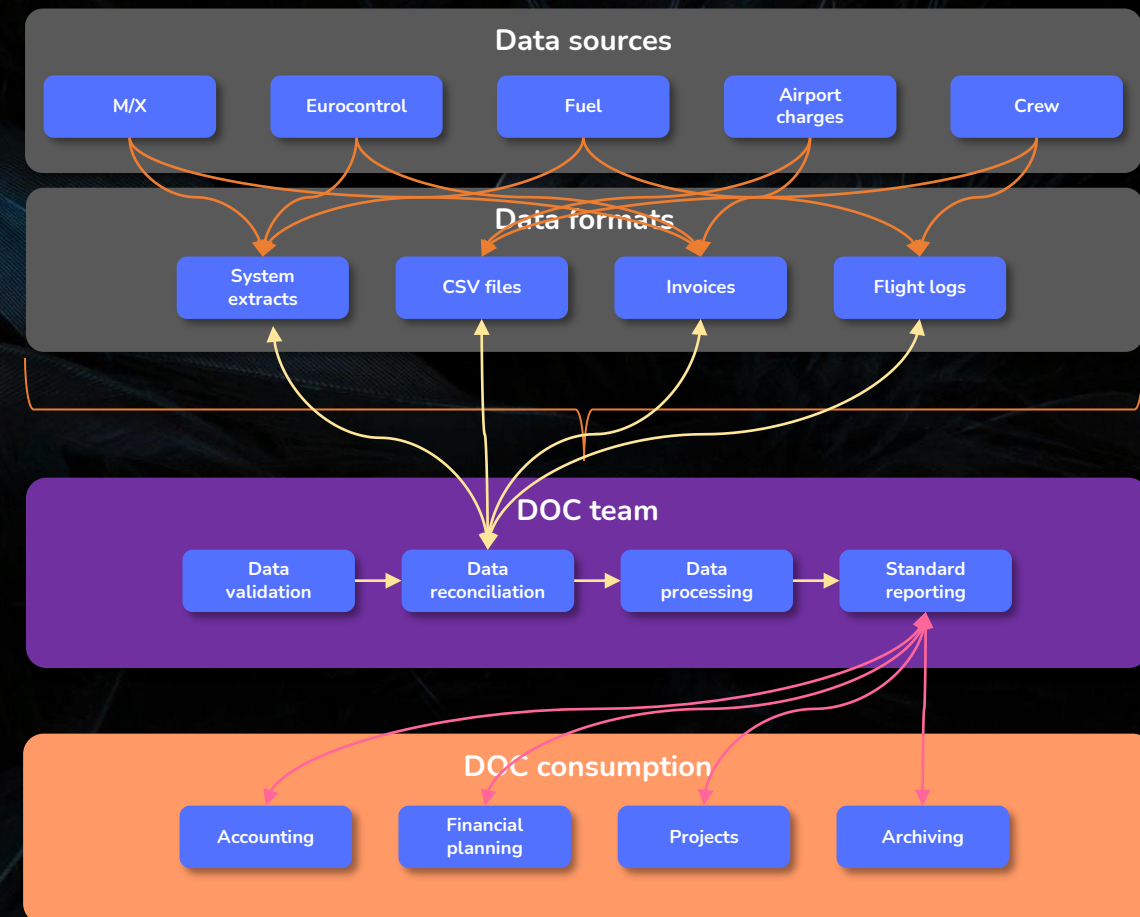
❖ Management of Direct Operating Costs

❖ Fuel management, planning and ETS

❖ Flight planning, flight safety monitoring and schedule optimisation

❖ Revenue management systems, network planning, data analytics and CRM

❖ Aircraft maintenance insights and component forecasting above and beyond legacy tools

