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A Standardized Success? The Case of Leroy-Merlin in France

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MANAGEMENT SUMMARY

Leroy-Merlin was the second-largest distributor of do-it-yourself products in France and was part of the international Auchan group. The company procured its supplies from about 1000 regular suppliers and sold them to end consumers through the 59 company-owned outlets.

In 1988, initially aiming at improving the operational efficiency of processing its purchase orders, Leroy-Merlin began installing an EDI application based on the standardized EDI service 'ALLEGRO'. For the medium sized French distributor of DIY products, the availability of a third-party network and the decision for 'ALLEGRO' were crucial in taking advantage of the EDI technology when aiming at reducing cost and lead time. Adopting a standard instead of striving for an in-house development allowed Leroy-Merlin to implement its EDI application quickly, cheaply and without risk.

The biggest barrier to diffusion was some resistance from a number of suppliers who were rather reluctant to adopt the system. Future developments in terms of extending the functional and geographical scope of Leroy-Merlin's EDI application would have to follow the lines drawn up by the service provider 'ALLEGRO'. Thus, the 'EDI success' regarding operational efficiency was likely to be repeated and extended. However, a competitive advantage due to EDI could not be achieved since competitors had access to exactly the same service.

INDUSTRY BACKGROUND

The do-it-yourself (DIY) sector (covering home repair and home care goods as well as gardening products) in France mainly existed in the form of average-sized stores (typically 1000–3000 square meters) developed by independent companies such as Mr Bricolage and Bricomarché, and specialist superstores (typically over 10 000 square meters) operated by companies like Leroy-Merlin and Castorama. There were 1772 DIY-stores and superstores of at least 400 square meters with Castorama and Leroy-Merlin owning respectively fourteen and six of the 20 largest DIY superstores.

The French DIY market was undergoing some changes. On the one hand, market leaders such as Castorama and Leroy-Merlin, who seldom operate with a shopfloor space of less than 10 000 square meters, had been strengthening their position; on the other hand, the number of stores in urban locations with floor space ranging from 1500 to 3000 square meters was expanding dramatically. Market growth was supported by the fact that 61% of the population wanted to improve/decorate their homes; over 12 million households needed partial renovation¹

COMPANY OVERVIEW

Leroy-Merlin, a family business founded in 1965 and in 1992 part of the Auchan group (one of France's largest hypermarkets),² was a distribution company of DIY products with administrative and operational headquarters located in Noeux-Les-Mines, in the north of France. It employed 6000 people: 400 employees were based in the corporate headquarters and 5600 individuals worked in the 59 company-owned outlet stores where they sold directly to customers.³ The average area of a Leroy-Merlin store was 7500 square meters, representing more than 60 000 article numbers and 30 000 check-outs per month. The company's products could be divided into several categories, such as electrical appliances, tools, sanitary products, paints, and plumbing products. Christophe Dubrulle, Leroy-Merlin's General Manager made the following observation: 'From a mass market, we have moved on to a multi-specialist market, thus meeting the expectations of a new generation of

¹Source: *Nachrichten fuer Aussenhandel*, 14 April, 1992, page 6.

²The Auchan group was established in France, Spain, Italy, and the USA. [Food: Auchan, Al Campo (more than 50 hypermarkets); do-it-yourself: Leroy-Merlin; Catering: Flunch, Pizza Pai, Pic Pain, Chandeleur; Sport: Decathlon; Electric household appliances: Boulanger, Textiles: Kiabi.]

³Leroy-Merlin warehouses were decentralized throughout France; they covered altogether 45 000 square meters and 42 000 storage pallets. About 50 trucks delivered DIY products daily from these warehouses to the company's stores.

