

Servitization in the automotive sector: creating value and competitive advantage through service after sales

S. Verstrepen¹⁾, D. Deschoolmeester¹⁾, R. van den Berg²⁾,

¹⁾Vlerick Leuven Gent Management School

Bellevue 6, B-9050 Ledeberg, Belgium

Tel: + 32 (0)9 210.98.24

Fax: + 32 (0)9 210.97.00

e-mail: sven.verstrepen@vlerick.be,

dirk.deschoolmeester@vlerick.be

*²⁾Baan Development²⁾P.O. Box 143, 3770 AC Barneveld, The
Netherlands*

Tel: + 31 (0)3 18 696613

Fax: + 31 (0)3 42 428200

e-mail: rvdberg@baan.nl

Abstract

A framework for servitization and service after sales is introduced as a tool for manufacturing companies to create customer value and competitive advantage. The role of information technology in implementing this framework is underlined and a number of trends, future evolutions and business challenges in the Belgian automotive industry are discussed in order to illustrate the potential impact these framework concepts may have on a particular market.

Keywords

Automotive industry, information technology, service after sales

1 INTRODUCTION

When consumption is growing and markets are stable, it is sufficient for manufacturing companies to develop and market good-enough products in order to create customer value and outsmart competitors. Today, however, many European

industries are facing diluting profit margins and growing customer disloyalty due to saturated markets, aggressive global competition and a confusing parade of technological revolutions. 'Servitization', which entails adding extra service components to core products, has the potential of being used as a powerful antidote against these threats (Levitt, 1981). Similarly, by recognizing that the relationship between a supplier and a customer does not necessarily have to begin and end with a single transaction, the concept of 'Customer Relationship Management' (CRM), which focusses on building stable, iterative, long-lasting and individualized relationships with each customer (Loebbecke and Powell, 1998), is becoming a top priority for most marketing executives.

These evolutions have to a great extent been made possible through advancements in information technology, which enable the end-to-end integration of physical and information flows throughout the entire supply chain of an organization. The rapid adoption of Enterprise Resource Planning (ERP) packages by manufacturing companies that we have recently seen, illustrates this for production processes. Marketing and sales processes on the other hand, and service after sales in particular, have long seemed to lag behind when it came to benefiting from information technology.

2 THE SERVICE AFTER SALES PROCESS

A business processes can be defined as a set of consecutive activities and operations that create value or resolve a problem for an internal or an external customer. Hammer and Champy (1994) distinguish four primary business processes within any enterprise:

- 1. Development and innovation:** development of new products and services that provide solutions to the changing needs of customers.
- 2. Customer contact:** development of commercial leads through marketing or sales efforts, prospection and responding to customer inquiries.
- 3. Order processing and fulfillment:** order entry, logistics, manufacturing and delivery.
- 4. Service after sales:** installation, repair, maintenance, quality control, complaints handling,... and all other activities that take place after an initial sales transaction.

In general, the service after sales process encompasses all activities related to enabling existing customers to quickly locate, contact and activate the supplier's resources that are needed in order to create satisfactory product-related services, answers to inquiries or solutions to problems. Contrary to the other three main generic business processes (innovation, customer contact and order processing), the concept of service after sales has long been treated by business literature without the attention it deserves. Until recently, most theory and practice of marketing have been focussing almost exclusively on the art of attracting new customers (e.g. advertising and selling) as opposed to retaining existing ones and caring for the customer afterwards. In a saturated and highly competitive environment where margins are suffering, this is no longer a viable approach:

retaining customer becomes equally important to survival than winning new ones. Developing a post-sales relationship with customers offers a way of solidifying customer ties, gathering valuable customer information and providing opportunities for cross-selling and up-selling (Peters, 1997.)

3 THE CUSTOMER VALUE CREATION LIFE CYCLE

Commercial transactions are the result of satisfactory value propositions brought to the right customers. Three principal dimensions of customer value or 'value disciplines' have been identified by Treacy and Wiersema (1993):

- **Operational Excellence:** focussing on highly cost-efficient production in order to minimize price.
- **Product Leadership:** focussing on superior product performance and innovation.
- **Customer Intimacy:** focussing on satisfying individual customer needs through close relationships with and intimate knowledge of the customer.

