NetLine/Ops ++ aiOCC

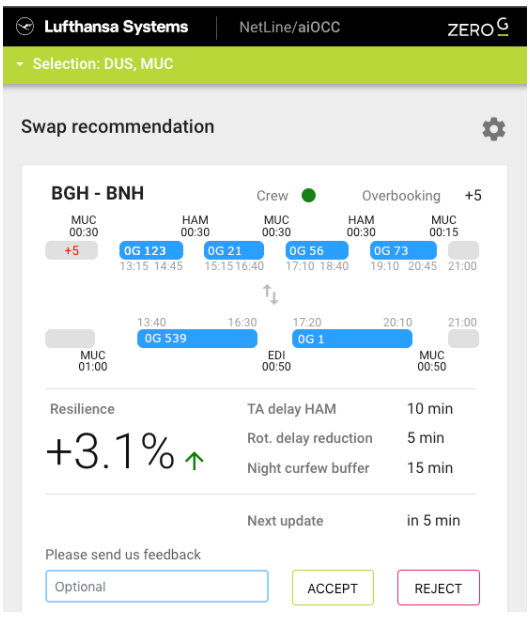
The airline industry's first AI-powered Operations Control assistant

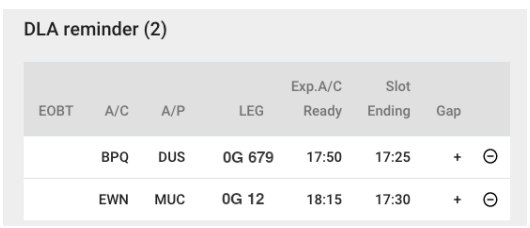
The challenge of operations control

Flight operations controllers make thousands of complex decisions every day. They react to unforeseen events to minimize the impact of schedule disruptions. Several information sources must be analyzed within minutes to find the best solution. This decision making becomes more challenging, since on the one side more data sources are added to improve decision quality, where on the other side delay risk is increased through the need to constantly optimize the schedule for aircraft utilization. Due to this, especially during peak times, fast decision making becomes impossible.

The power of AI

NetLine/Ops ++ aiOCC leverages the power of AI to translate information from multiple sources into concrete actionable recommendations. The system monitors all events around aircraft, rotation, passengers and crews to identify delay risks ahead of time. It makes suggestions for adapting the schedule proactively.





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Join us on our journey towards a data-driven OCC

The operations controller keeps control

The NetLine/Ops ++ aiOCC assistant generates suggestions for improving operations and provides additional information to the operations controller regarding impact of the proposed solution on the overall resiliency, the buffer and the propagated delay. If the operations controller accepts the recommendation, it is automatically applied in NetLine/Ops ++, if not the system checks for alternatives.

Further automation

Besides the proactive stabilization of the schedule, NetLine/Ops ++ aiOCC is aiming for process automation. Right now it is already able to identify the right point in time for the creation of delay messages. The operations controller only needs to release those messages afterwards. Even an automated sending of those and the automation of further routing processes is possible.

Replaying the day of operations

Based on NetLine/Ops ++ data, using the methods developed in aiOCC, the Ops Controller is able to replay any historical day of operations, identify situations and actions taken. This closes the feedback loop between planning, operations, and end-of-day performance.

Behind the scenes: Reinforcement Learning

NetLine/Ops ++ aiOCC is based on Reinforcement Learning, a new machine learning methodology for extracting cause and effect from data and providing data-driven decision support. Our decision assistant is the first in the airline industry to use Reinforcement Learning to derive meaningful recommendations.

Get started!

Be one of the first to bring AI to your OCC. Let us unlock the intrinsic power of your data together!
The following steps are required:

1. **Tailor it to your business**: Airlines operate with certain business models, fleets and networks. The forecasting model of NetLine/Ops ++ aiOCC might need to be extended to cover all specifics of your business model.
2. **Integrate it into your processes**: As NetLine/Ops ++ aiOCC is an assistant, it is important that it creates meaningful recommendations for your users. We discuss which type of recommendations generate most value for your users.
3. **Train the AI:** The agent is trained on historical data. We will analyze which data is available at your company.

We will evaluate all this with you in the scope of a study, co-financed by Lufthansa Systems.
Get in touch to get started!

NetLine

- **NetLine/Plan** – Network planning
- **SchedConnect** – Codeshare management
- **NetLine/Ops ++** – Operations control
- **NetLine/Sched** – Schedule management
- **NetLine/Crew** – Crew management
- **NetLine/Load** – Weight & balance

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