Cost Savings and Other Benefits in the Management of Replacement Parts

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Abstract

Migros, the largest retailer in Switzerland offers its customers comprehensive customer service. This case study describes the organisation of the process of obtaining replacement parts from the supplier to the end customer. This process is carried out by the service provider M-Service *with the help of integrated information systems. Particular attention is given to an electronic multi-supplier catalog, which significantly increases efficiency and effectiveness in the procurement of replacement parts.*

1 The Migros enterprise

1.1 The company

The core business of Migros as the largest Swiss co-operative retailer consists of supermarkets and hypermarkets as well as specialist shops. In addition, the company owns its own factories which largely produce food, and is also a service-provider in a range of areas.

In 2001 the Migros Company made a consolidated turnover of 20 billion CHF – 2.6 percent more than in the previous year. The retail business turnover makes up nearly 80 percent of this total. Migros has 80'000 employees. The number of members of the Migros co-operative rose to roughly 1.9 million in 2001.

Migros has a market share of 16 percent in the retail sector, (24 percent in the food sector and 9.5 percent in the non-food sector). Since 2000 a slight upward trend has been evident.

In order to fulfill individual customer requirements, Migros follows a clear sales strategy in its core business: supermarkets (local and regional supply) and hypermarkets (inter-regional shopping centres which also carry a wide selection of non-food items such as

clothes, toys, electronic equipment) offer a creative selection of food, complemented with other consumer goods for daily use. Specialist shops with a range of non-foods (Do it & Garden, Micasa, Sportxx, OBI) operate separately.

As a prerequisite for the implementation of its strategy, Migros is developing expertise across the board, in areas of quality, price, innovation and ecology. In commodity management, particular value is placed on a process orientation along the entire value chain.

The customer has highest priority in the company strategy. The role of Migros' customer service organisation examined here should be seen in the light of this. Service to the customer should be competent, obliging, and tuned to customer needs. It should guarantee customer satisfaction and foster customer loyalty.

1.2 The customer service organisation 'M-Service'

M-Service is Migros' customer service organisation. Its main responsibility is to provide replacement part management for eight *Migros Service Centers*. The Service Centers in turn supply 435 *Customer Service desks* as well as *Service Outlets* for bicycles, skis, ice-skates, etc. The Customer Service desks provide Migros customers with advice and a comprehensive repair and replacement part service for all hardware which has been sold by Migros.

The Service Centers carry out roughly 800,000 customer orders per year made by the branch Customer Service desks and in 2001 made a turnover of 50 million CHF. The Service Centers employ 410 staff (full-time equivalent), not including the Customer Services staff in the branches.

M-Service carries out the main functions required to structure the company's business processes efficiently, from the manufacturer of replacement parts, via the decentralized Service Centers, and on to the customer. In addition it is responsible for the worldwide procurement of replacement parts (the main task), stock management, running a logistics centre for repairs and replacement part orders as well as providing and maintaining information and logistics systems. M-Service has operated an electronic product catalog since 1999, which supports the Service Centers in the procurement of replacement parts required for repairs and for customers.

2 E-business strategy

Migros' immediate plan is to gain experience through its e-business activities. The main focus of interest is in new forms of shopping and consumer behaviour and the increase of productivity across the entire product chain. The projects aim to demonstrate ways in which economic benefit can be created.

3 Procurement solution

E-procurement in the Migros Service sector is an internal management solution. The Service Centers adopt the role of buyer and order the required replacement parts and assemblies from M-Service (the seller). Electronic support of the ordering process and transaction management are located in the Service Centers (Figure 1).

M-Service, in its purchasing capacity, adopts the function of procurement service provider: Besides central purchasing and logistics services, this includes content and catalog management, aspects of transaction management as well as user administration (Figure 1).