It was argued that firms can only achieve leadership in an industry by concentrating

their efforts on one of the three value disciplines (lowest price, best product or best individual solution), while still meeting minimum market requirements for the other two. Companies that achieve mastership in two or three value disciplines have been very rare until now. Today, however, market and technological evolutions make it both feasible and essential for businesses to strive for multiple superiority in order to create value. The proposed shift in attention from cost-leadership and product excellence (not implying that these should be neglected!) towards customer intimacy and relationship-building in manufacturing, is motivated by a number of observations (Voss, 1992). First of all, a company's sales each period originate from two sources: new customers and repeat customers. It is estimated that the cost of attracting a new customer can be up to five times as high as the cost of pleasing an existing one. In addition, it takes time and attention to bring a new customer to the same level of profitability as existing ones, due to the accumulated revenue streams that these have already been generating. Also, loyal and happy customers provide a free and highly effective channel of publicity. As is shown in Figure 1, four consecutive phases can be identified in the customer value creation life cycle (adapted from Ives and Learmonth, 1990):

1. requirements analysis

2. acquisition

3. ownership

4. disposal

Requirements analysis and acquisition can be described as parts of the 'pre-sales cycle', whereas ownership and disposal can be attributed to the 'post-sales cycle'. Each of the consecutive steps in the cycle phases can be analyzed both from the perspective of the supplier and that of the customer:

Table 1 The customer value creation life cycle

Phase	Customer perspective	Supplier perspective
Requirements	perception and definition of needs	market research, adaptation to market needs, new product development
Acquisition	selection and acquisition	tendering, sales, delivery
Ownership	utilizing and operating the product	after sales service
Disposal	disposal and replacing	take-back and recycling

Preparation of new sales cycle

Each of the steps in every phase represents ‘a value creation moment’ that will entail a certain degree of interaction between the supplier and the customer and supplier. Information technology can play a role in the support of the service components for each of the different elements in this cycle, by either **focusing on personalizing the service** (e.g., integration and analysis of customer information, anticipation of specific needs, identifying and focussing on profitable customers, building an information network around the customer,...) or by **enabling the transformation of the business processes** (e.g., evolve from make-to-stock to make-to-order, mass customization, e-commerce,...).

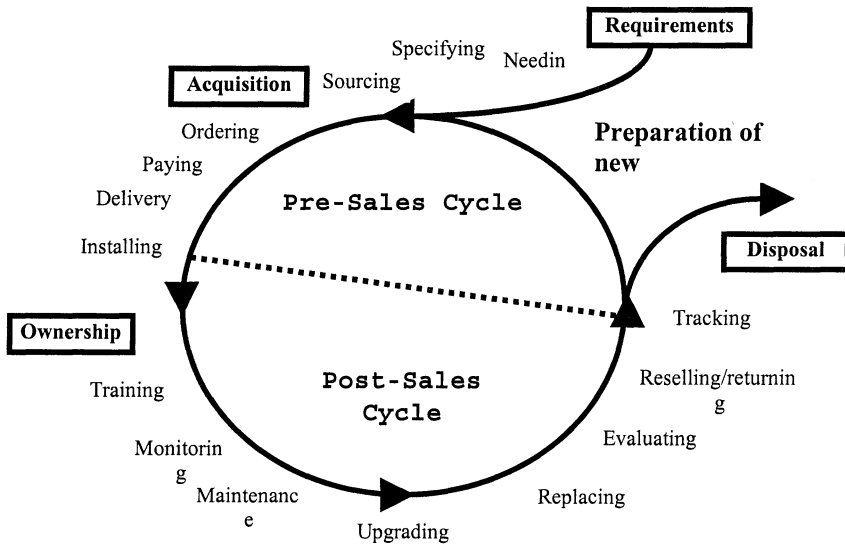


Figure 1 The customer value creation life cycle (adapted from Ives and Learmonth, 1990)

This value life cycle offers a useful framework for analyzing a manufacturer’s different alternatives for creating value and ‘servitizing’ his product offering. Furthermore, combining the phases with the value disciplines enables an integrated

approach to managing the different dimensions of customers value and offers a fresh view on how IT may be used to solidify customer relationships.

