

Competing through EDI at Papeteries Brun Passot

Making paper passé

We've tripled gross revenues in five years, while maintaining manpower at a constant level. The increased efficiency came primarily from implementation of EDI [electronic data interchange].

Jean-Philippe Passot, Deputy Managing Director,
Brun Passot

Industry overview

The office supplies industry in France is highly fragmented; the principle players are the manufacturers, distributors, and customers. Many highly specialized manufacturers are often dedicated to a single product line. The distributors, like Brun Passot, are of different sizes and degrees of specialization. The total number of distributors in France is about 5,000. This figure sharply contrasts with the one in Great Britain where approximately 100 distributors share a slightly larger market.

Approximately 25% of the French office products suppliers market is held by the four main companies Guilbert, Gaspard, Saci, and Brun Passot. The remaining 75% of this FF11 billion¹ market is divided among small players. The annual growth rate of the market is 3–4%; it is constant and mainly driven by the high level of innovation and the number of new products.

The size of the office supplies market in the European Community is FF175 billion, with the two main players being Germany and Great Britain who have a share of respectively FF35 billion and FF15 billion. Some large American and British firms are expected to approach the French market over the next few years. Their high volume and global operating capabilities are likely to have a severe effect on the French industry.

Company overview

Brun Passot is a French PME² founded in 1949 by André Passot as a family business located near Lyon. The 60-person company initially specialized exclusively in paper processing, a renowned business in the Rhone–Alpes region. In 1970, it started diversifying its activities into the distribution of office supplies and products related to computer and office equipment.

In 1992, Brun Passot employed 160 people including a salesforce of 22 persons. It had recently significantly enlarged its direct customer base to include major industrial and service organizations (e.g. Renault, Alcatel, Dassault, Pêchiney, Crédit Lyonnais, Shell, Philips, and DEC France) as well as several governmental agencies (such as Electricité de France, France Télécom, the French Armed Forces, and the national railroad company SNCF). Through its network of 11 branches and one warehouse centre, Brun Passot offered 12,000 products to 6,000 customers at 15,000 delivery locations throughout France. From a mere FF15 million in 1970, the company's turnover reached FF254 million in 1991.

The growth of Brun Passot over the years coupled with higher diversification and more products and partners (customers and wholesalers) has increased the business complexity for the company. In the early seventies, its top management decided to use IT to

¹ US\$1 = FF 5.85, as of 25 August 1993.

² PME ('Petite et Moyenne Entreprises') refers to small and medium-sized enterprises.

This case was written by Tawfik Jelassi, Associate Professor at INSEAD. It is intended to be used as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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help manage Brun Passot operations. In 1978, the first step consisted of networking the corporate headquarters with the central warehouse, providing a platform for developing real-time applications. Aware of the potential of this new IT platform and at the stimulus of several large customers, Brun Passot established an electronic link between their purchasing departments and Brun Passot's supply information system. Several routine tasks, including orders generation, inventory inquiries and statistics, could now be handled in a more efficient, less-paper manner resulting in a number of benefits for both parties.

Brun Passot's business strategy

According to a national study,³ an employee of the service or manufacturing sector uses on average FF2,200 of stationery (i.e. writing materials) per year; this figure excludes the purchase of paper, preprinted forms, and computer-related equipment. Purchasing this stationery requires, on average, 16 purchase orders, each containing 70 product lines. Brun Passot has estimated the costs for companies, to process these orders and manage the subsequent inventory, to range from 38 to 145% of the purchase value⁴ (see Exhibit 1). As Jean-Philippe Passot said:

Companies suffer from what I call 'the sugar syndrome'. On average they stock sufficient office supplies to cover 4 to 10 months of consumption.

In 1980, Brun Passot sought to distinguish itself from the competition by offering a distinctive customer service based on the concept of 'just-in-time' purchasing (or telepurchasing). Because of telepurchasing's potential for reducing the costs of acquiring, storing, and managing office products, the company saw it as a

means to win the loyalty of existing customers. Other customers, it was hoped, could be stolen away from its rivals. Such benefits are especially important in the highly competitive office supplies market where profit margins are small (3–4%) and price sensitivity very high. Jean-Philippe Passot added:

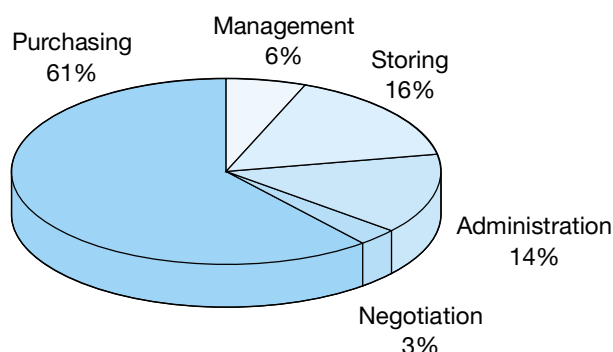
The impact of such a change in the relationship [with the customer] shifts the entire focus of classic commercial procedures, wherein the seller presses the buyer according to his own interests [in] selling a large volume of goods with a high profit margin.⁵

Brun Passot's telepurchasing applications

In 1980, in order to implement telepurchasing, Brun Passot considered setting up IBM computer terminals at customer premises which would be connected to its supply information system through a specialized communication line. However, it quickly realized that only a few customers could afford the cost of such an electronic link. It then found in the emerging videotex platform, which became publicly available in France in 1982, an interesting vehicle for developing the telepurchasing service.

Three reasons led Brun Passot's management to adopt Minitel: First, France Télécom provided the terminal free of charge (this has changed since 1990); second, Minitel was widely used throughout France (there were 120,000 terminals distributed in 1983 and this number was expected to increase significantly in time⁶); and third, the Minitel terminal

Exhibit 18.1 Costs of office supplies for customers (for a purchase of FF2200/office worker/year)



Source: Brun Passot.