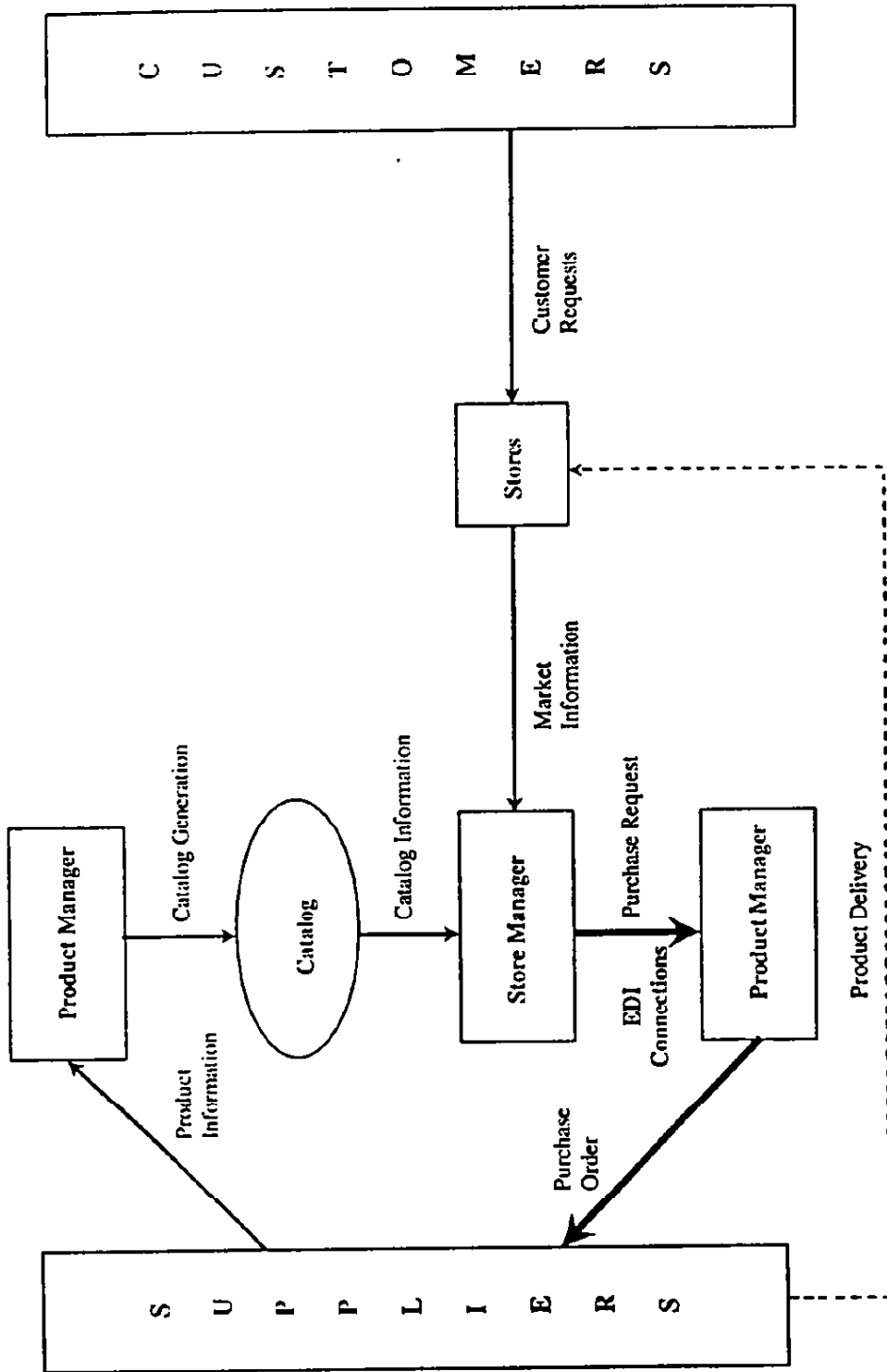


Figure 4.1 Operations at Leroy Merlin

DIY enthusiasts. Today, Leroy-Merlin offers millions of customers a wide range of products for DIY, building, decorating and gardening.'

Leroy-Merlin did not manufacture any of the products it markets; it bought them from about 4000 suppliers, including 1000 suppliers with whom it dealt on a regular basis. Of the suppliers, 90% were located in France with the remaining 10% in Italy, the UK and Taiwan. The main competitor was Castorama; it had a slightly larger market share and operated in a similar fashion. Leroy-Merlin stores existed mainly in France. However, in 1989, the company had started doing business in Spain where it owned three stores in 1992. Sales in 1984 had been about FFR 3 billion (ECU 0.46 billion) and were expected to reach FFR 6 billion (ECU 0.9 billion) in 1992.

The Information Technology (IT) department was a centralized function based in Noeux-Les-Mines employing 50 people. The IT infrastructure at Leroy-Merlin was well developed. This had been a key factor in the implementation of the Electronic Data Interchange (EDI) application which had required three internal IT professionals. The company outlet stores extensively used bar code scanning both at the point of sale (POS) and at the merchandise delivery level. The scanned information was stored in each store on a back-office computer and was used for generating stock control and purchase requests. All store information was forwarded to the IT department's centralized database where it was analyzed, and where all related management and accounting functions were performed.

THE BUSINESS PROCESS UNDER CONSIDERATION

Figure 4.1 shows Leroy-Merlin's operating procedure for product purchase and distribution. Each product manager was responsible for one or more product categories and selected a suitable range of products from the suppliers. All selected products were assembled in a catalogue which was then forwarded to each store manager. The store manager chose from the catalogue the set of products that was best suited to the needs of the local market. This selection list was sent electronically (however not yet in EDI standard) in the form of a purchase request to the headquarters which acted as a focal point for product ordering. The 59 stores were connected in real time to Leroy-Merlin's computers in Noeux-Les-Mines. Once the purchase request was received, the product manager sent the purchase order either by post or electronically (via EDI)⁴ to the supplier, depending on whether

⁴An internal interface transformed the electronic purchase requests received from the retail outlets into messages in EDI standard.

or not the supplier was connected to the EDI network. This process was done in batch mode at the end of the day.

THE EDI PROJECT

The Beginning

The idea to use EDI originated in 1988 from middle-level IT managers. During the decision process, Leroy-Merlin's IT manager did not really consider the possible strategic impact of the project, but rather focused on how EDI could benefit the company in its daily operational work. The expected main benefits consisted of: (1) reducing paper and administrative work; (2) reducing lead time and inventory; and (3) reducing re-entering of data and transmission errors.

A contributing factor motivating the introduction of EDI was that the repetitive strikes and long delivery times by the postal service had been causing high lead times, and had been making the overall ordering process inefficient by being totally dependent on the PTT. Accordingly, there had been pressure from the stores to send purchase orders to suppliers in a more timely fashion and more accurately. Moreover, some high volume suppliers had expressed an interest in EDI.