4 FIELD STUDY: SERVICITIZATION AND SERVICE AFTER SALES TRENDS IN THE BELGIAN AUTOMOTIVE INDUSTRY

To 'validate' the framework, nearly 20 Belgian professionals from various automotive corporations and distribution channels were interviewed in 1998 in order to assess their views and ideas about service after sales in the automotive industry, its links with other parts of the business, current and potential information systems and future trends and evolutions. The main interview conclusions and market evolutions (Gross, 1997) appear to support the elements of the framework.

In Belgium, depending on the vehicle brand, the average repeat purchase only occurs every five to seven years, and customer retention rates range between 65 and 85 %. Due to a slowdown in market growth, automotive manufacturers are increasingly concentrating on defending or improving this figure. Profit margins on actual vehicle sales in Belgium are said to be very low and spare part and maintenance margins are under constant pressure from new market entrants, third-party vendors and parallel import. Car sales in Belgium are also highly cyclical, (peaking every 2 years during the Brussels Motor Vehicle Exhibit), making service after sales a vital source of revenue for most car dealerships and manufacturers. However, cars have become so maintenance-unintensive that customers easily lose touch with their dealership as soon as the warranty period ends.

The field study indicates that, while all motor vehicle manufacturers operate customer service departments, their degree of sophistication greatly varies. Although expensive to develop, service after sales efforts are generally perceived to help build a strong company image and a lot of goodwill from customers and distribution channels. All respondents claimed that in the near future these efforts will only grow, implying that customer service has become a top priority for all automotive manufacturers. Almost every manufacturer has some kind of own-developed information system for managing his after sales channels and processes. These systems are the result of many years of development and mostly offer an acceptable degree of performance. However, many of these systems are also slow, not user-friendly and poorly integrated with other business departments (e.g. parts ordering and or warranty management).

European legislation will protect small single-brand dealerships until the year 2006 (the initial date of 2002 was postponed after heavy pressure was exercised by automotive lobbies). Until then, 'official' dealerships will remain contractually dependent on one single manufacturer and retain local monopolies. In spite of this restriction, 'parallel', multi-brand dealerships and service points have successfully entered the market. This causes a strong need for increased efficiency and productivity of traditional service outlets. Higher levels of automation and integration, which are now still very limited, are expected to help achieve this goal.

These investments in technology and know-how will almost certainly result in a shakeout of existing dealership and service outlets. In order to realize economies of scale and optimal efficiency, industrial-size, regional service centers (possibly operating 24 hours a day) are expected to develop in each region, which will be surrounded and fed by a local network of smaller, local service satellites. Resource pooling of personnel and parts between different service outlets might provide a way for further increasing productivity and agility.

Long-term, fixed-price warranty and maintenance contracts and service bundles are increasingly used to assure customer loyalty. Mobility insurance and once-a-year servicing at a pre-fixed price have become common practice. A growing number of mobile service units will be deployed in order to guarantee optimal geographical coverage, customer convenience, flexibility and scalability. In spite of increased scale and cost-efficiency, customers will still expect, stimulating the development of a hi-tech customer support infrastructure (e.g. self-service kiosks with speech recognition, central data warehousing, on-line analysis of car parts, individualized service offerings via the Internet, etc).

A trend towards outsourcing of all non-core activities (manufacturing, handling, warehousing, transporting and billing of spare parts), disintermediation (car sales via the Internet, less but larger, multi-brand dealerships) and re-intermediation (third party service providers collecting, integrating and centralizing logistical, insurance, leasing and maintenance information about vehicles) is developing. In the long run, on-line information systems are expected to cover the entire life cycle of a car and its major parts, from manufacturing over maintenance to introduction on the second-hand market and eventual disposal and recycling. One respondent used the metaphor of 'an IP number in every car part' to describe this trend.