3 A study made in France in 1989 by the Institut National des Statistiques et des Etudes Economiques (INSEE), Paris.

4 These figures are based on a representative sample of 80 customers with a total number of employees ranging from 300 to 5,000.

5 'Telesupplies, the Brun Passot Bureautel System', *Minitel News*, No. 2, 1991.

6 That prediction was confirmed since the distribution of Minitel terminals increased to 531,000 in 1984, then to over 2 million in 1986, and has reached approximately 7 million in 1992. In addition to electronic telephone directory, Minitel terminals offer information services, professional databases, banking services, electronic mail, order processing, cash management, portfolio management, and accounting. (For more information on the development and diffusion of Minitel, see: Cats-Baril, W. and Jelassi, T. 'The French Videotex System Minitel: An Example of a Successful Implementation of a National Information Technology Infrastructure', INSEAD Working Paper Series, 1993. For examples of business applications of Minitel, see, in the INSEAD Case Study Series, Jelassi, T. and Loebbecke, C. 'Home Banking: An IT-based Business Strategy or a Complementary Distribution Channel – CORTAL versus Crédit Commercial de France', 1993; also Jelassi, T. and Murthy, G. 'Minitel, A Home Retailing Application', 1993).

allowed for connection to a computer network. With the help of France Télécom, Brun Passot developed Bureautel in 1982, the first Minitel-based telepurchasing service offered in France. This non-EDI application is one of the three telepurchasing services that the company has developed, the other two being a basic EDI application (called SICLAD) and an advanced one.

Bureautel 2000

Bureautel 2000 was developed in one year by four members of Brun Passot's nine-person information technology group. In March 1983, its two application modules became available; they were aimed at two different user categories:

- One application module concerned supply, which allowed the sending of electronic orders in a validated and secure way (each customer has an identification number and a password).
- The other concerned managerial decision-making; it allowed routine inquiries of Brun Passot's inventory and provided reports on the status of purchases to date and cash flow.

An enhanced version of Bureautel, developed in 1989, allowed customers to follow up on their supplies. Based on the LECAM⁷ technology, it gave users direct access to Brun Passot's order entry application. Brun Passot issued its own credit card having a pre-defined maximum purchase limit per customer department for a certain time period. As orders were placed, the value of the items was subtracted from the department budget. Using reports provided by Bureautel, users/departments were able to trace their expenses. The benefits of the system included: (1) it substituted for a purchase order and hence reduced paper work; (2) users no longer needed to request management approval or go through a centralized purchasing department to order office supplies; and (3) careful monitoring of the use of their office supplies budget was ensured since they could not exceed it without getting their supervisor's approval. This card was not used for actual payment; instead orders resulted in the issuance of a regular invoice.

Customers with any computer equipment were attracted to Bureautel but others found it less appealing. Some large customers pushed Brun Passot into developing a PC-based telepurchasing service. As

Olivier Figon, Head of the IT Department at Brun Passot, explained:

Some of our customers refused [to use] Minitel and strongly preferred the PC. Not developing an application on the PC, which was becoming widely used in companies, would have resulted in one missing out on a whole market.

Initial EDI development

The first EDI application at Brun Passot was developed in-house in 1985 by a five-member team. The software, called SICLAD (Système Informatisé de Commande Locale pour Approvisionnement Décentralisé), was PC-based. As Olivier Figon said:

The PC had several advantages over Minitel. It is cheaper for the customer since, with the PC, data input is free⁸ while with Minitel he pays for the phone connection while keying-in the data [the purchase orders]. Moreover, Minitel has no memory storage capability; we can't save a file on it. The PC is also faster than Minitel, more user-friendly, and allows the use of colors and having a LAN [local area network] configuration.

The SICLAD software was offered free of charge to Brun Passot customers; it ran on Macintosh and IBM-compatible PC environments either in stand-alone or LAN configurations. The LAN version supported up to 32 customer PCs, with anyone permitted to access the external network. This provided centralized control over placing orders, while still giving customers the convenience of generating from multiple offices. Olivier Figon said:

Apart from some bugs in the application programs which we fixed, the other technical problem that we faced was due to the type of network our customers had. Even those [networks] with the same type, such as Novell or Ethernet, didn't work from the start.

SICLAD allowed customers three ways to access the Brun Passot server by way of the customer's private automatic branch exchange⁹ in three different ways: first, over the telephone network through the use of a

7 LECAM (Lecteur de Carte à Mémoire) is a device that can be attached to a Minitel terminal to read magnetic-stripe cards.

8 The customer can key in a file his/her purchase orders before getting connected to the data network to electronically transmit that file.

9 A private automatic branch exchange (PABX) provides for the transmission of calls to and from the public telephone network and allows internal dialling from station to station within the company's premises. It also allows Brun Passot to determine the telepurchasing application used for placing an order (i.e. Bureautel, SICLAD-EDI, or point-to-point EDI) and hence to measure the volume of transactions made over each medium.

modem; second, over the TRANSPAC¹⁰ network; and third, over the French ISDN¹¹ network Numéris (see Exhibit 2). The choice of the path depended mainly on the volume of transactions that a customer has with Brun Passot.

Customers could use SICLAD to send purchase orders electronically and receive receipt acknowledgements. Invoices and catalogues were not available over the network. Olivier Figon explained:

Purchase orders and receipt acknowledgements are what I call peripheral documents. They don't directly impact the information system of the customer. This is not the case for products information and invoices which are both central to the customer files, databases and accounting systems.

Three technical limitations restricted electronic distribution of the catalogue and invoices. First, the typical PC did not have sufficient memory space to store a huge volume of data.¹² Second, more sophisticated software would have been required. Third, incompatibility of data formats would have required customers to rekey invoice data. Olivier Figon added:

To avoid entering the data in their [computer] systems, some of our customers asked us to develop a front-end interface between SICLAD and their internal IT applications. But we didn't want to get into this business. Plus, since each customer has a different IT system, how many interfaces would we have ended up developing?

