



# SAP FOR LOGISTICS SERVICE PROVIDERS AT ARVATO

Arvato Logistics Services is a subsidiary of Arvato AG, the international media service provider of the Bertelsmann Group. In 2003 the company implemented the SAP for Logistics Service Providers solution portfolio to increase transparency in its supply chain. The investment has paid off: Arvato has significantly cut costs and achieved a 108% return on investment within five years.

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## AT A GLANCE

### Company

Arvato Logistics Services is a subsidiary of Arvato AG, the international media service provider of Bertelsmann AG. Headquartered in Gütersloh, Germany, the company employs over 7,000 people at 30 locations worldwide and provides comprehensive supply chain management services for media and communication products – from production through procurement, order entry and sales, and customer communication. Arvato Logistics Services is one of Europe's leading service providers in this dynamic market segment.

### Challenges and Expectations

- Increase transparency in the supply chain to respond better to changing market conditions
- Improve collaboration with the performing transportation firms (carriers)
- Connect customers and partners more closely and thus support multimodal transportation chains
- Lay the foundation for future potential cost savings

### Strategic Objectives

- Optimize shipment costs
- Provide better reporting for customers and partners
- Make customer service more efficient

### Approach

- Implement the SAP for Logistics Service Providers solution portfolio to fully model the supply chain
- Deploy the SAP NetWeaver® Business Intelligence component for up-to-date, harmonized reporting throughout the company
- Create powerful structures for seamless data exchange between customers' and partners' enterprise resource planning systems
- Establish a means for continuous online tracking and tracing

### Results

- Projected 108% ROI within five years
- Monthly savings of €180,000
- Annual savings of €250,000 by replacing the previous core system
- A 108.5% internal rate of return – proof of the investment's profitability

## EXECUTIVE SUMMARY

Arvato Logistics Services, a subsidiary of Arvato AG, specializes in logistics services for the full spectrum of supply chain management with a market focus on media and communications products. Efficient and reliable IT applications form the backbone of the business, ensuring that all transactions run smoothly.

In 2001 the company opted to invest in a new logistics solution to respond to major challenges in its core business processes: management of freight cost, carriers, and information. Arvato Logistics Services went live with the SAP for Logistics Service Providers solution portfolio in August 2003, followed by the SAP NetWeaver® Business Intelligence (SAP NetWeaver BI) component in December 2003.

Arvato Logistics Services is now in constant contact with customers and partners, thanks to tracking and tracing of shipments at all stages of the supply chain and exchange of comprehensive information about delivery status. Customers can access each of their carrier's route plans in a user-friendly Web browser whenever they wish, and can use self-service functionality to create current Web-based reports. This keeps them constantly in the loop about delivery status. With exact information about itineraries and delivery times, Arvato can control multilevel transportation chains.

Unlike the company's legacy application, the SAP® applications provide a full view of the supply chain and cost structure. The company knows exact costs per unit and can analyze shipment costs in detail and make specific improvements – one of its main objectives. This has made an impact on finances: during the 15-month implementation period, the company was already saving around €180,000 per month. The company's billing model allows these cost savings to be passed on to its customers.

A glance at the business figures confirms the investment's success. Over the five-year period in the analysis, from 2004 to 2008, projected total ROI is 108% with a 108.5% internal rate of return.

The new applications are opening up a number of potential benefits. For instance, Arvato wants to model multimodal transportation chains and enter the market for supply logistics from China to Europe. The company plans to pass on additional cost savings to its customers. The SAP applications are paving the way for customer satisfaction and long-term business success.

## **COMPANY**

Arvato Logistics Services was founded in 1964 as Bertelsmann Distribution and renamed Arvato Logistics Services in 2002. The company provides the entire range of supply chain management services under one roof, encompassing not only the receiving of goods and products as well as coordination and shipping to the customer, but also production, procurement, order entry, distribution, and all customer communications.

As the European market leader, Arvato ships high-value, fast-moving articles, mainly media and communications products, on a daily basis. Over 50 million shipments leave its warehouses on a yearly basis. Arvato serves worldwide operating companies as well as midsize enterprises in the areas of IT and telecommunications, automotive, banking, insurance, manufacturers, and media.