Due to increased vehicle quality and reduced need for maintenance, the number of service contacts with customers is steadily decreasing. This creates a growing need for 1-to-1 marketing practices and stimulation of long-term customer loyalty, which remains problematic due to insufficient integration and analysis of customer data. Our field research showed that information systems of neither car manufacturer nor their Belgian distribution channels are capable of tracking individual customer profitability or lifetime value. Data warehousing and integration initiatives appear to be necessary in order to centralize and activate all available customer, behavior and vehicle data.

5 CONCLUSIONS

Servitization in general, and a strong focus on service after sales in particular, are powerful ways for European car manufacturers to differentiate their products, improve customer loyalty, generate extra business and defend financial margins. Service after sales should be managed as a boundary-spanning and integrated process: other operational functions of the firm such as accounting, sales, manufacturing or IT must actively support the objectives of any customer service program to make it successful. Pro-active after sales service offerings should be

created and individualized, depending on the customer characteristics and workload of the after sales service channels. Sufficient integration of information resources and operational data is crucial in order to achieve this. Dealerships and technical service personnel do not have the time or the background to perform complicated queries themselves, which makes automated assistance (e.g. intelligent agents and push technology) and easy-to-use user interfaces very important. The shift towards long-term relationships or 'e-partnerships' between buyers and sellers will involve the creation of structural yet flexible ties between car manufacturers and external service providers such as leasing companies, insurance companies, road assistance organizations or car refurbishers. This enhances the need for an open, cross-functional, standardized and integrated information infrastructure. The deployment of information technology in the automotive industry in order to extend the sales cycle and establish long-term, individualized customer relationships instead of transactional ones offers many new perspectives on creating competitive advantage and customer value. Car manufacturers that fail to prepare for this transition run the risk of being seriously disadvantaged as further deregulation and global competition will impose increasing pressure on the European market.

6 ACKNOWLEDGEMENTS

The authors wish to thank Mr. Ludo Sys and all interviewees for their contribution to the field study.

7 REFERENCES

- Gross, D. (1997) Auto pilots: preparing automotive sales for change. *CIO*, **Feb.** 15, 70-77.
- Hammer, M. and Champy, J. (1994) Reengineering the corporation: a manifesto for business revolution. Harperbusiness, New York.
- Ives, B. and Learmonth, G. (1990) Can Information Technology (IT) revitalize your customer service ?, *The Executive*, **Vol. 4, No. 4**, 52-69.
- Kotler, P. (1997) Marketing Management: Analysis, planning, implementation and control. Prentice-Hall, New Jersey.
- Levitt, T. (1981) Marketing intangible products and product intangibles. *Harvard Business Review*, **May-June**, 94-102.
- Loebbecke, C. and Powell, P. (1998) Competitive advantage from IT in logistics: the integrated transport tracking system. *International Journal of Information Management*, **Vol. 18, No. 1**, 17-27.
- Peters, L.D. (1997) IT enabled marketing: a framework for value creation in customer relationships. *Journal of Marketing Practice: Applied Marketing Science*, **Vol. 3, No. 4**, 213-229.

- Treacy, M. and Wiersema, F. (1993) Customer Intimacy and other Value Disciplines. *Harvard Business Review*, **Jan-Feb.** 84-93.
- Voss, C. (1992) Applying service concepts in manufacturing. *International Journal of Operations and Production Management*, **Vol. 12, No. 4**, 93-99.

8 BIOGRAPHIES

Sven Verstrepen holds a degree in Applied Economics from the University of Antwerp (RUCA) and an MBA in Marketing from the Vlerick Leuven Gent Management School, where he works as a Research Associate at the Operations and Technology Management Center. His main areas of interest include marketing, information technology and organizational strategy.

Prof.dr.ir. Dirk Deschoolmeester is a Partner of the Vlerick Leuven Gent Management School and Director of the MIS Department. His work focusses on information systems development, IT management, IT strategy, business process re-engineering and entrepreneurship.

Roelof J. van den Berg is Program Manager Research at Baan Development in The Netherlands. He holds a M.Sc. in Industrial Engineering from Eindhoven University of Technology, where he will defend his doctoral dissertation later this year. To date he has published over two dozen articles on business modelling, business process re-engineering and the evolution of enterprise systems.