An enhanced version of SICLAD, developed in 1989, used Numéris, the French ISDN service. It provided colour photos of each product using an image database. Customers accessed this database either by locally looking up the images of the 200 products¹³ stored on the hard disk of his/her PC, or by remotely

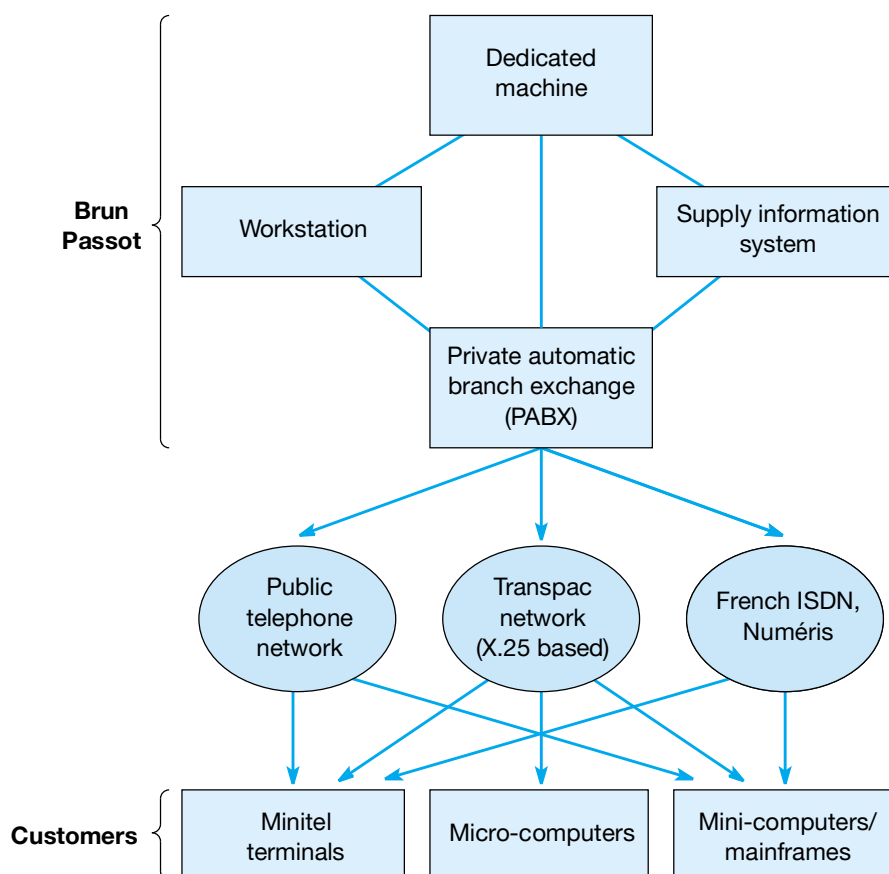
10 TRANSPAC (Transmission par Pacquets) is based on the X.25 packet-switching standard.

11 ISDN (integrated services digital network) is capable of handling simultaneously data, voice, text and image transmission over a digital network.

12 Storing just the 12,000 products catalogue would have required a minimum of 10 megabytes.

13 This figure represents the average number of office supplies frequently purchased by large customers and which correspond to products of ongoing consumption. These products slightly differ by customer (by a factor of 10%).

Exhibit 18.2 Access methods to Brun Passot's telepurchasing applications.



Source: Adapted from *Télécom Magazine*, No. 33, April 1990.

getting connected to Brun Passot's workstation. In the latter case, the entire image database for 12,000 products was accessible.

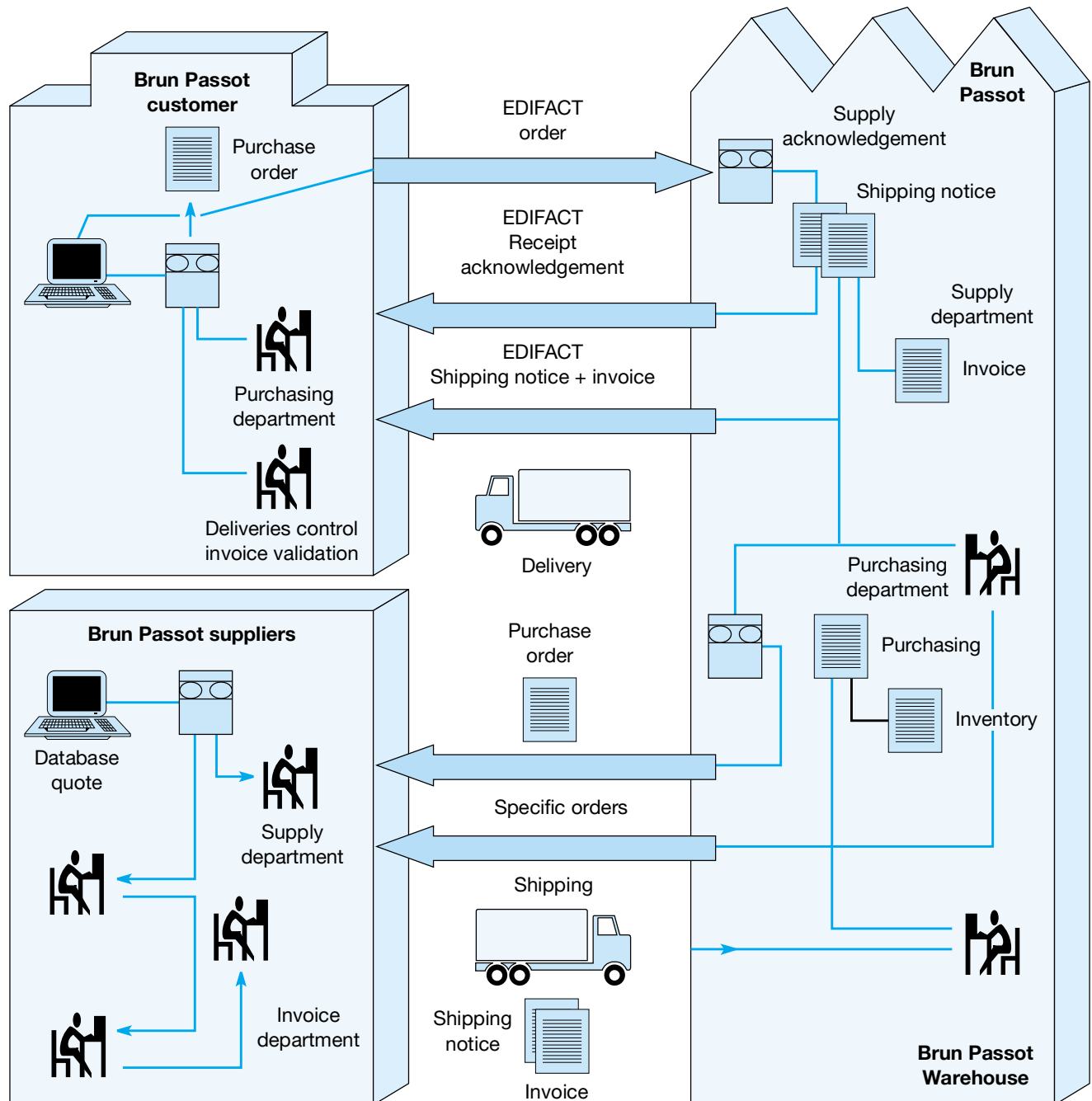
In spite of the added functionality, ease-of-use and convenience that the various versions of SICLAD brought over Bureautel, some of Brun Passot's large customers still did not want to adopt it. Olivier Figon explained:

Bureautel and SICLAD are [telepurchasing] services with a single supplier; they are proprietary systems of Brun Passot. What some of our large customers wanted are multi-supplier [telepurchasing] services. Their attitude represents an emerging trend in the market.

Advanced EDI development

SICLAD allowed customers to place purchase orders and receive the corresponding receipt

Exhibit 18.3 Information flows between Brun Passot and its business partners



Source: Adapted from *Télécom Magazine*, No. 33, April 1990.

acknowledgements. In order to offer other capabilities, Brun Passot developed in late 1989 an advanced EDI application through which it also electronically sent product files, delivery status reports, purchase quotes, shipping notices, invoices as well as payments and related bank details (see Exhibit 3). However, a hard copy of each invoice was generated for archival purposes. According to Monique Coupaud, Manager of the EDI Project at Brun Passot: 'We still print our invoices on paper, because electronic invoices are not yet recognized by the [French] judicial system.'

In late 1989, the French subsidiary of Digital Equipment Corporation (DEC) was the first Brun Passot customer to use the advanced EDI application.¹⁴ Shortly after this pioneering implementation, other large customers connected to the system, including Electricité de France, Elf Aquitaine, Péchiney, Matra and Spie Batignolles.

The EDI linkage between Brun Passot and its customers was made via a value-added network (VAN),¹⁵ France Télécom's ATLAS 400. Olivier Figon said:

VANs are best suited when you deal [electronically] with hundreds of business partners. They have good security since you don't 'enter' the computer systems of your partners. You leave messages for your customers in an [electronic] mail box from which you also retrieve messages sent to you.¹⁶

Establishing an EDI link between a customer purchasing department and Brun Passot's order entry information system require commitment and trust from both sides as well as a good understanding of the customer operating procedures. Jean-Philippe Passot explained:

In a business as banal as that of office supplies, you tend to get a lot of what I call flirtation between big companies and their suppliers. With EDI, you need the commitment of true love. Before we set up an EDI link with one of our customers, we study their logistics for as long as a year. This requires trust and openness from both parties. In the end, we know their supply patterns better than they do ... In order that the system really takes root in major companies, we set up a real partnership with the Computing Department as well as the Purchasing and Finance Divisions of our customers. This means that the system is integrated into the client company so it can evolve while taking into account the future needs of the users.¹⁷

Organizational/business changes induced by EDI at Brun Passot

Three actions by Brun Passot top management helped diffuse customers' adoption of the telepurchasing applications while building internal commitment. These actions, which also led to some organizational changes inside the company, were:

- *Creating in 1989 a new marketing unit* exclusively in charge of promoting the diffusion of SICLAD and in particular its Numéris version. This unit, which had three full-time members, had been participating in a variety of fairs and industry shows throughout France, hence helping the company salesforce.
- *Establishing in 1990 a new financial bonus* to reward each salesperson who would convince a customer to adopt the basic EDI system (SICLAD) or the advanced one. The bonus was paid in addition to the already existing financial reward for winning new customers.
- *Offering SICLAD free of charge:* Brun Passot top management believed that their business was to sell office supplies not computer software and that by giving the software and its related services (training, update, maintenance) for free, the company could attract some new customers.

Over a two-year period (from September 1990 through September 1992), the number of corporate SICLAD users drastically increased, from 15 to almost 100. Moreover, all the new large customers¹⁸ have adopted either SICLAD (80 implementations)

14 It was also the first EDI experience of this nature for the French subsidiary of DEC.

15 VAN (value-added network) is a network that provides additional value to basic leased lines. It connects computers and provides new services such as electronic mail, facsimile transmission, and enhanced terminal-to-computer communications.

16 Exchanged messages between the sender and the receiver were on the EDIFACT format (EDIFACT – Electronic Data Interchange For Administration, Commerce and Transport – is an international EDI standard suggested by the United Nations).

17 'Electronic documentation offers greater efficiency', *International Herald Tribune*, March 14, 1991.

18 Large customers account for about 90% of Brun Passot client base.

or the advanced EDI service (7 implementations). Olivier Figon said:

The larger number of SICLAD implementations was due to any of three factors. First, those companies [who adopted SICLAD] didn't have the required computer equipment for the advanced EDI service. Second, they were in the process of restructuring their information systems and they didn't want to add a new major operation. Or, third, they found the investment [required for the advanced EDI service] too heavy.

