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PROFILE

Company: **Lufthansa Cargo.**
 Interviewee: **Stephan Madlung.**
 Job Title: **Head of Integration Competence Centre, Lufthansa Systems.**
 The Subject: **EAI and development technology is playing a central role in modernising Lufthansa Cargo's business processes.**

Q: WHAT FIRST LED LUFTHANSA CARGO TO INTRODUCE INTEGRATION TECHNOLOGY?

A: The logistics market is experiencing large growth and in 2001/2, Lufthansa Cargo was facing an increasing number of shipments and also wanted to integrate more closely with its customers and partners, especially the large freight forwarding companies. Customers expect more flexible contracts and all the time new ideas and new requirements need to be brought to market. Against this, the company's IT systems were operating at their limit.

In logistics, even more than other businesses, the automation of processes is a key success factor. At Lufthansa Cargo, IT became a barrier to growing the business. This led the company to review all its processes – from its booking to handling processes, right through to revenue accounting. It looked at both the 'is' and the 'to be' processes and estimated that it would take three years to get from 'is' to 'to be'.

Lufthansa Cargo wanted to achieve excellence in all its business processes by 2006 and set up continual improvements of processes.

In IT, it wanted a state-of-the-art system and saw that its business processes and IT must be tied as closely together as possible.

I work at Lufthansa Systems which is the overall IT provider

at Lufthansa Cargo. We carried out a study and found Lufthansa Cargo had a variety of heterogeneous systems and an overall lack of integration. The company runs 50-plus applications including some standard applications such as SAP and Siebel and lots of custom-developed applications. The whole data management lacked integration. There was redundant data storage, for example, and gaps in IT support for the overall business process chain.

We decided the start point was to define a strategic IT architecture. We took a layered approach – with this, the goal was to increase flexibility, to provide faster support from IT

to the business and to achieve cost reductions.

Q: WHAT ROLE DID INTEGRATION TECHNOLOGY PLAY IN THIS?

A: As part of the new architecture we introduced an integration layer. This layer was under discussion for a number of months and in some ways it is unique; I have not seen it in other company architectures. It was a key factor in achieving enterprise-wide application integration – at many companies, there are islands of integration or there is no single integration platform for all departments.

The integration layer at Lufthansa Cargo has three goals. The first is integration,

including classical EAI to integrate the 50-plus internal systems, and also B2B integration to integrate the company with its business partners and customers.

The second goal is not just integration but migration. The Unisys host legacy system and other older systems are being phased out, and having the integration layer and an integration platform is an advantage in being able to phase out systems. By putting the integration logic in the core platform, we can make changes more easily.

The third goal is in business processes. With a central integration platform and integrated business logic, it is possible to introduce common workflow processes across all the applications.

We have focused so far on the process automation. The next phase will be to integrate the processes and people, integrating the 'human workflow' through a portal, for example. This is why the integration layer has had a major role from the start.

COMPANY FILE

Founded in 1994, Lufthansa Cargo is the world's biggest air cargo carrier. The company markets its own freighter capacities and the cargo capacities of all passenger aircraft in the Lufthansa Group.

In 2003, it handled 1.58 million tonnes of freight and mail. It has 5,000 employees and runs a fleet of 14 MD-11F aircraft and eight Boeing 747-200 freighters to 450 destinations worldwide.

Eight global freight forwarding companies and a large number of local business partners have linked their business processes with Lufthansa Cargo. It also has the 'WOW' alliance with SAS Cargo, Singapore Airlines Cargo and Japan Airlines Cargo – involving harmonised products, IT systems and handling processes – and joint ventures with a number of other cargo airlines as well as DHL.

The need to link systems with partners and respond to customer demand for more flexible services persuaded Lufthansa Cargo to modernise and standardise its IT systems.

Q: HOW DID YOU CHOOSE YOUR INTEGRATION SOFTWARE SUPPLIER?

A: We built an EAI team of four people who selected the integration platform vendor.

The selection process took around three months. We sent out a request for information (RFI) to 12 vendors and from there chose a shortlist of four – IBM, webMethods, BEA and TIBCO. After talks and workshops with all four, we continued with webMethods and TIBCO.

We involved the business units at Lufthansa Cargo and worked out five realistic scenarios of upcoming projects

which the two suppliers had to implement over a 10-day Proof of Technology (PoT) test – for example, implementing a more proactive tracking process.

It was a very intensive PoT but both vendors did a good job. From the functional side they could both do everything 200% but especially on the operational side and in some areas on a more detailed level for us TIBCO had some advantages and gave us the confidence to successfully introduce EAI immediately – therefore we chose them.