Top management initially was not involved in the project for two reasons. First, EDI had not appeared to have strategic implications. Second, the implementation budget had been relatively small (FFR 50 000 (ECU 7600)) and therefore had not needed top management approval. Once the project had been successfully implemented, it had been 'sold' to the product managers who were responsible for the commercial policy, reference marking, orders generation and dispatching. They were also responsible for making the necessary improvements to fulfil customer needs. Very soon all of them recognized the potential benefits of the EDI application and subsequently promoted it within the company. This resulted in *a posteriori* top management support and even pushed for further EDI development. Product managers also showed enthusiasm for and interest in pursuing EDI.

The Implementation Process

The main factor in the implementation process was the choice of the network and the EDI standard to adopt. The availability and widespread use in the industry of GENCOD⁵ and ALLEGRO⁶ convinced

⁵GENCOD (Groupement d'études de normalisation et de codification) was a private French institution that nationally provided product codes and offered the ALLEGRO service.

⁶ALLEGRO stands for 'Automatisation des Liaisons avec les Langages EDIFACT et GENCOD par Réseau d'Ordinateurs'. It was an EDI service offered by GENCOD since 1989. ALLEGRO ran on a central server managed by the French computer company BULL.

Leroy-Merlin to select this system platform. Probably Leroy-Merlin would not have started such an EDI project if there had not been any standard third-party network and EDI services available.

ALLEGRO could be accessed through various methods: the X.25-based TRANSPAC network,⁷ the telephone network and the Integrated Services Digital Network (ISDN) (see Figure 4.2). The choice of the network mainly depended on the volume of transactions between the two business partners. Most companies had adopted the telephone network, unless they had already been connected to an alternative network (TRANSPAC or ISDN).

Two types of PC stations could be used: a dedicated station or a general-purpose one. The former might be used if the receiver, also equipped with a dedicated station, wanted to receive messages directly without having to connect to the central server. For the latter, sending and receiving messages could only be done through the central server.

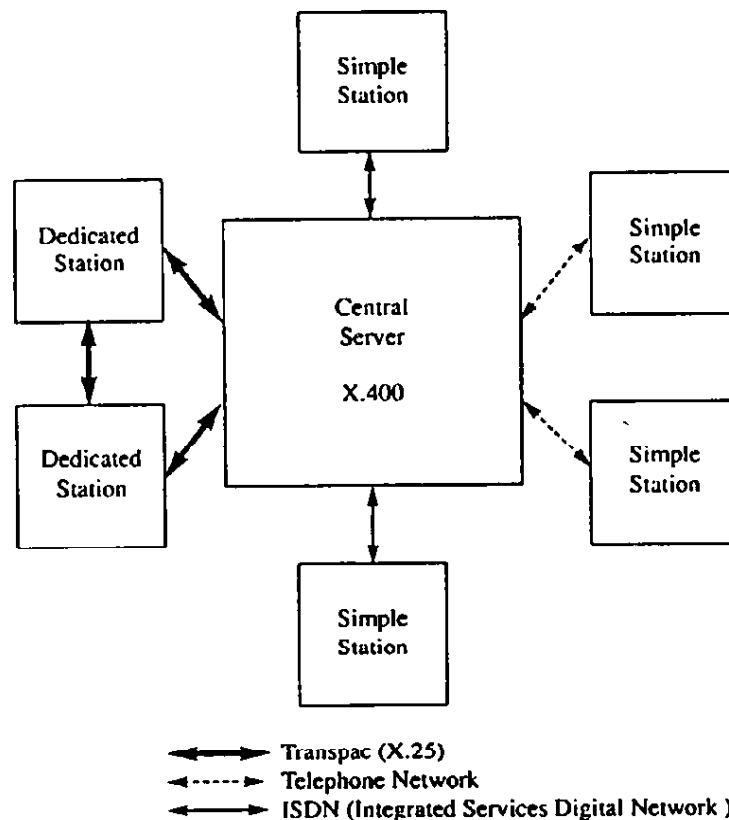


Figure 4.2 ALLEGRO access methods

⁷Transpac was a public packet-switching data network that was used to connect the companies' computers to the ALLEGRO server.

In addition to subscribing to the ALLEGRO service, companies needed to build a front-end interface to their internal information system. Such an interface could either be purchased or developed in-house. As soon as those two steps were accomplished, the EDI link became fully operational. The only remaining task for a company such as Leroy-Merlin was convincing/motivating its business partners (e.g. the suppliers) to also adopt the system.

ALLEGRO had been used in a variety of industries; however, it was mostly adopted in the DIY sector with a penetration rate of about 40% of all EDI users in this industry. Through ALLEGRO, a user (e.g. Leroy-Merlin) sent formatted messages as specified by either the GENCOD or EDIFACT standards. These messages got transmitted to an ALLEGRO 'mailbox' from where the receiver (such as the supplier) retrieved them for internal processing (see Figure 4.3). Up to autumn 1992, 12% of ALLEGRO traffic consisted of EDIFACT-based messages.