The advanced EDI service had also affected the organizational relationship of Brun Passot with some of its customers, especially the large ones. Olivier Figon explained:

We became in 1990 the single supplier of office products to DEC France. This evolution in the relationship with our large customers is quite typical. It also happened with Péchiney in Grenoble and Matra Espace in Toulouse.

However, the scale of this success was rather limited. Olivier Figon added:

Some customers, who have been using SICLAD, thought they should not deal with only one supplier. I find this nonsense. There is nothing strategic in [products such as] pencils, erasers, paper, staples and pens.

Investment in telepurchasing and resulting benefits for Brun Passot

For Brun Passot, the initial investment made for Bureautel and SICLAD amounted to a total of FF250,000 (FF150,000 for acquiring additional hardware to the existing large computers¹⁹ and FF100,000 for developing the software). Subsequent investment to purchase microcomputers as well as to use EDIFACT and Numéris amounted to FF300,000. Maintenance costs reach approximately FF100,000 per year, an expense covered by the FF280 monthly subscription fee to the system that only Bureautel users pay.

The return on this investment became visible rapidly. In 1984, Bureautel contributed 2% (or FF4.5 million) to total turnover with 18,000 electronic orders processed, a figure that reached 22% (or FF27 million) in 1988 corresponding to a volume of 180,000 electronic orders. In early 1991, the contribution of all three telepurchasing applications reached about 50% of total turnover²⁰ or a value of approximately FF120 million, with Bureautel contributing FF41 million, SICLAD FF28 million and

the advanced EDI application FF44 million. Brun Passot's management thought that, although the contribution of Bureautel reached a ceiling, that of SICLAD and especially the advanced EDI application would continue to increase over the next several years.

Moreover, the introduction of the telepurchasing applications at Brun Passot simplified the supply procedure and the related administrative work. This freed up 25 people to do more sales and customer visits. Telepurchasing also enabled the company to predict more accurately customer needs and, consequently, to have a better idea of what goods to order from the wholesalers and when it should be done. This improvement led to faster stock rotations (from 9 times in 1977 to 11 times in 1983 to 16 times in 1989) and, therefore, to reduced inventory management costs by 7%.

Qualitative benefits were also achieved. The telepurchasing applications enabled Brun Passot to differentiate itself from the competition by first establishing Brun Passot as an innovative user of new technologies and then by sustaining this advantage over time through the continuous enhancement of these applications. Jean-Philippe Passot said:

The development of our telepurchasing service has helped improve the image of our company. It has made for faithful clients, and at the same time, helped us improve our productivity.

Moreover, the videotex- and EDI-based offerings allowed Brun Passot not only to provide a quality service to its customers but also to view its relationship with them differently. Jean-Philippe Passot explained:

The development of this type of service represents the archetype of a new relationship that a company can establish with its suppliers. The service aspect becomes the basic component of a partnership between the two parties, as much because of increased productivity as due to the methods and culture it introduces. In this way, the 'goods' are relegated to their proper position, [that of] a qualified, quantified, regulated and controlled flow of physical objects.

¹⁹ The telepurchasing applications run on a PRIME 6350 computer (with a processing power of 10 MIPS), connected locally to a VAX 3400 (having 4.5 MIPS) and remotely to 5 other PRIME computers. There are 150 terminals, local and distant, connected to the network, as well as over 1,000 videotex terminals.

²⁰ The remaining contribution comes from sales made through the traditional modes (i.e. mail, telephone and fax).

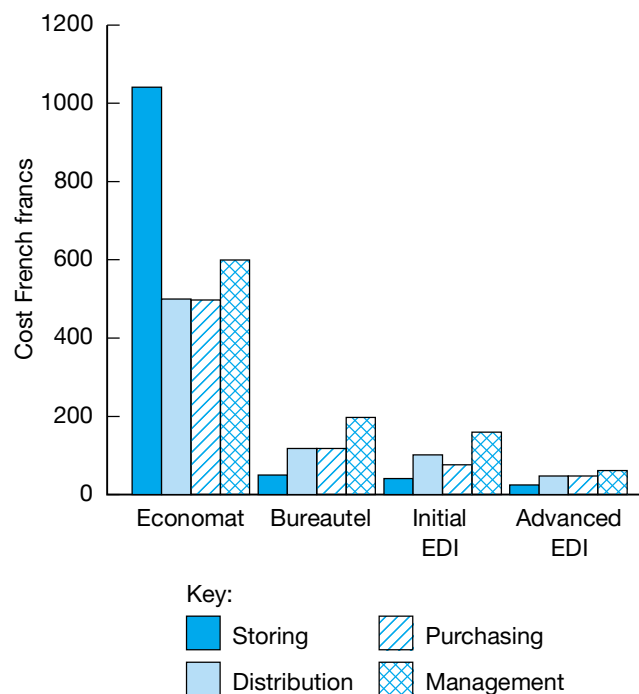
Customers' use of telepurchasing and resulting benefits

Today, Brun Passot's telepurchasing applications are used by 1,120 customers who connect to the system on average 400 times every day (approximately 10,000 times each month) for a duration of about 7 minutes per connection. The applications are mainly used for placing orders (78% of the traffic), but also for generating control reports (8%), sending e-mail messages (8%), and getting cash flow statements (6%).

Brun Passot claims that, based on a survey of 50 of its customers,²¹ its telepurchasing services can save companies 20 to 60% of their present office supplies budget.²² Compared to the traditional paper-based procedure, these services decrease the lead time by 2–4 days and reduce the rate of errors (due to re-keying the information contained in the paper documents) by a factor of five.²³

Exhibit 4 shows costs incurred by Brun Passot's customers through the four different ways of acquiring office supplies: Economat (which refers to the traditional paper-based method), Bureautel, SICLAD, and the advanced EDI application. These costs are related to a purchase value of FF2,200 and are given for each

Exhibit 18.4 Costs of office supplies for customers based on four purchasing methods (for a purchase value of FF2200).



Source: Brun Passot.

associated function, i.e. purchasing, storing, distribution, and management accounting. The costs of the EDI acquisition method are only a small fraction of the corresponding Economat costs.

