



Automated invoice processing at BASF

Approximately 2,000 to 3,000 invoices arrive at the Accounts Payable department (AP) at BASF in Ludwigshafen (Germany) every day. Many of these allow significant savings through discounts if processed fast enough.

The initial situation

All invoices were manually sorted, filed and assigned to the respective company employees who then verified the invoices, checking for example if the quantity stated corresponded with the quantity ordered. The AP data was then entered into the booking system before the payment of all invoices could finally be authorized. Only after processing, the invoices were barcoded, scanned and archived (see process steps fig. 1).

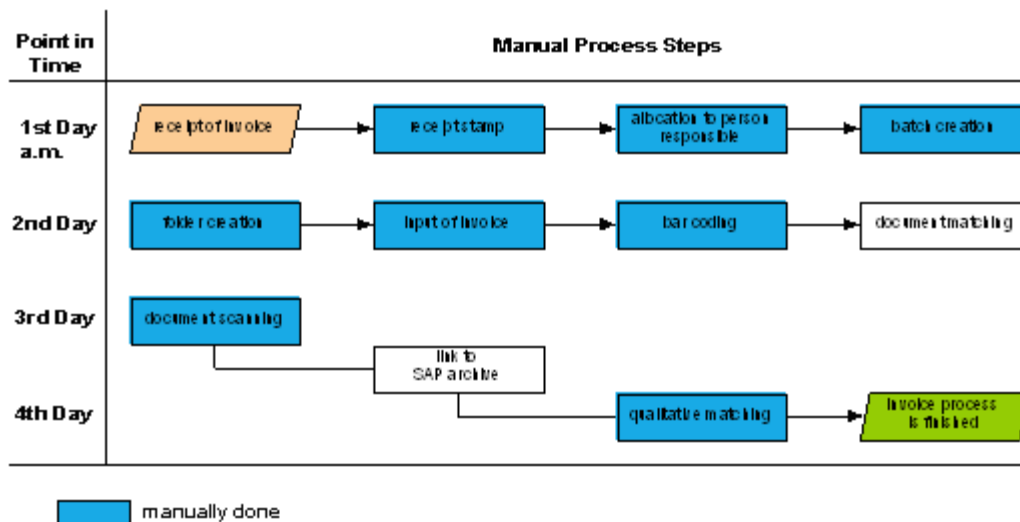


Fig. 1: Process before the "Early Scanning" project

About 60% of all invoices (approx. 340,000 documents per year) were still handled manually. The other documents were processed by Electronic Data Interchange (18%) and via other electronic interfaces.

The Challenge

BASF identified the following objectives and criteria to opt for the automated invoice data capture solution by Paradatec and IBM:

- reduction of processing time (1-2 days versus 4 days),
- improvement of data quality,
- higher degree of transparency in the entire process as well as an accelerated flow of information,
- automatic deadline monitoring for workflows & automatic assignment of tasks by SAP workflow,
- improved systems integration and
- reduction of processing costs (personnel).

The “Early Scanning” project was split in two phases. The design stage started in November 2003. Following the requirements of BASF’s AP department to implement the project into the existing infrastructure, a competitive mass test involving five vendors was organized with BASF Antwerp. Achieving the best test results, IBM Global Services was awarded the contract to automate and improve the company’s AP processes using Paradatec’s freeform OCR/ICR technology PROSAR-AIDA.

The Solution

As the next step, the solution and architecture concept was devised together with the BASF departments. PROSAR-AIDA recognizes the type of document through content based analysis (classification) and performs the extraction of all relevant data items. Paradatec’s verification and correction module PROKEY is used to manually type any remaining uncertain data (see fig.2). The scan and workflow functionality required for this operation is provided by Kofax’s document imaging platform Ascent Capture.

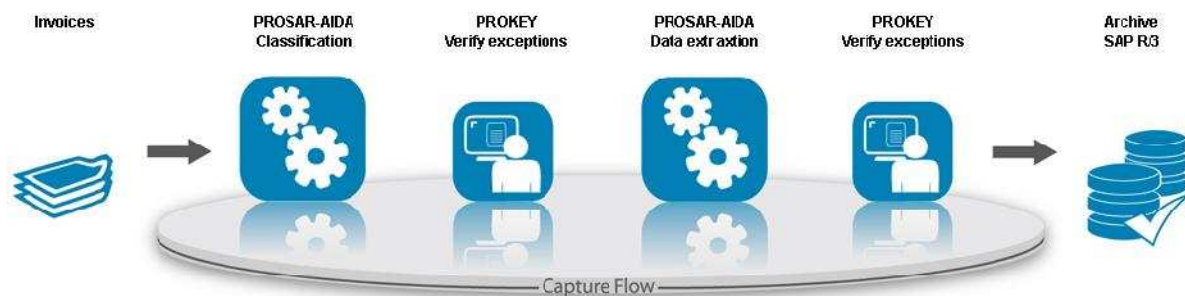


Fig. 2: Workflow architecture

After the software had been implemented into the existing system in April 2004 and work on the rule tree was completed with the cooperation of the experienced AP team at BASF, the new automatic invoice processing system went live in July 2004.

