

»We set ourselves a series of objectives. By achieving these goals, we were able to pay back our investment costs in less than two years. In that sense, networking our systems really paid off.«

Dirk Devers,  
Deputy General Manager



### Customer

- As early as the mid-1700s, the North Rhine-Westphalia-based media services provider L.N. Schaffrath DruckMedien had already established a reputation as one of the most innovative companies in its industry. In addition to the complete production of magazines, newspapers, catalogs, and brochures, the company's range of services also includes state-of-the-art cross-media publishing. L.N. Schaffrath works closely with its customers in all areas – from individual consulting and digital prepress processes to shipping domestically and abroad. Many well-known publishers have long relied on the company's expertise. Today, L.N. Schaffrath is one of the most modern, best performing companies in its industry.

## L.N. Schaffrath

**Initial situation** 350 employees working in three shifts produce 140 magazines, catalogs, and brochures on sheet offset machines, web offset machines, and various processing and shipping devices (folding machines, binding machines, gathering machines, addressing devices). The objective was to combine the company's complex technological needs in a single networked system. In order to do so, every workstation – from printing plate manufacturing to distribution – had to be integrated into this networked system. Data was exchanged with the business software via JDF and/or JMF. Just a year after the decision was made, all stages of production all the way up to distribution had been completely integrated in the new system.

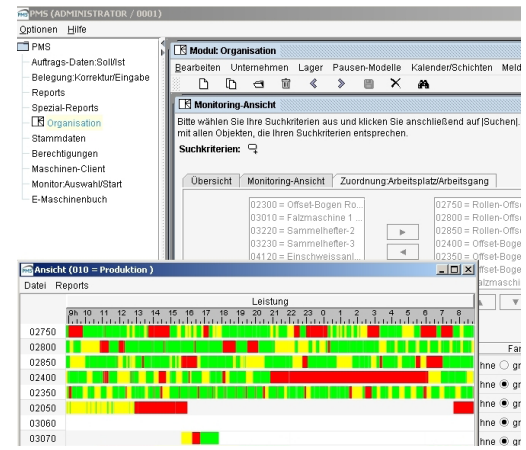
**Project objectives** The goal was to make all up-to-date information available to management, production, shipping, and controlling by way of consistent machine and operating data logging, thus significantly reducing the amount of communication required. Online logging ensures that the production processes are constantly monitored, allowing the company to analyze weak points and eliminate them while production is still ongoing. Machine failures and modified operating times and speeds must be immediately included in the planning process so that the new information can be acted upon directly. The production management system (PMS) provides information on the speeds at which the systems operated, which materials were used, what output quantities were produced ("good" sheets of paper and waste paper), and what errors occurred.

L.N. Schaffrath also defined additional general objectives for the new networked system. The company wanted to improve the use of resources, reduce idle periods between production stages, and increase production safety. Consistent machine data logging is expected to improve efficiency by 1 percent.

»PMS increased transparency throughout the entire company, and L.N. Schaffrath is now able to optimize shipping and production processes on an ad-hoc basis.«

**Solution** In order to make information available, the existing production machines needed to be networked, regardless of the stage of production, the year the machine was constructed, or its manufacturer. In addition to printing machines, this also includes folding machines, binding machines, and shipping units. In order to lighten the machine operators' workload and to keep track of operating times and amounts produced, the machines were optoelectronically connected to the PMS. This allows all machines to record gross and net amounts as well as various operational processes. Utilizing the existing signals ensures that the information the operators have to input manually is kept to a minimum. In order to classify errors, malfunctioning units and the reasons for errors can be defined during each operation cycle. This allows the system's weak points to be analyzed. In addition to production times and the amounts produced, the amount of ink required for each order is automatically recorded and assigned to the parts of the order produced. The data arising during production is saved on the PMS server, making it available for detailed evaluation. The current status of the machines can be viewed in online overviews from any of the company's locations. Information on the status of the machines is uploaded to the planning components of the DISO solution via JMF messages, making it possible for dispatchers to react to problems quickly and systematically. The PMS data automatically fills in the product cost analysis in DISO, avoiding the need for any additional data entry. The necessary order data is transmitted to PMS from the DISO solution via a JDF interface. Feedback on these orders/parts of orders can be generated; for rush jobs, the machine offers an easy-to-use order creation system.

**Customer benefits** By implementing PMS, L.N. Schaffrath was able to increase the efficiency of its machines by an average of 3 percent, minimize machine set-up times, and reduce waste paper. Additionally, PMS increased transparency throughout the entire company, and L.N. Schaffrath is now able to optimize shipping and production processes on an ad-hoc basis. The company can analyze weak points and make improvements on the basis of detailed information.



## An Overview of the Case

### INDUSTRY

- Print shops

### PROJECT

- Introduce a production management system (PMS)

### TECHNOLOGY PLATFORM

- Java J2EE on JBoss Application Server, Eclipse RCP front end (machines), Java Swing client (administration), DB2/400 database

Any questions? Please contact us.

#### Your Contact

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