Users' perspective on SICLAD

Customers are convinced of the benefits of adopting the telepurchasing applications. For example, COGEMA (Compagnie Générale des Matières Atomiques), which is located in Vélizy (outside of Paris), has for the last two years been using the simplest version of SICLAD which operates on a stand-alone PC station. Mr Maslard, a manager in the Purchasing Department of COGEMA, said:

My goal vis-à-vis my internal customers was to offer them a good, fast service by means of a simple procedure. I realized that I needed a PC-based system [for telepurchasing] and Brun Passot had the best one [available] on the market.

After an 8-month period during which Mr Maslard discussed the telepurchasing idea with the company management, SICLAD was adopted and the system smoothly implemented. Today, his 700 internal 'customers', located at 72 delivery points, submit their orders of office supplies to him on a paper-based document. He then keys these orders in the PC and forward them through SICLAD to Brun Passot. Mr Maslard said:

The investment was very minimal: FF2,500 to buy a modem for my PC and about FF240 per year to pay for telephone charges. But every year we save 30 to 40% of the cost of [our previous] manual procedure.

The savings are due to the reduction of inventory and the elimination of one staff position as well as mailing costs. Aware of the additional benefits to be gained from eliminating the paper-based documents filled by the internal users, COGEMA decided to implement the network version of SICLAD by late 1993. Mr Maslard explained:

I can't do it before then. Connecting all users' PCs to my PC [which SICLAD runs on] requires using the internal phone exchange and installing a modem on each PC. This would be very costly. We preferred to wait till the internal PC network is implemented.

21 Brun Passot commissioned in 1989 a French business school, the Ecole Supérieure de Commerce de Lyon, to conduct this survey. The latter was based on a mail questionnaire which, in some cases, was followed up by telephone interviews.

22 Source: 'Une Entreprise, Une Application Télétel', France Télécom, February 1990, No. 19.

23 Ibid.

Matra Espace, an aeronautics company employing 2,000 people and with headquarters in Toulouse, installed the network version of SICLAD. The company, which purchases office supplies worth FF2 million from Brun Passot annually, has been using SICLAD as part of its new purchasing procedure. Throughout the week, secretaries key in their office supplies orders on the company computer network. On Friday, the purchasing manager reviews these orders and then transmits approved orders to the Brun Passot server. The following Tuesday, Brun Passot delivers the ordered products to the company offices. According to Mr Boutty a purchasing manager at Matra Espace:

The benefits have been tremendous. We have been saving FF700,000 to 800,000 per year since we adopted SICLAD. It is due to the reduction of personnel [needed] to prepare the paper-based documents and to the elimination of xeroxing and mailing costs as well as following up, by phone or fax, on the orders we placed ... The statistics that we get from SICLAD have been very helpful. Before we were in the dark. We didn't know what had been expended. We couldn't know.

For Matra Espace, in order to set up SICLAD, the only significant investment made was in management time to hold a series of meetings. Hardware was not an issue due to the highly computerized corporate environment. Although the conversion to SICLAD went smoothly and a training programme was given, a few secretaries (about two in ten) who were used to the old manual procedure had some difficulty in adjusting to the new computerized system. In the summer of 1993, the Toulouse division of Matra Espace started using the advanced EDI application of Brun Passot, now its single supplier of office products.

The successful experience of the Toulouse division of Matra Espace with Brun Passot has attracted other divisions of the company. Matra Vélizy has recently adopted SICLAD and other companies of the Matra Group are considering switching from their current supplier (who uses the traditional, paper-based approach) to Brun Passot.

Users' perspective on the advanced EDI application

The research centre of Péchiney, a major chemicals company, employs 400 people in its Grenoble offices. A pilot installation of Brun Passot's advanced EDI application was set up over a 18-month period; then,

3 months ago, the use of the system to the entire centre was generalized. Mr Bouchailler Head of the Purchasing Department, explained:

Due to the nature of our work and the profile of our employees who are mainly engineers and technicians, we are big users of office products. A lot of work was needed to acquire and manage these low-priced products; we call it here the 80-20 rule. I suggested to the management that they adopt a system like Brun Passot's so we can make users responsible for their purchases.

Today, purchasing of office supplies is decentralized at Péchiney with each department managing its own budget. Once a week, each department secretary looks up the Brun Passot's catalogue on their computer screen, keys in the products to order, and transmits them via the EDI system to Brun Passot. The latter delivers the ordered products to each requesting department. Mr Bouchailler added:

The required [EDI] investment was small, but we have significantly reduced our overall [office supplies] budget. There aren't any more misuses or abuses such as 'the start of schools' phenomenon. We have made significant time savings since everything is now done directly between Brun Passot and the final user without going through us [the Purchasing Department]. The system works well and our [internal] customers like it.

Péchiney stopped acquiring office products from the small suppliers it used to deal with and now does all its business with Brun Passot. However, the company does not think that the EDI system caused a 'lock-in' effect vis-à-vis Brun Passot. Mr Bouchailler said: 'We will keep using EDI but we are totally independent of any supplier. We can easily switch to other players in the market, to Guilbert or Gaspard if we want to.'

The issue of customer independence/lock-in has been central to the on-going debate at Brun Passot. Some managers prefer to further 'push' SICLAD because they think the proprietary nature of this software would lock-in customers. Other managers favour diffusing the advanced EDI application because of the additional capabilities and enhanced customer service it provides.

DEC France, another EDI user with Brun Passot, has an annual volume of 8,000 orders, averaging a value of FF700 per order. These orders total about 60,000 item lines generated from over 1,000 internal departments within DEC France. In the past, four paper-based documents were generated per order:

the purchase order, the receipt acknowledgement, the shipping notice, and the invoice. The associated procedure was error-prone (due to re-keying the data), costly and time consuming. Since October 1989, about 1,100 terminals located in 24 sites within DEC France have been connected through the company network to Brun Passot's server. Through these terminals, users place their office supplies orders in an autonomous yet controlled manner, without having to go through a centralized purchasing department.