First EDI Partners

At the beginning, Leroy-Merlin selected a couple of suppliers as its first EDI partners for the project. It chose the ones for whom EDI would be most valuable both from a supplier's and from its own perspective. To do so, Leroy-Merlin ranked its suppliers in order of importance. The criterion used was not the purchase value to the supplier but rather the total number of purchase orders and the number of

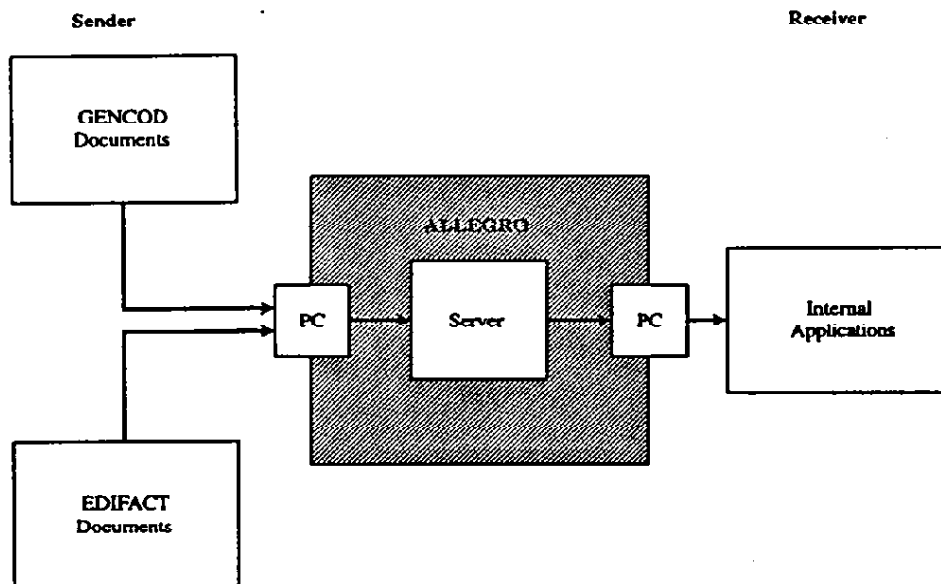


Figure 4.3 The EDI network at Leroy-Merlin

product lines per order. Each product line corresponded to an order of one product with a specified quantity, delivery date and estimated price.

Leroy-Merlin was able to convince the suppliers with whom it had a high number of orders to switch to EDI due to the foreseeable benefits of reducing input errors and processing cost per order. At the beginning, Leroy-Merlin reached an agreement with a couple of suppliers in order to jointly install and test the system. For a period of 2–3 weeks, both EDI and the traditional paper-based approaches were used in parallel. As soon as the validity of the EDI system had been 'proven', the traditional procedure was abandoned.

Resistance Towards the EDI Project

In spite of the successful introduction of the system with some suppliers, the project faced some external resistance from other suppliers. The resistance came mainly from those suppliers who had a limited number of product lines and thus received only a few purchase orders from Leroy-Merlin. Therefore, they were not motivated to switch to EDI mainly due to the cost involved (FFR 20 000 to FFR 60 000 (ECU 3040–6120)). Furthermore, many suppliers who were in the middle of restructuring their own information systems were reluctant to adopt EDI because of the incompatibility with their existing IT platform. Others had already been connected to other systems such as ATLAS 400,⁸ General Electric's Information Service or IBM's Information Network⁹ and were less inclined to implement EDI through ALLEGRO as promoted by Leroy-Merlin. Product managers were assigned the task of convincing their suppliers to adopt the EDI system; but the time they spent on this task varied greatly, explained Patrick Fontaine, Manager of the EDI Project at Leroy-Merlin:

Only about 20% of our total time consumption has gone into the installation of the interface between the supplier and our headquarters; we have spent the remaining 80% convincing and motivating potential partners to hook onto the system. On average, a supplier accepted to adopt ALLEGRO within one month of the initial discussion. It usually went well and quickly with those suppliers who designated a person to take care of this matter and be our contact. However, with some suppliers, it has taken as long as one year.

⁸Atlas 400 was a publicly-available electronic messaging system based on the X.400 standard.

⁹Although all these systems used the same GENCOD language, they were not interconnected, therefore requiring that a company subscribe to the same service as its trading partner.

The medium sized suppliers were the ones who easily accepted to adopt the EDI system suggested by Leroy-Merlin. The large suppliers often had too much rigidity and bureaucracy to accept EDI. The small ones did not have the IT infrastructure nor the skills to adopt EDI, and for them the solution was often a costly outside service. Although Leroy-Merlin did business with some suppliers who did not use EDI, several product managers decided that, after a certain date and for certain products, they would deal only with those suppliers who had implemented EDI or were willing to do so shortly.

As far as internal resistance from Leroy-Merlin personnel was concerned, Patrick Fontaine said: 'EDI has not encountered much internal resistance. This is mainly due to the fact that the EDI implementation has not yet changed the organization and the way people work. However, we expect that EDI might face some resistance in the future when new phases get implemented.'

Security and Legal Aspects

Security and legal aspects had not really been considered during the implementation. Patrick Fontaine explained:

So far, there have not been any problems concerning those issues. This is mainly due to the high quality and reliability of the ALLEGRO service, which has several mechanisms in place to ensure data integrity. Both Leroy-Merlin and our distributors keep an electronic copy of the transaction which could be used to compare transactions, track errors and problems if necessary. As far as I know, within the last four years, there has been only one case where the central ALLEGRO server was down for about thirty minutes. Since we operate in batch mode, this incident did not have any dramatic impact on any participant's operations.