## **CHALLENGES AND EXPECTATIONS**

In the early 2000s, Arvato Logistics Services was faced with a number of challenges in the areas of freight cost management, carrier management, and information management. Its legacy system was no longer able to support new business models or handle new requirements showing up in bid invitations from major business prospects.

In particular, the process of searching for the status of transport operations was very laborious due to the lack of supply chain transparency. Often, customer service personnel were forced to search for data manually and painstakingly compile and compare information from different sources.

Information management was another area needing action. Customers were asking for improved, more flexible reporting. In response, Arvato employees would have to create elaborate programs for customer-specific reports on procurement and transport operations, and nonstandard reports would usually require extensive preparation to be customer ready.

The company established the following main objectives for its new logistics solution:

- Increase transparency in the supply chain
- Optimize collaboration with carriers
- Support multimodal transportation chains

## **PROPOSED SOLUTION AND IMPLEMENTATION**

The company decided on a complete overhaul of its business processes for carrier management and freight cost management with a future-proof IT solution, and opted for offerings from SAP. Because they were already working with SAP software, employees had a great advantage when the new processes were being implemented and the solutions were being hosted. By and large, they were able to implement the new processes using their own know-how without external support. After the preparatory work for the freight management vendor project had been performed, the SAP for Logistics Service Providers solution portfolio went live at the start of August 2003, and SAP NetWeaver BI followed in December.

SAP for Logistics Service Providers maps the full range of supply chain management services using a decentralized enterprise resource planning (ERP) infrastructure – from the consignor’s goods issue posting, through transportation by the carrier and delivery at the customer’s site. One of the main challenges was communication from the ERP software to carriers and customers, and this was achieved with application link enabling (ALE) interfaces that ensure seamless data transfer. ALE interfaces also provide real added value for carriers and customers alike, as warehouse management is sensitive and time critical and managed separately from other applications.

Another advantage is that Arvato employees can also enter status information through other media, such as mobile devices. However, the Arvato name must be entered as the freight company for route segments. To do this, the company uses line-haul solutions organizing the preliminary leg itself, and forwards the shipments to the actual carrier only when the goods reach the destination country.

The SAP Event Management application allows complete tracking and tracing of itineraries via online connection. Customers access Arvato systems online to track their shipments whenever they wish, keep informed of the situation, and optimize their own processes if necessary.

The implementation of SAP NetWeaver BI has provided flexible ad hoc reporting. Using this Web tool, customers and partners create detailed reports, which are then integrated into the appropriate cost accounting and activity allocation reports. The customer's controlling department thus receives reliable customized reports.

The following table is an example illustrating the business processes in a high-tech company supported by an integrated SAP software environment for overall transparency. It covers the complete supply chain, with the central SAP infrastructure providing comprehensive monitoring and reporting functionality.

## RESULTS

Arvato Logistics Services can measure the effectiveness of its investment in both qualitative and quantifiable terms.

### Qualitative Benefits

With almost the same number of employees as before implementation, Arvato Logistics Services is now handling double the freight volume, and there is still potential for further increases in volume. This productivity improvement is primarily due to significant enhancements in customer service processes, which are now much more efficient thanks to better data quality. Deliveries can be tracked online, allowing the company to manage all operations much more actively. Customers have greater planning reliability and can optimize their value chains.

Furthermore, customers are no longer reliant on standard delivery-processing reports. They can now create Web-based, ad hoc reports tailored to their specific needs, rather than relying on Arvato to compile and modify spreadsheets for them.

Integrated Business Processes				
Customer Service	Sourcing & Production	Logistics Services	After-Sales Services	Financial Services
Customer contact centers	Sourcing	Pick and pack	Reverse logistics, returns, and customer hotline services	Credit check & ratings
Order management	Bundling, kitting, and assembly	Warehousing	Spare-parts logistics	Invoicing, factoring, & central settlement
Technical support activation	Media on demand	Freight management	Repair services	Online clearing & cash collection
Customer loyalty & CRM programs	Merchandise planning	Returns management	Software updates	Corporate debits

### Quantifiable Benefits

The implementation of SAP software has resulted in significant cost savings in Arvato's freight cost management, carrier management, and information management processes. Thanks to the optimization of shipment costs, Arvato Logistics Services was able to save around €180,000 per month during the 15-month implementation period. Using an adjusted price model, the company directly passes on this cost advantage to its customers.