❖ Resource planning and management

❖ Central data repository creation and management - single source of the truth

❖ Data migration, integration and legacy system upgrade projects

Example applications - DOC

Management of the Direct Operation Costs (DOCs) is a crucial process but resource consuming, prone to errors and requires skilled finance people (often with specialist experience) due to the complexity and lack of automation and standardisation of the DOC process
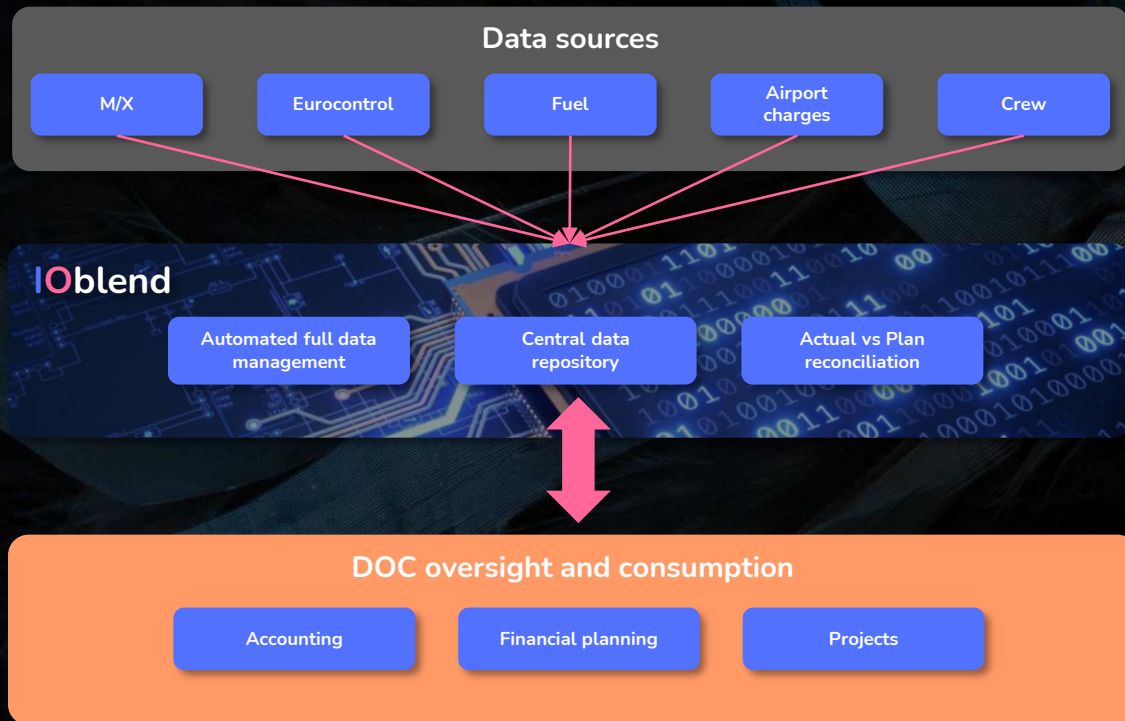
Process as is *(some airline specific variations may apply):*

❖ DOCs comprise of several operating cost line items, including but no limited to:
- ❖ Fuel, ground handling, crew, maintenance, enroute charges, overflight charges, airport charges, etc.

❖ This data comes in various forms from multiple sources and needs to be validated and collated
- ❖ Aircraft systems, invoices, airports, HR, MX logs, Eurocontrol, NATS, etc

❖ DOC team members manually process this data as it arrives in periodic batches and varying formats

❖ Results are compared against invoices and Plan to ensure the costs are within the expected margins

❖ The standardised output is passed on to the central finance and accounting teams for cross-checking, input into a financial system and reporting templates, as well as ad hoc analysis or data extracts are applied on an "as required" basis for various projects

❖ This process is ***very laborious, costly and time-consuming***, involving multiple manual touch-points, which drive often inconsistencies and errors, while also limiting the airline's flexibility to do data deep-dives and finding cost saving opportunities

"*Quick wins*" applications – DOC process

IOblend can be easily applied to managing airline's DOCs, by shifting the burden of manually collating various data inputs, processing them and comparing against Plan to an automated system and greatly reduce resource usage and errors

Data sources

| M/X | Eurocontrol | Fuel | Airport charges | Crew |

IOblend

| Automated full data management | Central data repository | Actual vs Plan reconciliation |

DOC oversight and consumption

| Accounting | Financial planning | Projects |

Process using IOblend:

❖ IOblend extracts digital data automatically regardless of the source

❖ The SMEs apply desired business logic with SQL when setting up the process initially (or amending later for new insights)