The System at Work

At Leroy-Merlin a dedicated PC was linked at one end through TRANSPAC to the ALLEGRO server and at the other end to the main computer of the company. It allowed Leroy-Merlin to send data directly from its information system to the suppliers' mailboxes on the ALLEGRO server, and to retrieve data from their mailbox on the ALLEGRO server to the company's computer.

At the supplier site, another PC played a similar role to the one of Leroy-Merlin. Some suppliers had not yet linked the ALLEGRO PC to their own information system and therefore had to re-enter the data manually into their own system.

For the time being, Leroy-Merlin had only implemented one EDI service, the electronic processing of purchase orders. The sequence of operations was fairly simple. Once the purchase order was generated on Leroy-Merlin's information system, it was formatted using the appropriate GENCOD standard and sent, via the PC, to the supplier's ALLEGRO mailbox. At regular time intervals, the supplier retrieved purchase orders from its mailbox on the ALLEGRO server. If the supplier's ALLEGRO PC was integrated into an internal IT application, the order got automatically transferred for further processing. Otherwise, the order data needed to be entered manually in the supplier's system.

However not all Leroy-Merlin suppliers had, like Francaise de Métallurgie, a PC dedicated to ALLEGRO. Roussel as well as Cuivrierie Centrale, two suppliers of Leroy-Merlin, used a shared PC to connect to ALLEGRO. Said Mrs Morand from Cuivrierie Centrale: 'We have been using the system for almost three years now. We cannot dedicate a machine to it, and that constitutes a drawback. Sometimes, we want to access our ALLEGRO mailbox, but either our machine is used for other tasks, or we cannot connect to the server due to a busy line.'

However, in spite of this shortcoming, Cuivrierie Centrale, like many other suppliers, was satisfied with the overall performance of the system and certainly did not want to go back to the previous paper-based operating procedure. The cost and time savings along with the added convenience were cited as being the major benefits of using ALLEGRO. William Ben Said from Francaise de Métallurgie elaborated: 'Today, 15% of all purchase orders are electronically processed. We also send through the system delivery notices and, starting next March, it will be the invoices. There the cost savings will be tremendous: from FFR 30-40 (ECU 4.5-6) per invoice today to a mere fraction of one franc.' (ECU 0.15)

Another benefit for some suppliers was freeing personnel previously charged with keying in data. William Ben Said commented: 'We did not lay off people, but we assigned them to other tasks. They now deal with customers and help us sell more.' However the system had some drawbacks and constraints. Mr Ben Said explained: 'There are different norms and standardization is very slow. The ideal is to have one uniform system through which we can do business with all our customers and partners.'

There was also a slight disappointment in the present number of system users. Mrs Léger, from Roussel Co. added:

Like many other suppliers, we were 'pushed' by some of our customers to use ALLEGRO. We believed in the benefits that it gives and we thought that it would attract a lot of users. However this is coming very slowly. Some

companies have been confused by the different systems available out there; others preferred to take a 'wait and see' attitude.

ALLEGRO: A STANDARD IN THE DISTRIBUTION SECTOR?

ALLEGRO versus ATLAS 400

GENCOD Corporation managed both the national product codification standard (also referred to as GENCOD) as well as the ALLEGRO service. This was an attractive feature for Leroy-Merlin since it had to deal with only one company. Had ATLAS 400 been chosen, Leroy-Martin would have ended up having two partners: TRANSPAC Corporation (which managed ATLAS 400) and GENCOD which was in charge of the product codification standard.

Comparing the two systems, Miss Virgili from GENCOD Corporation, said: 'ALLEGRO is a system specially developed for the distribution sector and is not a generalized system like ATLAS 400. I see this as an advantage; the drawback is that it runs only on PCs while ATLAS 400 also operates on minicomputers and mainframes.'

Choosing between a general-purpose system (such as ATLAS 400) and a sector-specific one (such as ALLEGRO) had some business consequences. José Gauvin from TRANSPAC Corporation explained:

You have to think about the access methods that a system provides. ATLAS 400 allows the use of different computing platforms as well as Telex, Teletex and Fax. The latter methods [which are also not supported by ALLEGRO] are especially important for users who are not subscribers to the system.

Another differentiating factor between ALLEGRO and ATLAS 400 was the international connectivity of the system as explained by José Gauvin:

A user abroad can access ATLAS 400 through the telephone network, INFONET or any public service that is based on X.400. For example, a subscriber to MCI Mail in the US or to TNS in the UK can access our system. Moreover, ATLAS 400 allows the use of both GENCOD as well as EDIFACT formats.

In spite of the distinctive features (in terms of usage flexibility and functional capabilities) that ATLAS 400 offered, ALLEGRO was still the most widely used system in the distribution sector according to José Gauvin:

We are 'bothered' by some sector-specific systems like ALLEGRO. This system must open up [to other existing ones]. Technically, they can do it. A user subscribing to ALLEGRO should be able to communicate with those subscribing to other systems, e.g. ATLAS 400.