The new logistics application now makes per-unit costs transparent, allowing Arvato to make further improvements. The company will be able to cut other costs such as modeling multimodal transportation chains (shipments that involve different modes of transport). Improved logistics capabilities have opened up opportunities for market expansion, particularly for supplying logistics for computer hardware from China. Data on batches being shipped is available earlier than before, allowing the company to reliably plan and estimate costs per unit. Finally, Arvato Logistics Services is now better able to optimize routing and simultaneously optimize stocks.

By replacing its legacy software, the company has been saving approximately €250,000 annually on maintenance and operating costs in the area of information management since the end of 2004. Another aspect of the new solution is facilitating Arvato's expansion into international markets: it provides a number of language versions and has thereby achieved quick buy-in with customers and partner companies throughout the world.

### Overview of Project Key Figures

Key Figure	Value (in Thousands, €)	Description/Formula
Total investment costs	5,980	Investment costs over a five-year period (2004–2008)
Present value investment costs	5,595	Total of discounted investments
Total cost savings/targeted benefits	13,025	Total benefits achieved over a five-year period (2004–2008)
Present value of cost savings	11,632	Total of discounted savings
Net present value (NPV)	6,037	$NPV = \text{present value savings} - \text{present value of investment}$
Return on investment (ROI)	109.7%	$ROI = \frac{\text{net present value}}{\text{present value of investment}}$
Internal rate of return (IRR)	108.5%	Effective interest on capital accounts achieved by investment
Capital costs	6%	Rate of interest for procuring capital on credit market

## **OUTLOOK**

The ROI calculation includes only benefits and cost savings that can be realized on the basis of current business. The calculation has not taken into account assumptions about how business will develop in the future and how Arvato Logistics Services can further leverage the investment. However, the company hopes to tap additional potential by mapping multimodal transportation chains and entering the market for supply logistics from China to Europe. Expansion remains a priority. Arvato Logistics Services would also like its customers to continue to benefit from its cost savings in the coming years.

## **LESSONS LEARNED**

At the time of implementation, the SAP Event Management application was still new to the market. Arvato required customer-specific enhancements that needed substantial internal work. Despite this, the implementation period was just four months.

Arvato recommends that, before implementing SAP Event Management, companies define a detailed business blueprint and clarify all open issues to prevent misunderstandings. Once all the business rules are defined and configured, SAP Event Management is very reliable and provides users with a wealth of previously unavailable information. The application can be used in many business areas that compare planning data with actual data and that trigger appropriate workflows on this basis.

## APPENDIX

### Notes Regarding the Total Value of Opportunity Method

The ROI results in this case study were determined using the total value of opportunity (TVO) method devised by Gartner, which surveys the business benefits of IT-driven business initiatives. Gartner uses the Gartner Business Performance Framework as a standard methodology for measuring the business benefit to be analyzed.

The ROI results based on the TVO method do not represent a guarantee or recommendation by Gartner Consulting for the suitability of products, services, data, or sales technology of SAP. The results determined with the TVO method should not be viewed as an industry average and may differ from results published by Gartner Research. In this case study, Gartner Consulting contributed to the calculation of ROI; all other evaluations and conclusions are not based on statements from Gartner. The study was supported by the Business Consulting group of the SAP Consulting organization.

### The Business Process Metrics

The following table provides an explanation of the business process metrics used by the Gartner Business Performance Framework.

Demand Management	Market Responsiveness	Sales Effectiveness	Product Development Effectiveness
Supply Management	Customer Responsiveness	Supplier Effectiveness	Operational Efficiency
Support Services	Human Resources Responsiveness	Information Technology Responsiveness	Finance & Regulatory Responsiveness

As shown in the table above, the Gartner Business Performance Framework evaluates the following functional areas of a business:

- Demand management, which includes all measurable activities used to generate demand for a company's products and services
- Supply management, which includes all measurable activities used to satisfy demand for a company's products and services
- Support services, which includes all other measurable activities that support the company internally, such as services, quality, and costs accepted from internal customers in comparison to alternatives