According to a manager at DEC France headquarters in Evry, 'We have achieved a time saving of 8–12 days for processing an order. It corresponds to a gain of FF400,000 to FF700,000 per year.'

Since 1 January 1990, Brun Passot delivers office products to all the 24 sites of DEC France.

Brun Passot guarantees delivery of the ordered products to the customer premises within 48 hours of receipt of the electronic purchase order. This factor allowed Spie-Batignolles, a major construction company employing 3,500 people, to go one step further than DEC France and the other customers. It decided to abolish its FF2 million stock of office supplies, which required 10 full-time employees to manage. Since then, Brun Passot delivers three to four tons of products daily to Spie-Batignolles.

Facilitators and barriers to the use and diffusion of the EDI applications

Several facilitators and barriers helped/hindered the development, use and diffusion of Brun Passot's telepurchasing applications.

Facilitators

Some of the facilitators were due to a clear business strategy and sound management decisions; others were the result of good timing and luck. These were:

- *The perception of telepurchasing and EDI as the core of a business strategy* and not just an IT project. Jean-Philippe Passot said:

From a technological perspective, there is nothing exceptional about EDI. The real value that we add is our know-how and experience. We had to go through a 'cultural revolution' ourselves and to adjust our marketing approach [to the use of the technology].²⁴

- *The long-term commitment and involvement of Brun Passot management:* Jean-Philippe Passot, the

39-year-old Deputy General Manager with a background in Law and Management, has been a fervent champion of the telepurchasing projects since he joined the company in 1980. For example, he was the key sponsor of these projects at Executive Committee meetings, defending them and winning approval for their development and funding.

- *The strong financial support of IT activities at Brun Passot:* the corporate IT budget over the years has been between 4–5% of total turnover, a figure that is double the average IT budget in the industry.
- *A 'motivated' organizational environment* for developing the EDI applications, due to the already available Bureautel service. Moreover, SICLAD helped launch the advanced EDI application. Olivier Figon said, 'SICLAD was an intermediate step. For us, it was a springboard to [reach out to] some of our large customers.'
- *The availability of new technologies* (such as TRANSPAC, Numéris and ATLAS 400) developed by a public third-party (France Télécom). This factor has made the development of SICLAD and the advanced EDI application easy, fast and quite inexpensive.
- *The adoption by Brun Passot of an evolutionary approach* to allow for future enhancement and growth of its inter-organizational relationship.
- *A strong business pull* (as opposed to a technology push) at the very start and through out the development of all the telepurchasing applications. This pull came mainly from some large customers who believed in the benefits of establishing an electronic link with Brun Passot.
- *The close interaction with customers* to define the 'what, where, when and how' of the product supply chain so that both customer and supplier can benefit from the added value; also *customers' reactions* to a promising tool that simplifies procedures and reduces time and cost.
- *Competitors' late development of telepurchasing:* the other major players in the French office supplies market already have their own Bureautel-like system but not yet an EDI-based service. Guilbert, the market leader, has just developed a SICLAD-

²⁴ Translated from an interview to *Décision Micro*, No. 68, 27 January 1992.

like system with the help of a software company; however, it has not really attracted customers. Mr Maslard, from COGEMA, said, 'I looked at their system; it's very good. But I won't take it because Guilbert sells it for FF55,000; it runs only on a 486-PC and requires strong technical knowledge.'

Barriers

There were only a few barriers to the use and diffusion of Brun Passot's EDI applications. These were:

- *The rapid success of Bureautel* (i.e. its wide adoption by customers and its rapid contribution to Brun Passot's total turnover) constituted a barrier for the diffusion of SICLAD and the advanced EDI application.
- *The Brun Passot decision to keep offering the Bureautel service* after introducing both SICLAD and the advanced EDI application. The rationale for this decision was keeping customers, who had a small transactions volume and who were especially sensitive to costs, for whom Bureautel was best suited.
- *The relatively weak bargaining power of Brun Passot vis-à-vis its customers* due to the non-strategic nature of the products it markets.
- *The relatively heavy investment needed on the customer side* to use the advanced EDI application.

Going beyond the 'basic' use of EDI

Brun Passot has already started leveraging its EDI infrastructure through several on-going projects. As reflected in an internal document, the company intends to use EDI as the 'Trojan horse' for further growth.

At Brun Passot, EDI spells the future. It is 'paper-less trading' relying on 'people-less administration' ... The beauty of these [EDI] applications is that they need not be confined to the procurement of office supplies, but can be developed to encompass all purchasing undertaken by the company.

Establishing EDI links with wholesalers

Brun Passot has started extending its information system backwards to the wholesalers in order to get access to a more diversified product offering (from the current 12,000 to 120,000 products). Both parties would benefit from this electronic linkage since Brun Passot could increase the products penetration rate

with its customers. Moreover, a just-in-time purchasing system can generate savings (due to reduced inventories) for both sides.

Operationally, the JIT purchasing system is used as follows. Due to its strong knowledge of the nature and quantity of products its customers order, Brun Passot needs to send, for replenishment purpose, electronic orders to its wholesalers only once a week. In some rare cases where a customer requests an exceptional quantity of products, Brun Passot places right away an urgent order with its wholesaler(s) without waiting for the regular weekend consolidation. Jean-Philippe Passot said:

We aim, by the end of 1992, to do 80% of our transactions with wholesalers through EDI. We are considering setting up an electronic link with a supplier as an opportunity to assess its business performance in terms of logistics costs, quickness of delivery, and quality of service. In some cases, this assessment led us to stop doing business with some of our traditional suppliers.