Under the pressure of their customers, such as Leroy-Merlin, some suppliers had to adopt two or more different EDI servers. This was the case for example at Cuivrerie Centrale, where the company ended up adding a front-end interface to its system allowing it to access ALLEGRO, ATLAS 400, as well as other servers. Such an interface, usually developed by software houses, was the 'best' solution to the multiple-server problem and therefore it was becoming commonplace in the absence of a link between the VANS companies.

Advantages and Disadvantages of Adopting a Standard

The use of an industry or sector-wide standard necessarily led to a close linkage between Leroy-Merlin on the one side and GENCOD (ALLEGRO) on the other. The main advantage for Leroy-Merlin of such a close relationship was the use of EDI services without taking any risk in developing them. Through ALLEGRO, Leroy-Merlin had access to more business partners in the distribution sector than through any other system currently operational in France. However, such a relationship also had important drawbacks with major consequences for the strategic impact of EDI. Leroy-Merlin as well as other users of the standard were totally dependent on GENCOD, i.e. they could not set the pace in the industry and therefore could not get first-mover advantages. Since any competitor connected to the system could at any time use exactly the same ALLEGRO services (which Castorama had done),¹⁰ the EDI system could not provide a sustainable competitive advantage even in the short run.

COSTS OF LEROY-MERLIN'S EDI APPLICATION

According to Leroy-Merlin, the EDI application costs that it had incurred as well as those of its suppliers were as follows:

	<i>Set Up Fee</i>	<i>Monthly Fee</i>
ALLEGRO Subscription:	FFR 1500	FFR 250
Equipment:		
PC 286 ¹¹	FFR 9000	
X32 card with integrated modem (ALLEGRO card II)	FFR 7000	
Windows 3	FFR 1790	
Subscription to Transpac X32	FFR 370	FFR 50
Total	FFR 19 660	FFR 300

¹⁰Castorama, which originally decided to be on another system (Atlas 400), decided later to be connected to ALLEGRO as well (due to the large number of suppliers connected to ALLEGRO). The number of Castorama's suppliers did not change and they maintained the same business relationships with them.

¹¹The PC could also be used for other tasks; it was needed only for approximately 5 minutes per day.

In addition to these expenses, any participating company had to establish an interface between its ALLEGRO station and its internal information system. The development or acquisition¹² cost for such an interface varied between FFR 10 000 (ECU 1520) and FFR 50 000 (ECU 7600).

BENEFITS OF LEROY-MERLIN'S EDI APPLICATION

Quantifiable Results

1. *More than 50% of purchase orders were sent via EDI.* Three years after introducing EDI, Leroy-Merlin had successfully implemented the electronic purchase order with about 160 suppliers. Although this figure represented only 16% of its regular suppliers, it amounted to about 55 % of the total number of order lines and about 30% of the total purchases' value. Regarding future prospects, Patrick Fontaine thought that about 300 of Leroy-Merlin's 1000 regular suppliers were 'potential EDI candidates'.
2. *Reduction of lead time between the order's entry at Leroy-Merlin and its acknowledgement by the supplier had been reduced from an average of 5 days to about 1 day in 1992 (see Figure 4.4).* This factor allowed Leroy-Merlin to order more frequently and in smaller quantities. It was estimated that this had *increased sales by 1% since the more frequent products deliveries* had led to less out-of-stock items. Furthermore, the more frequent deliveries had enabled Leroy-Merlin to decrease its inventory levels, and thus to reduce working capital requirements. The company had also been able to save space for inventory. Over and above these quantifiable benefits, the reduced lead time had resulted in *an improved customer service due to less out-of-stock items.*
3. Furthermore, Leroy-Merlin's EDI project had *reduced the cost of sending about 200.000 purchase orders per year.* With the traditional approach of sending orders via mail or fax, the average 'mailing' cost per order was about FFR 3 (ECU 0.46). The EDI system had significantly reduced this cost to FFR 0.4 (ECU 0.06). Therefore, although the number of orders had increased by about 15% due to the technical capabilities of the system and the convenience of placing more frequent orders, the total order cost had been significantly reduced.

¹²Leroy-Merlin provided its suppliers contact information of software companies offering such interfaces.