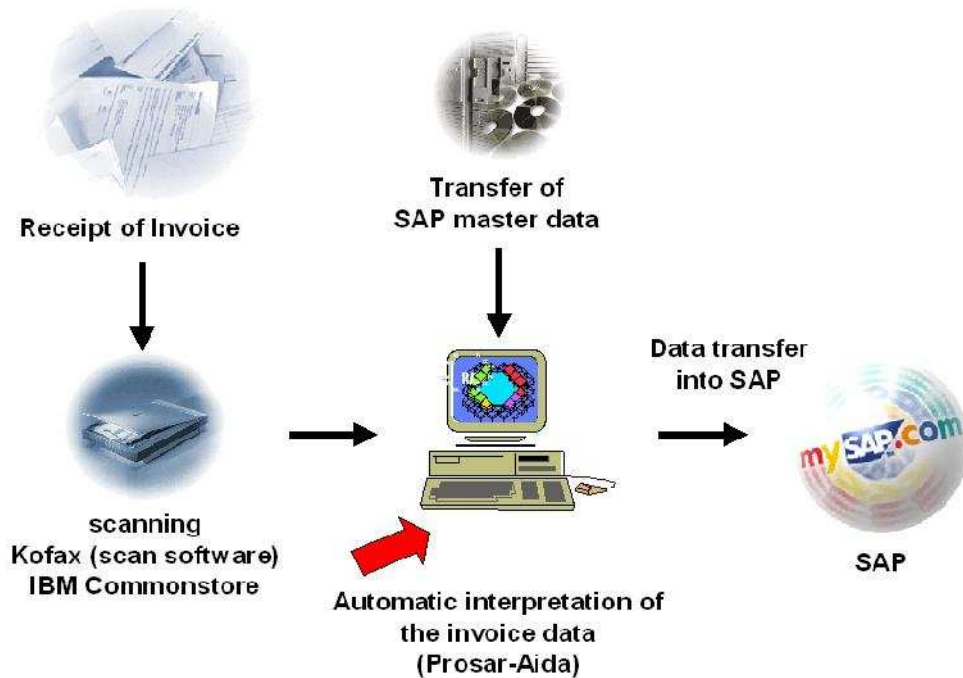


Fig. 3: System architecture

The Bottom Line

Oliver Bieder, manager of the BASF project team, described the advantages of this automatic invoice processing as follows: "We shifted most processing steps from the desk to the screen. Via early scanning we are able to avoid errors which occur for example when typing in figures, and of course the electronic way is much faster than the manual data entry." (Cit.: Ulla Biernat, "Früh gescannt – schnell geprüft", published in: BASF information July 2004)

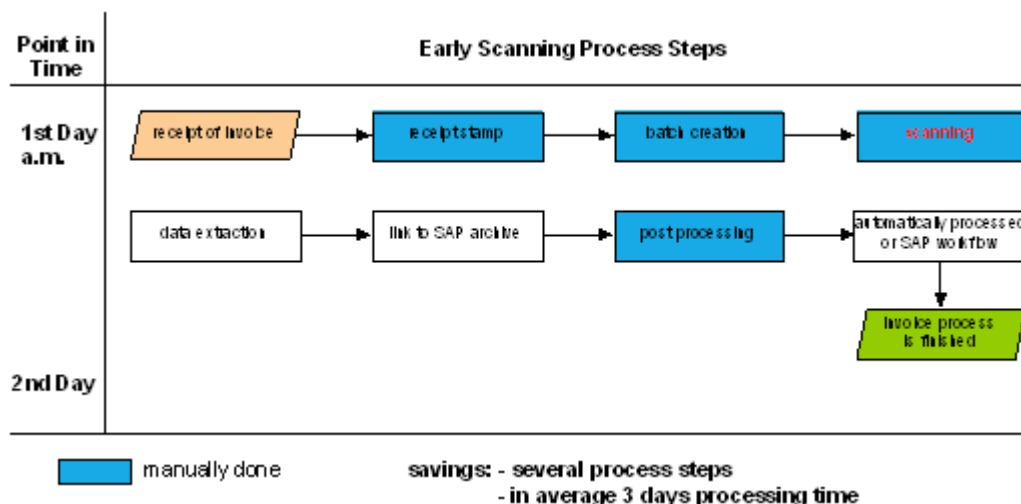


Fig. 4: Process after the "Early Scanning" project

Qualitative improvements are achieved as typical human mistakes arising from manual data entry are now avoided. Most of the data is transferred automatically, accurately and at very high speed into the workflow. Since the start of production the system has been successfully running and achieves an 85.7% automation rate across all relevant fields – including complete line items extraction.

“Early Scanning” allows same day processing of a large proportion of invoices (reduction of processing time: 3 days). An automatic assignment of tasks, as provided by the SAP workflow, is now possible and the particularly labor and cost-intensive transport of original documents between the different stations is no longer necessary.

Because of the successful production use in Ludwigshafen, the system was also implemented at BASF AP in Antwerp (Netherlands) in December 2004 and from the beginning of 2005 freight invoice control has also been included in the process.

BASF is the world's leading chemical company. In its five business segments (Chemicals, Plastics, Performance Products, Agricultural Products & Nutrition and Oil & Gas), with around 82,000 employees on five continents BASF posted sales of €37.5 billion in 2004. BASF maintains business relationships with customers in more than 170 countries and supplies approximately 8,000 products from its five segments to a wide range of industries worldwide. Major customers for BASF products come from the agricultural, automotive, chemical, energy and construction industries. Important sectors also include the health, nutrition, electrical/electronics, textiles, packaging and paper industries.

Paradatec was founded in 1988 in Braunschweig, Germany. For two decades, Paradatec has focused its skills towards delivering the most efficient, accurate, and flexible freeform document classification and data extraction solutions available anywhere. Paradatec software modules have been, and are used in a multitude of different vertical markets both in domestic and international organizations. Paradatec is represented by subsidiaries located in the U.K. and in the U.S.