❖ The software automatically processes all relevant data, validates and reconciles it against Plan and stores it in the central repository for immediate consumption by the relevant systems and departments

❖ SMEs only get involved by exception, if the data errors are caused by improper invoicing or data source issues, now having more time to do thorough investigations, deep dives and analysis

❖ This process is fully automated, robust and cost-effective, while allowing the business the full freedom to work with the DOC data on demand

Example applications – Fuel management

Fuel management and optimisation is paramount for airlines as *fuel is one of its biggest expenses* - 15-30% of total depending on equipment and network. In addition, airlines have a legal obligation to monitor and report its emissions very accurately based on the fuel consumption (EU ETS)

Process as is:

❖ Most airlines will have some form of fuel management system in place (integrated solutions or in-house tools) and run fuel saving initiatives
  ❖ Single engine taxi, min uplift, tankering, optimised flight paths, pilot training, etc

❖ On top of that, airlines will buy a dedicated software to collate and report emissions for the EU ETS

❖ Fuel data comes from a number of sources that needs to be recorded, checked and reconciled:
  ❖ Aircraft systems, flight planning, DCS, flight logs and fueller

❖ A fuel manager (software and/or person) would process this data as it arrives in periodic batches and varying formats and compile into standardised reports (normally a spreadsheet), which are then used for reporting, insights and finance. The data is not used in real time monitoring and forecasting because of this

❖ A second check is performed by the fuel procurement/finance team, when the fuel bill is compared against what was uplifted and used, again automatically or manually with a follow on action as required

❖ Data availability and quality issues need to be investigated manually and are always time-consuming

❖ This process is *costly and inefficient when done manually*, as you either rely on a third-party dedicated, expensive software or an in-house team of specialists working with disparate tools to obtain and manage fuel data. On top of that, if you use a dedicated third-part software, you are wholly dependent on the provider for the duration of the contract and will have difficulty switching away from them – having to implement a new system from scratch

"*Quick wins*" applications – Fuel management

IOblend can be easily applied to the fuel management process by shifting the burden of manually collating various data inputs, processing them and comparing against Plan and invoices to an automated system managed by your SMEs – you retain the full flexibility to work with your fuel data as you see fit

Process using IOblend:

❖   IOblend extracts digital data automatically regardless of the source

❖   The SMEs apply desired business logic with SQL when setting up the process initially (or amending later for new insights)

❖   The software automatically processes all relevant data, validates and reconciles it against Plan or invoices and stores it in the central repository for immediate consumption by the fuel manager, flight planners and fuel analytics tools

❖   SMEs only get involved by exception, if the data errors are caused by improper invoicing or data source issues, now having more time to do thorough investigations, deep dives and analysis

❖   This process is fully automated, robust and cost-effective, while allowing the business the full freedom to work with the fuel data on demand or in real time, including your ETS calculators

❖   Data logic and schemas are easily transferrable to any external analytics tools if required, so you are in full control of your process and data

❖   By employing proactive fuel management, the fuel saving can be 2-3% or more, depending on your starting point

❖   And the best part is that since **IO**blend is a DataOps platform, *not* a one-function tool, you can apply the same software to all other data areas in your organisation at no additional cost! One software for *all* your data engineering and data management needs and covers all your systems and users

IOblend offers *significant* benefits

❖ Over *70%* saving in Data Engineering and Data Management costs vs legacy ETL

❖ *10X* reduction in development time of your data projects vs traditional methods – *huge* gains in speed of data project implementation, data volume processing and cost reduction

❖ Significant reduction in ongoing data management effort due to the *high-level of automation*

❖ Flows huge data volumes at incredibly low latency with the power of **IO**blend's unique engine

❖ Promotes *strong team collaboration* among your Data Engineers, Data Scientists, and the Business

❖ Centralises and standardises all your data management and technical governance activities in a single simple-to-use visual platform – one software to power *all your organisational needs*, no hidden costs!

IOblend is designed to be a simple, all-in-one solution for *all* enterprise Data Analytics

Unlock *incredible* value for your organisation with **IO**blend

IOblend

Make your data estate state-of-the-art

Schedule a demo today
@ www.ioblend.com

Contact us : info@ioblend.com