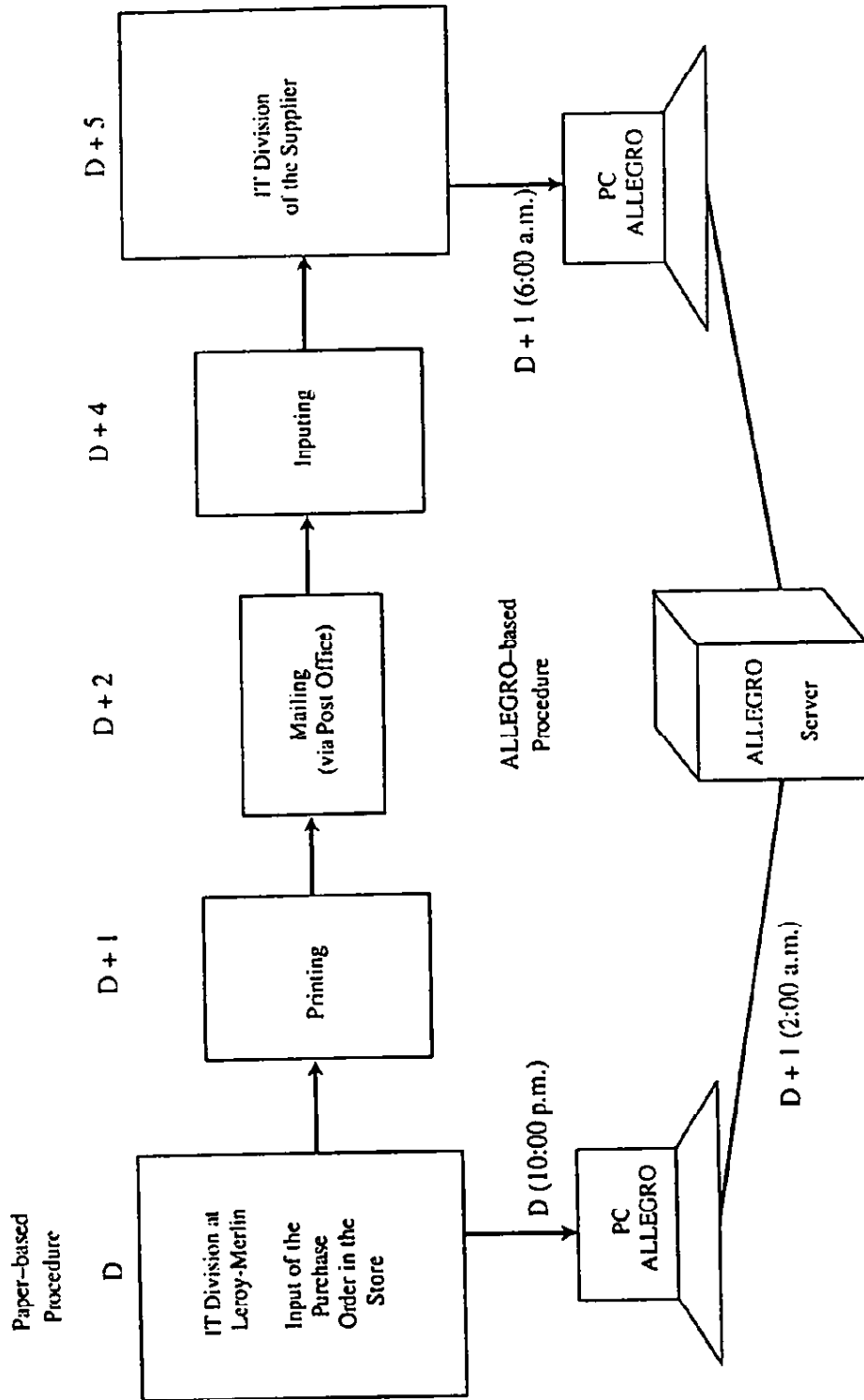


Figure 4.4 Placing an order

Qualitative Results

The qualitative results might be summarized as follows:

1. Less paper and administrative work: EDI had reduced the amount of paper and administrative work, for example it was no longer necessary to put the orders in envelopes. The time spent on the phone with the suppliers had also decreased.
2. Independence from the postal service. Not only had the lead time been greatly reduced, but Leroy-Merlin and its suppliers did not depend on the postal service any more, an important development given the frequent strikes in France.
3. No more data re-entering at the supplier's site.
4. More reliability and accurate data. Since data was entered only once, there were no longer various copies of the same data in use (no data redundancy).
5. No tangible effects on the organization. At this stage, EDI had not changed the organization's structure and processes and had only marginally affected the way buyers work.

OUTLOOK AND FUTURE ISSUES

Leroy-Merlin worked—with different intensity—on four main areas to develop further its EDI applications. Patrick Fontaine explained:

Our two main areas of interest are the number of connected suppliers and the scope of the integrated functions. We certainly count on a steady increase in the number and percentage of our suppliers connected to us via EDI. At the same time, we need to expand the functions and processes covered by our EDI system. To exchange only purchase orders was a good start, but by now it is time to integrate additional functions.

In the near future Leroy-Merlin intended to exchange with its suppliers via EDI, the delivery bill and the product characteristics. For every new function, a new set of GENCOD messages had to be created and therefore a committee had to approve it. For dispatch orders and electronic billing, standardized messages had been created. While the electronic exchange of the dispatch orders was currently not available due to the necessary organizational adjustment at Leroy-Merlin, AL-LEGRO's electronic billing messages were still waiting for approval by the French taxation authorities.

Leroy-Merlin's final goal behind its EDI applications was to eliminate all repetitive tasks that did not add value. Patrick Fontaine

elaborated: 'At each point of sales the ideal would be to have salespeople spending 100% of their time taking care of our customers'.

Another important development for Leroy-Merlin's EDI system was extending its usage outside of France. In this case, the messages were not transferred into the GENCOD format, but to the internationally common standard EDIFACT/EANCOM, which could also be handled by ALLEGRO. Miss Virgili explained: 'Using ALLEGRO abroad is not problematic. It can be done in two different ways: either through an ALLEGRO station based in the host country or by interconnecting the national systems, that is [linking] ALLEGRO with its foreign counterpart such as AECOM in Spain.'