We introduced TIBCO in March/April 2003.

Q: HOW IS THE SYSTEM BEING IMPLEMENTED?

A: We continued with the same EAI team that did the selection, so that we were now doing strategy work and the practical work of implementation.

It was worth running the PoTs to get hands-on experience of TIBCO's integration tools and also to start the change management process – the project managers were getting involved and getting enthusiastic about the idea.

We set up a central EAI/Integration Competence Centre which designed the architecture and defined the coding guidelines and standards. We also clearly defined the tasks that the EAI competence team would carry out.

We started with two pilot EAI projects. We built a system for claims management, which involved integration of the Siebel CRM system, the shipment database and the ERP billing system; the other project was to rebuild the tracking system and move to customers proactively tracking shipments.

To date, we have now run 13 projects – not all integration projects, but in each project integration has played a key role. We have integrated 15-plus systems, including SAP, Oracle, Siebel CRM, shipment databases, EDIFACT communications, the booking engine which is Lufthansa

PERSONAL FILE



NAME: Stephan Madlung.

BACKGROUND: Stephan leads the Integration Competence Centre of Lufthansa Systems. As a project manager and consultant in the IT Consulting division of Lufthansa Systems, his consulting activities include IT strategy, IT architecture and EAI/integration strategy and implementation.

At Lufthansa Systems, Stephan helped pilot EAI at Volkswagen, ran the EAI selection process at Lufthansa Cargo, built the Lufthansa Systems EAI/Integration Competence Centre, defined EAI standards and guidelines, and architected and helped to implement more than 13 EAI projects at Lufthansa Cargo.

Previously, he was director of IT development at New Horizons Computer Learning Centres Franchise Master in Germany, a computer learning franchise network, and before that a team leader/consultant at Unilever.

Cargo's core system, some older legacy host systems, some capacity control systems and some modern technologies such as web services.

The TIBCO integration components are a common platform with messaging and standard transport mechanisms which let the applications talk to each other – the systems now speak a common language through XML standards, both internally and externally with business partners.

This has enabled a service oriented architecture with shared services.

We have web services standards in place for B2B integration with the business partners. We have integrated just a few partners in this way and the next task is to get the web services security to a more granular level. But with web services, it means that we can integrate partner companies much more quickly, in a matter of days for existing services.

Q: WHAT MANAGEMENT APPROACH HAVE YOU TAKEN?

A: We discussed how to run the projects and decided that we couldn't just buy the integration tools and give them to each project team. The important

thing is it's not just about the tools, it's also about the change management and the methodologies.

We didn't want to do everything centrally. The implementation work was done by the project teams but the central Competence Centre defined the architecture and the overall standards and guidelines, including the project management process and the quality assurance process.

Change management is a key success factor for EAI. We made sure we involved the business units and had a stakeholder within the senior management at Lufthansa Cargo which was the central information management department – they were involved from the early beginning of the project.

It's very important that Lufthansa Cargo has some responsibility in all this – they must provide a proper set of business management.

Q: HOW DID THE USERS REACT?

A: We have just done an EAI survey on the project managers and the business analysts and developers from Lufthansa Cargo and got very good feedback on the development and operations.

Q: HAVE THERE BEEN ANY PROBLEMS WITH THE TECHNOLOGY?

A: On the technology level we did not have that many problems – and having bought from a single vendor, these were easy to sort out.

In the beginning the problems were more to do with a skills gap which we filled with external suppliers and then by training, and problems on the organisational side. We spent time fine-tuning the methodology. For example, we have defined the EAI development process, including areas like the design and coding guidelines and standards.

The implementation across many projects has to be managed through a standard quality process and it is important to keep the same implementation standards across projects.

Q: WHAT ARE LUFTHANSA CARGO'S PLANS NOW?

A: We have definitely established EAI successfully. We have done a lot in one and a half years but we want to continue to get to a higher level – to introduce the integration platform across the whole enterprise.

We will also continue to fine-tune the methodology and focus on using the workflow part of the integration platform to integrate people as well as systems.

Q: ARE THERE ANY KEY LESSONS YOU HAVE LEARNED FROM THE IMPLEMENTATION?

A: The key lesson with EAI projects is that it is not just the tools, it's the methodology. You must build an Integration Competence Centre – the key success factors are the know-how of the EAI integration technologies, but also of integration strategies.

You have to have the technical know-how to implement the integration technology, and the strategy know-how to know that you really are heading in the right direction.