Re-routing

For Brun Passot, re-routing is a natural extension to its present telepurchasing capabilities. The idea consists of setting up 'electronic bridges' using TRANSPAC or Minitel which would allow customers to access, through a single connection to the Brun Passot network, different servers related to a given market. For example, a user connected to one of Brun Passot telepurchasing applications and requesting some information on product lines (e.g. those of 3M France) that Brun Passot markets, gets automatically re-routed to the server of that company. Re-routing takes place while the customer is still logged on to the Brun Passot system; once he/she completed all enquiries about those product lines, they get disconnected from the host server and taken back to the original telepurchasing application.²⁵ This new capability alleviates Brun Passot from the task of having to include such data on its server.

Offering complementary products

Another planned enhancement consists of providing access to products marketed by other firms which are complementary rather than competitive with Brun

²⁵ Re-routing can be thought of as a multi-windowing facility through which, for example, a software package gets called upon or executed from an already activated application.

Passot's. Examples of such products include office furniture and cleaning materials. This will allow Brun Passot to extend its telepurchasing applications into a broader electronic market place.

EDI expertise as a product

The availability in France of a large diversified telecommunications network²⁶ allows many companies to install or to enhance inter-company electronic communication through EDI. However, many suppliers are PME that often lack the financial basis and the technical expertise necessary for implementing EDI systems. Having been a pioneer and an innovative user of telepurchasing over the last decade, Brun Passot has decided to leverage its expertise in this area through SATELITE, a new subsidiary set up to offer services in the development and implementation of EDI systems. Jean-Philippe Passot said, 'We have moved from the business of distributing office supplies to that of a service provider in this [industry] sector.'²⁷

Diversifying EDI capabilities

Brun Passot also intends to diversify its EDI capabilities by offering 'Financial EDI' applications. This automation would eliminate the costs of banking transactions for both customers and suppliers. Jean-Philippe Passot explained:

It makes no sense to separate the commercial and physical exchange of documents from the financial payment. Once [business] partners communicate with each other using the same mode, e.g. EDIFACT, they can process all their transactions operations. A supply [of goods] is not completed unless [its related] accounts are updated. The administrative work of a transaction has its financial aspects as well.

Business plans for the evolving single European market

The advent of the single European market

The single European market, established by the twelve EC nations and born on 1 January 1993, consists of 344 million consumers, which is 50% more than in the US, and has the potential to grow even larger.²⁸ Although the formation of this \$4-trillion market seems inevitable and beneficial to the European economy, full implementation is being delayed because of many remaining fiscal (taxation policy),

legal (antitrust law), monetary (possible single EC currency) and operational problems (e.g. passport controls). Nevertheless, the elimination of customs and all other barriers that prevent the free flow of goods and capital has already started and many companies have prepared themselves for increasing competition as new players (both European and non-European) enter or expand their operations in the EC market. Preparations made in anticipation of 1993 have resulted in major investments in Europe and a wave of corporate restructuring and mergers within those industries most directly affected, such as banking, insurance, and airlines.

Restructuring of the office supplies market

In the office supplies market and in anticipation of the 1993 event, some American companies which have already established themselves in England (such as Basic Net) as well as some British and German firms (e.g. Spicers and Herlitz respectively) made plans to expand their operations in Europe. Due to the threat such a move represents to the market share of French companies and in order to create a barrier for foreign penetration, some alliances and acquisitions have already taken place. For example, Brun Passot has merged last year with Saci, another distributor of office supplies with similar market share. The new larger group, called 'Groupe FIDUCIAL', aims at increasing profitability margins by benefiting from economies of scale, strengthening bargaining power vis-à-vis wholesalers and customers, as well as further leveraging Brun Passot telepurchasing applications.

Brun Passot plan for European expansion

Brun Passot has taken several steps towards expanding its geographical coverage to other European markets. First, it developed a multi-lingual (English and Spanish, in addition to French) version of its telepurchasing applications that uses the X.25 packet

26 Industry analysts consider the French telecommunications system better than that in other Western countries. This is due to the availability of a fully digitized telephone network as well as of a nationwide videotex, ISDN and packet-switched networks.

27 Translated from an interview to *L'Usine Nouvelle*, No. 2327-2328, 29 August 1991.

28 Jacques Delors, European Commission President, is already envisioning a European Community that will eventually include Western European countries and Eastern Europe as well as the former Soviet republics.

switched networks already available in several EC member states. This new application will help provide an integrated service to national as well as pan-European corporate customers. Jean-Philippe Passot said:

Salespeople have some difficulty in selling in foreign markets due to linguistic and cultural differences. With our telepurchasing applications, we will be able to talk in a language that our international customers can understand, that of convenience, ease of use and savings.

Second, it approached some of its multinational customers who have expressed their interest in reducing the number of suppliers they are dealing with across Europe. Brun Passot plans to start its European operations with DEC who has decided, by the end of 1993, to centralize on a single computer all the purchase requests generated at its different European subsidiaries. The information system residing on this computer would then select, based on the geographic location of the requesting party, the best suited supplier to provide the goods.

Brun Passot considers 'winning' the European subsidiaries of its present multinational customers as a good business opportunity for quick penetration of the single European market. Among management plans to implement the geographical coverage expansion are acquiring or joint venturing with some national companies as well as setting up some distribution centers near potential new European customers. The challenge for Brun Passot is to be able to move products around the continent as efficiently as it is done at present within the French borders and to offer bottom-line savings to the new European customers.

The different projects for leveraging its EDI infrastructure coupled with the future business trends mentioned above show the multi-faceted dimensions of Brun Passot's business strategy and market ambitions. Jean-Philippe Passot said, 'By 1994, we want to achieve a turnover of FF800 million with 80% of our transactions electronically made and processed, and with only 15% of personnel increase ...'

DISCUSSION QUESTIONS

- 1 What factors (business, managerial, technological) were critical for the successful development of the tele-purchasing applications at Brun Passot?
- 2 If you were a Brun Passot manager, what would be your position with respect to the ongoing internal debate mentioned in the case (i.e., favouring 'pushing SICLAD' versus 'diffusing the advanced EDI application')?
- 3 Assess the success potential of Brun Passot future projects for leveraging its EDI infrastructure, in particular the company's intent to broaden the business scope and geographical scale of its operations?