To exchange data electronically with suppliers located in The Netherlands, Austria, and Belgium, local ALLEGRO stations had been installed at each supplier's site in 1992 (see Figure 4.5). For example, such a station was now available at ALLPAC INTERNATIONAL, a Dutch supplier of Leroy-Merlin. It allowed reducing the delivery time from 14 days to just one week. In 1992, ALLPAC INTERNATIONAL delivered directly from The Netherlands to Leroy-Merlin's 59 retail outlets. An even more ambitious project, sponsored by the European Community's program TEDIS (Trade EDI Systems), was currently implementing an electronic interconnection between the French ALLEGRO system and its Spanish counterpart AECOM. A further development in this area concerned setting up INFONET, a European-wide electronic platform.

The last area for further development of Leroy-Merlin's EDI application consisted of technical enhancements which were mainly beyond the company's control. One foreseeable trend for the next three to five years was Interactive EDI (IEDI). While current applications of EDI were usually batch-processed, future applications would allow a user to interrogate the partner's computer (up to some mutually agreed levels).

Reflecting on the EDI project at Leroy-Merlin, Patrick Fontaine summarized:

I consider the EDI project at Leroy-Merlin as a clear success. We achieved what we expected within a relatively short time frame [2 years] and with a small budget. Furthermore, I think, it shows that an EDI application does not need to be expensive and complex when it is well thought through and really tailored to the company needs. The incremental implementation process has proven to be the right one for our project. We have started with some of our suppliers and with only one electronic document, the purchase order. Although sometimes we are considered as being at the forefront of EDI in our industry, we think that we are still in an early EDI stage. We have a long way to go in order to increase the level of integration, the number and types of transactions handled, and the number of business partners.

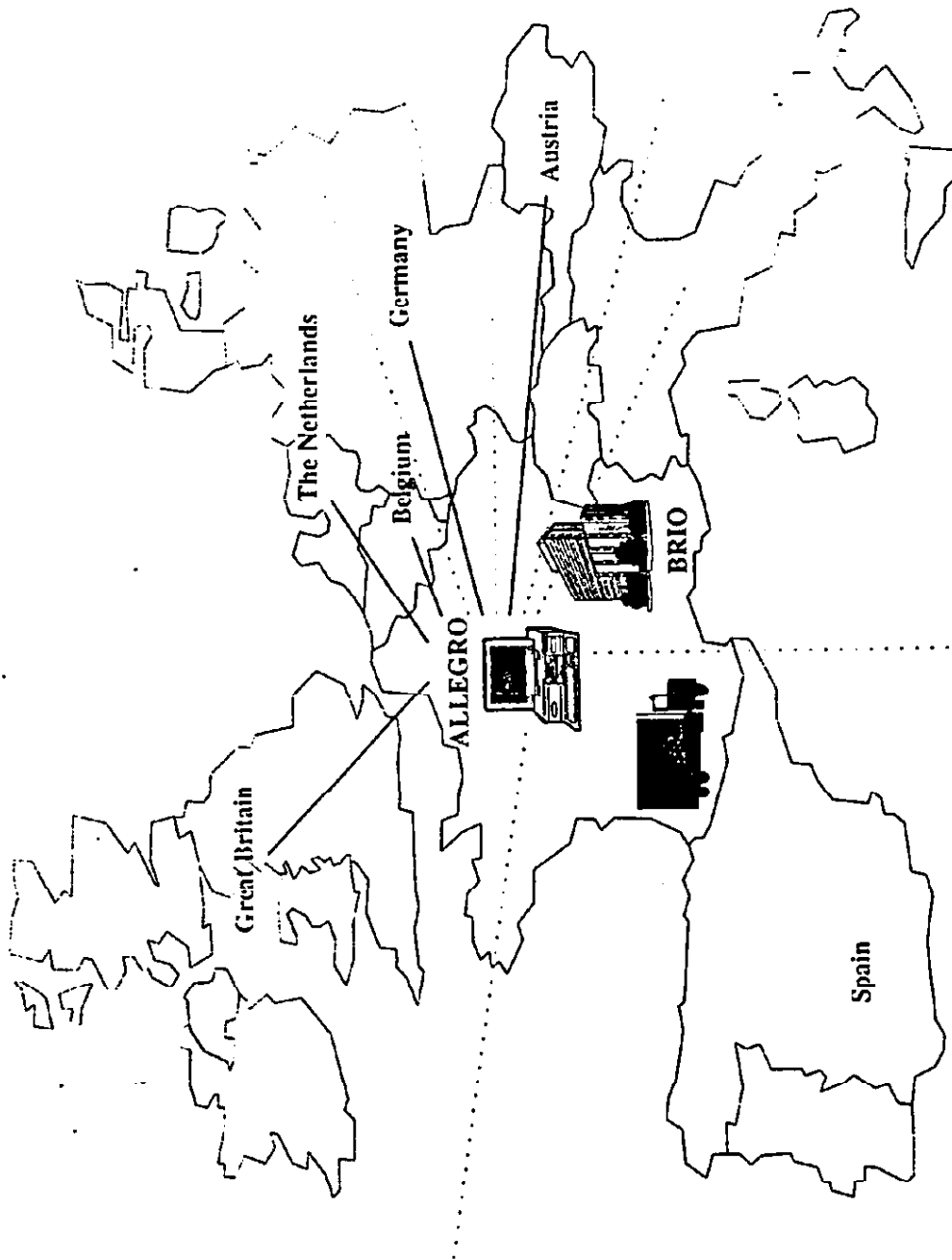


Figure 4.5 ALLEGRO—an international service