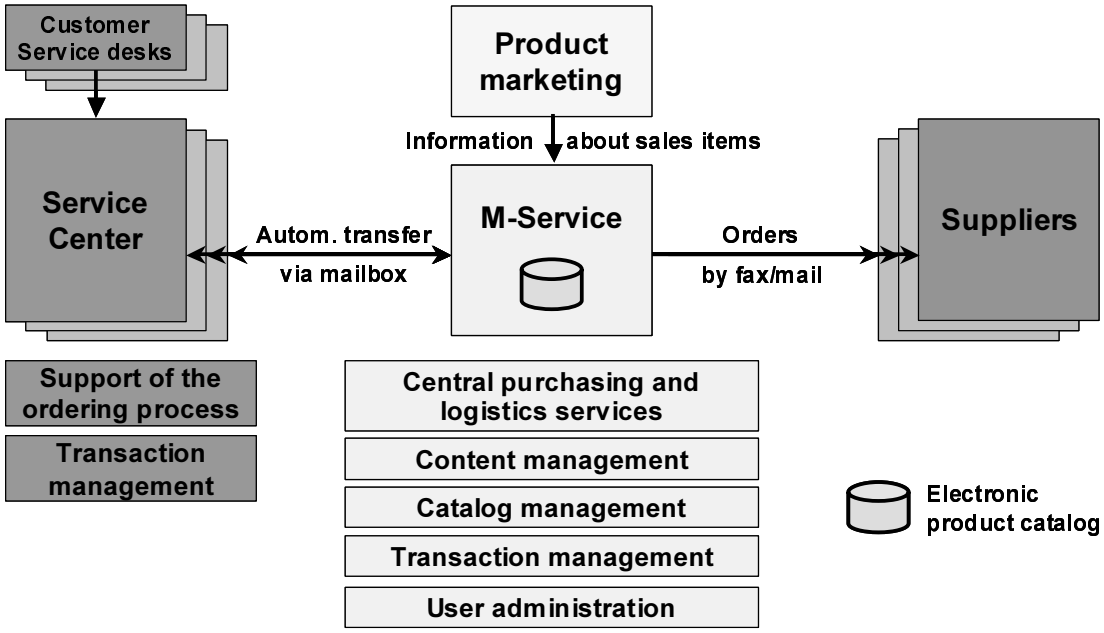

Figure 1: Distribution of the E-Procurement basic functions

With the combination of an electronically integrated fulfilment of the procurement transaction and an electronic product catalog, the Migros e-procurement solution consists of two logically different components which will be described below. While these partial solutions have already been integrated on a technical level, the underlying processes have not.

3.1 Functions and processes in the transaction-oriented procurement process support

Central to the e-procurement total solution is the ERP-System OpaccOne with the electronic multi-supplier catalog NetCat (see section 1.3.2 for further details). The ERP-System handles most of the data and, along with other systems, drives the primary process between the central M-Service and the decentralized Service Centers. Figure 2 illustrates the systems involved and the process of Migros' internal procurement of replacement parts, as described in this section.

Replacement part orders are registered in the information system KUSEM (Customer Service Migros) at the Customer Service desk terminals of the respective Service Centers. Employees can find the relevant information about the replacement parts in the browser-based search in NetCat. The orders are passed on to the sales module of the ERP-System. This module sends an order online to deliver the goods to the warehouse subsystem Kardex PP5000, which shows incoming and outgoing goods in the central

warehouse. The warehouse subsystem in turn provides confirmation and later the information that the goods have been sent. With the NetCat function 'delivery lists', the Service Centers can keep themselves informed about the expected date of delivery.

The invoices for the internal payment between M-Service and the Service Centers are made by the ERP-System. They are first transferred electronically to a clearing house and are then forwarded to the co-operative accounting system. The invoices for the end-customers are made by the Service Center in KUSEM.

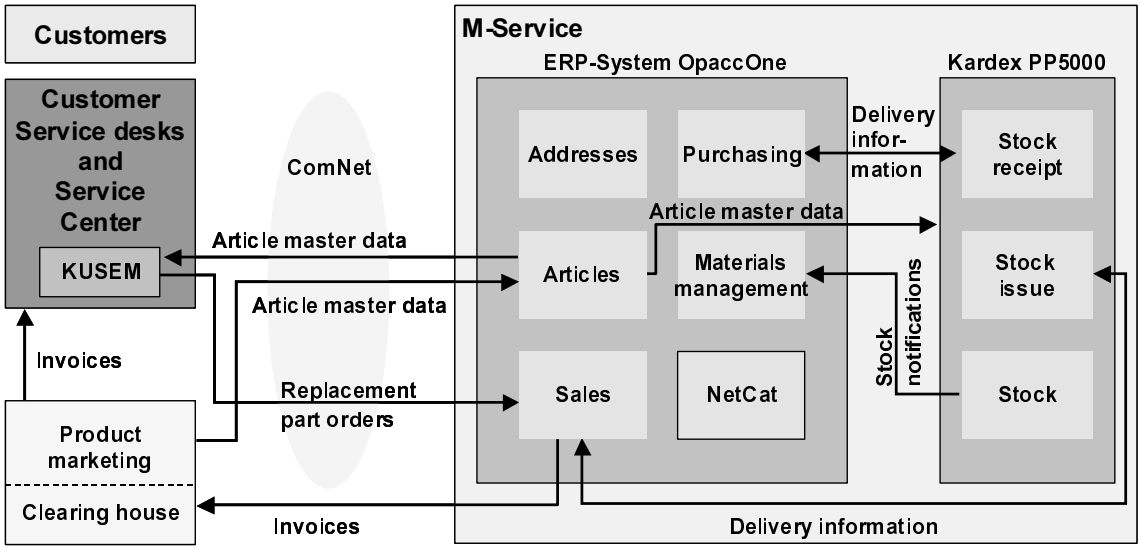

Figure 2: The integrated procurement process

The purchasing module of the ERP-System places the orders for the procurement of replacement parts with the suppliers. The actual orders are normally sent by fax. Information about ordered replacement parts is reported in the warehouse subsystem and information about incoming deliveries is reported back to the ERP-System. Because of the online connection between ERP- and the warehouse subsystem, information about incoming goods is also immediately available in the ERP-System.

