



Transforming Crew Operations at Lufthansa



Client Overview

Deutsche Lufthansa AG is a German airline which along with its subsidiaries is Europe's largest carrier in terms of passenger volume as well as fleet size. The fleet of over **280 aircraft (615 including subsidiaries)** currently serves **18 domestic** and **197 international destinations** spread across **78 countries** and covering Africa, the Americas, Asia, and Europe.

Lufthansa is one of the five founding members of the Star Alliance, the world's largest alliance of commercial airlines. It also owns several passenger carrier brands such as Austrian Airlines, Swiss International Air Lines, Eurowings and Germanwings (referred to by Lufthansa as its Passenger Airline Group) and several aviation-related companies such as Lufthansa Technik as part of the Lufthansa Group.

Lufthansa & IBS: A long standing bond

Since 2011, IBS has been successfully engaged in providing new generation IT solutions to enable the key business goals of Lufthansa and its various subsidiaries.

The relationship began with IBS creating an integrated cargo application platform (iCAP) for Lufthansa Cargo AG (LCAG) to replace their legacy Unisys platform, thereby unlocking considerable cost savings for the airline. This was based on the iCargo platform from IBS, which has since then been utilized to consolidate the IT landscape at LCAG, bringing in a thorough digital transformation to enhance the customer experience and greatly reduce complexity. IBS today plays a critical role in maintaining the highest of quality standards for the LCAG IT landscape by functioning as the Test Factory for their systems.

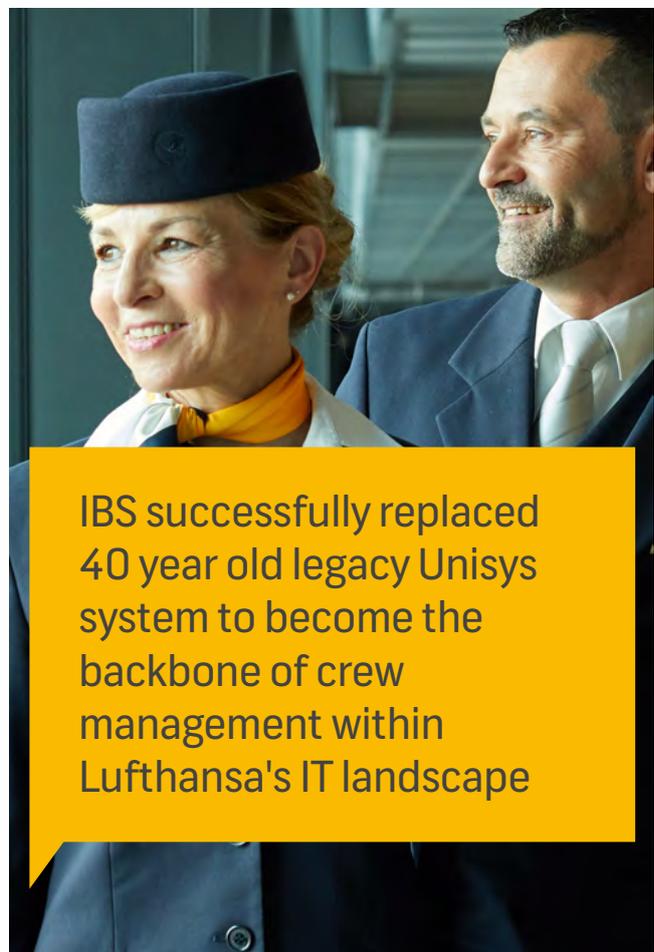


The Context

Crew Management at Lufthansa

Lufthansa Passage and Lufthansa Cargo together account for around 28,000 crew members (5,000 pilots & 23,000 cabin crew) in 2,000 flights on a daily basis. Crew member allocation and deployment at Lufthansa used to run in a highly complicated environment that evolved over more than three decades, with components ranging between new and over 40 years old. At the center of it all was a Unisys mainframe that acted as the framework on which the actual Roster and Pairing systems worked. It also held data, business rules and the relational logic which controlled communication between the system components. This supported several crew-related business processes such as management of crew accommodation, Crew APIS, the automated booking of deadhead flights and the corresponding e-tix generation, crew duty check-in, the storage and modifications of crew member data and the generation of reports.