The processes between M-Service and the Service Centers, such as the placing of orders, delivery information, incoming goods, payment for goods, etc, are carried out electronically and without manual registration or confirmation. The electronic integration of the processes and partial systems means that Migros requires few staff to carry out a large quantity of deliveries to the Service Centers.

3.2 Electronic multi-supplier catalog

An important subsystem to support the process of the procurement of replacement parts is the electronic online catalog NetCat. This is an integrated multi-supplier catalog, which makes it significantly easier for the Service Center employees to choose the correct replacement part. The catalog contains all replacement parts which are carried by Migros, as well as the products in which they are used.

NetCat replaces the previously used physical replacement part catalog, which was made on microfilm. A significant disadvantage of this catalog was that it was never up-to-date and that it took a long time to find the item required.

With NetCat, the employees of the Service Center and the customer service desk have at their disposal a very comfortable catalog system which provides quick access to Migros' entire, most up-to-date replacement part program. Special search functions carry out the search for complete products and individual items. The catalog also provides the following information:

- Full text search and structured search for products and replacement parts
- Identification of replacement parts by means of pictures, exploded views or parts lists
- Order numbers, quantities in stock and delivery time of replacement parts.
- Guarantee time, service time, location of repairs (in-house or external)
- Instructions for dealing with repairs

As a partial system of OpaccOne, NetCat has access to the complete data of the ERP-System. The photos in the catalog mostly come from Product Marketing. The preparation of the electronic explosion drawings requires a lot of work. Generally the manufacturer's drawings are scanned and the various positions linked with the relevant detailed information. This information is partly collected from stock lists or other documents from the manufacturer. From the range of replacement parts described, the employee in the Service Center compiles a replacement part list according to the order. The order is then generated in KUSEM to M-Service on the basis of this list. There was a break in the availability of the media mid- 2002 because the order data had to be entered in KUSEM manually.

In preparation for the continued integration of the order process, there are plans to place the orders directly via NetCat in the OpaccOne sales module. This would be technically possible. With regard to the further development of the electronic catalog, Migros is considering making it available to the end customer.

A log file analysis has revealed that a year ago around 1'100 searches were made in NetCat per day and that there are currently around 1'800 searches per day. The acceptance of the catalog is therefore very high and its significance in replacement part management is increasing. In future a log file analysis should be able to identify which search words are being entered by staff.

The basis for the electronic product catalog is the ERP-System OpaccOne, which M-Service has used for a long time. OpaccOne is constructed according to a multi-tiered architecture. The back office and front office applications provide the interface to the user. Application Services provide the connection to the central Dataflex data base. The electronic product catalog NetCat consists of a collection of XML-templates.

4 Cost-benefit analysis of the multi-supplier catalog

With the changeover to the electronic catalog NetCat, Migros' Customer Services achieved a range of improvements which were not in easily assessed in advance. The most significant improvements include the following:

Simplification in handling replacement parts

Before the electronic catalog was introduced, the Customer Service desk often did not manage to identify the required item. With the new catalog, the replacement parts are quickly and clearly identified so that the workload has decreased and the processing time has been reduced by half. In addition, the improved quality of information has helped reduce both the waiting time at the desk and the stress factor for Customer Service staff.

Greater price transparency for the customer

A big disadvantage of the earlier catalog was that the sales price was not given. This meant that the customer could not be advised as to the price of a repair or a replacement part. Now all the information the customer needs to make a decision for or against a repair is available to at the desk.

Doubling of customer orders

The introduction of NetCat resulted in a doubling of customer orders (for replacement parts) over five years. The reason for the greater willingness to make an order for a repair has been the improved availability of information. Customers who decide against a repair are nevertheless generally satisfied with the service offered and generate new business by making a new purchase.

Improvement of repair planning

The response from the warehouse system provides immediate information on the availability of the replacement parts. Repairs can therefore be planned much earlier and more exactly.

Cost savings

Changing from microfilm to the electronic product catalog caused the annual cost of the replacement part catalog to fall from 120,000 to 50,000 CHF. Further savings were made because of the reduction in wrong orders, und in the implementation of the replacement part stock. The development of NetCat cost around 50,000 CHF.

For Migros the project was a success. Customer satisfaction increased dramatically because of the positive effect on dialogue with the customer. In this way the electronic product catalog fulfilled the requirements which were formulated in the overall company goals. The project shows that positive effects can be achieved in e-business when the relevant expertise and appropriate technology are applied to provide relatively easy solutions.

References

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