Sustaining operations through this high maintenance legacy mainframe system was becoming difficult, and posed an intolerably high level of risk for the business.



IBS successfully replaced 40 year old legacy Unisys system to become the backbone of crew management within Lufthansa's IT landscape

Key Challenges

Rising costs – The Unisys system demanded regular maintenance and frequent, expensive upgrades, thereby increasing the IT costs to unmanageable levels for Lufthansa.

Growing operational risks – Enhancing the CMS landscape led to a large number of different modules (with a large number of interfaces and not using any middleware) in a complex grouping, while at the core was a system that was originally developed in 1978. Ensuring timely support was a challenge, and serious doubts were cast about how much life could be expected from such a system. It was too heavy a risk for the business and one that was getting too expensive to mitigate in any manner.

Extendibility concerns – System extendibility was proving difficult given that adding new systems to the landscape needed significant effort to ensure backward compatibility with legacy protocols. Additionally, the previously deployed point to point interface strategy made scaling up and rapid adoption of new business processes quite challenging.

Old technological standards – As scale and demand increased linearly, the need for a superior technical system meant that the older technological standards was proving to be a hurdle. Overhauling the entire platform was key to ensuring business scalability and growth for Lufthansa.



The Solution

IBS Software was engaged to completely overhaul the Crew Management System (CMS) IT landscape hosted on the Unisys platform, and replace it with the iFlight Crew platform application data model of pairing, rostering, and flight and crew data. This state-of-the-art platform completely took charge of the underlying integration of crew management operations at Lufthansa and is now at the heart of all flight and crew operations. IBS built 40+ inbound & outbound interfaces in addition to other functionalities that addressed business areas such as crew check-in, crew APIS, hotel & transport, crew booking and e-tix and reports. IBS also made certain that the existing platform and the new system were operated in parallel for a certain amount of time and data verifications were carried out to ensure that the functionality and interfaces in the new platform worked flawlessly and without any data inconsistency. The application went live in Aug 2018 and in a short period of four months (at the time of creation of this case study), has already managed over 520,000 hotel bookings for crew, 120,000 crew immigration messages, 110,000 deadhead crew bookings and processed close to 700 million real-time messages pertaining to flight, immigration, hotel booking and inter-system communication.

“The huge step of migration from our UNISYS Crew Management System to the new iFCM solution from IBS was made possible by flawless implementation, and incredible expertise, teamwork and commitment from the entire IBS team! They went beyond their mandate to ensure that such a complex project could be managed successfully within the specified time and budget.”

Dr. Florian Wikenhauser

Sr. Director, IT Service Factory Flight & Crew Operations - Lufthansa



Key Results

-  **Superior Technical architecture** – Migration from Unisys to the new solution based on iFlight Crew by IBS equipped Lufthansa's CMS landscape with a superior technical architecture base. Some benefits of the new solution included: access from web browser into a single system that is CUTE compatible and GDPR compliant, scalable architecture provided by component based deployment and the flexibility to add functional modules to the core platform.
-  **Future proof solution** – With this implementation, IBS has allowed for a tool based data migration process from current system. The solution also allows for easier integration with external systems with integration API that supports both IATA and XML based data interchange and support for web services for integrating with external systems.
-  **Low Risk High Reward** – The core requirement of Lufthansa was to ensure a significant reduction in their business risk. IBS' iFlight data model is flexible to handle large and complex airlines, successfully adapting for customer specific requirements in various ways. With high level of compliance to data maintenance functionality and features such as distributed Gantt view of crew pairings and roster details, Lufthansa clearly saw the benefits of high functional compliance to its requirements.



About IBS Software

IBS Software is a leading SaaS solutions provider to the travel industry globally, managing mission-critical operations for customers in the aviation, tour & cruise and hospitality industries. IBS' solutions for the aviation industry cover fleet and crew operations, aircraft maintenance, passenger services, loyalty programs, staff travel and air-cargo management. IBS also runs a real-time B2B and B2C distribution platform providing hotel room inventory, rates and availability to a global network of hospitality companies and channels. For the tour and cruise industry, IBS provides a comprehensive customer-centric, digital platform that covers onshore online and on-board solutions. IBS Software is a Blackstone portfolio company and operates from 11 offices across the world.

Further information can be found at <https://www.ibsplc.com>



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