

Integrated business excellence model for a trading company

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Process management,
Performance measurement

Abstract

In this paper, we first present the conceptual framework for the customer satisfaction-oriented evaluation of process improvements that is embedded in an improvement cycle. The basic feature of the evaluation model is the relationship between the overall customer satisfaction value of a company and its process-specific customer satisfaction values. The results of an empirical research project show that this model is an interesting alternative to traditional primarily finance-oriented techniques for identifying potential process improvements. In the third part of the paper, some extensions of the model, based on the customer satisfaction-oriented evaluation of process improvements, are discussed.

Introduction

Companies using business excellence models identify normally a lot of potential improvement areas. The problem is to identify the improvements which have the highest positive effects on business results. This is necessary for sustainable performance improvement and a successful change process.

Therefore our concern in this paper is to integrate various interesting models to solve this problem. The first models considered are macroeconomic customer satisfaction indicators, i.e. the American Customer Satisfaction Index (ACSI) and the Swedish Customer Satisfaction Barometer (SCSB) (Fornell *et al.*, 1996). According to these measures, customer satisfaction is influenced by the exogenous variable “customer expectations” and by the endogenous variables “perceived product quality” and “perceived product value” which are the company-specific indicators of customer satisfaction. The consequences involved are then expressed via the endogenous variables “customer complaints” and “customer loyalty”. The second approach taken into account is the Excellence Model of the European Foundation for Quality Management (EFQM), which is an evaluation tool on company level (Zink, 1998). In the EFQM model, the prerequisites for an effective and efficient quality management program are characterised by enablers. These are leadership, policy and strategy, people management, partnerships and resources as well as processes. The consequences are designated as results: people satisfaction, customer satisfaction, society results and performance results. Innovation and learning complete the model described in our work.

In general, also modern performance measurement systems (e.g. balanced

scorecard) include customer satisfaction indicators (Ghalayini *et al.*, 1997). Normally, the starting point for improvement activities is financial objectives whereas, in our paper, we introduce a different model. Our starting point for process improvements is process-specific customer satisfaction and customer requirements. However, also a financial evaluation of such improvements helps to show the sustainable impact of the alternative selected. Another reason for this kind of evaluation is that managers are used to it.

We will then consider a trading enterprise with the following business processes: order obtainment, order processing, logistics, customer service, customer complaints management, and marketing. We identify the key business processes and describe some improvement methods.

Finally, some extensions of the model, based on the customer satisfaction-oriented evaluation of process improvements, are discussed.

Evaluation model

In this section, we introduce the framework for a company-specific evaluation model for process improvement programs based on the primary internal indicators of customer satisfaction. In this model, the relationship between the overall customer satisfaction value of a company and its process-specific customer satisfaction values is expressed by the importance of each single business process from the customers' point of view. The model is then embedded in an improvement cycle.

In Figure 1, the starting point for the business process improvement cycle is represented by both the overall and the process-specific customer satisfaction indicators as well as by the related customer requirements (Jammernegg and Reiner, 1997). These measures can be determined via customer surveys.



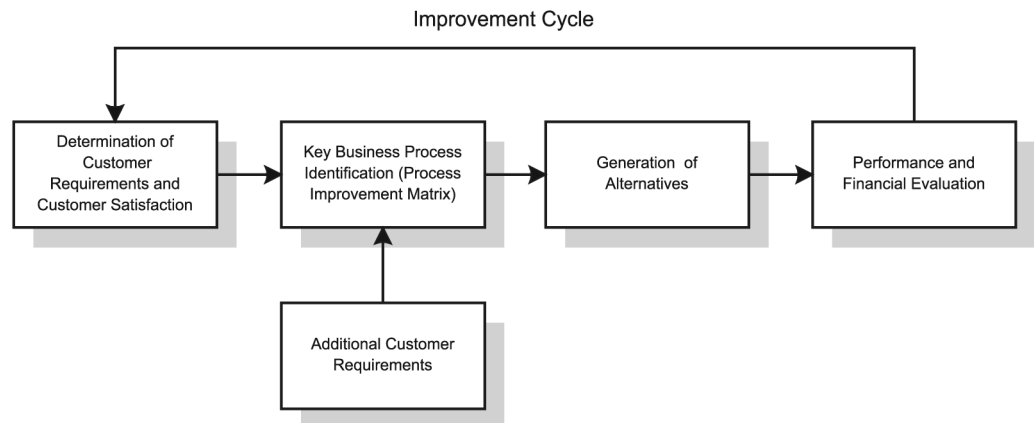
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Figure 1
Business process improvement cycle



The following step is to identify the business processes with the greatest need for improvement from the customers' point of view. This is particularly important as in most companies the financial resources available for such process improvement programs are rather limited. The business processes identified are called key processes. They are characterised by low customer satisfaction values and high customer requirements. In this context, it is necessary to take into consideration additional customer requirements which may be caused externally and, thus, are still unknown.

Next, potential for improvement must be found for the selected key business processes. For this purpose, creative alternatives have to be generated and then evaluated with regard to the performance indicators of the process involved. Such measures represent the basis for the comparison and evaluation of the different improvement alternatives. An interesting concept concerning the analysis of process improvements can be found in Enns (1996). Finally, the alternative showing the best performance values with respect to both operational and financial indicators should be chosen. It is important to perform a careful investment analysis of the alternatives so as to guarantee the long-term success of the alternative implemented (Serman *et al.*, 1997).

So, the improvement cycle is closed, and the business processes can again be evaluated by means of the overall customer satisfaction measure as well as via the process-specific customer satisfaction indicators.

A case study performed in a trading company

This section of the present paper includes the results of some empirical research. The

evaluation model and the improvement cycle are illustrated via a pilot case study conducted in a trading company in the electronics industry. The products considered are power tools and household appliances. Our analysis focuses on the reorganisation of the business processes to be improved and on the dependencies of key operational measures.

With the collaboration of the employees in charge – who were involved in the project – the first step was to identify the business processes. This was done on the basis of the interfaces to the external customers and suppliers (see Figure 2).

The interaction of the business processes is depicted in Figure 2, where a distinction is made also between the product flow and the information flow. The order obtainment process supports customers in their purchase decision. Customer orders are processed by order processing. The goods ordered are provided and delivered to the customers by logistics. Materials planning orders the required goods from the suppliers. The financial settlement with the customers occurs through handling of payments. Marketing supports the customers in advertising measures and promotions, for which market research provides the relevant information. The customer service offers after-sales support and, if problems arise, it is assisted by the customer complaints management.

The subsequent customer satisfaction survey was conducted via a model specifically developed for the firm (see Kristensen *et al.*, 1992). The goal of the present study was to analyse customer satisfaction with the respective brand at the level of the distribution middlemen (traders).

On the basis of the customer satisfaction survey within the framework of the

procedural model, the order processing process was selected for improvement programs. This process was viewed as highly important by the traders. The satisfaction value regarding order processing is lower than that of the order obtainment process. Thus, particularly the order processing process is an obvious choice for implementing an improvement program.

The focus of the analysis, development and evaluation of alternative courses of action is on the sub-process, credit note processing. The most important indicators are the volume of sales and the credit notes. Especially, the number and type of credit notes are a performance indicator for the order processing process and were, therefore, examined closely. Based on policy and strategy, the target set was to reduce the number of credit notes by 20 percent per year. Within the framework of the analysis of the actual situation, the reasons for making out credit notes were listed and analysed.

The undermentioned statistical methods further help in conducting the analysis of critical points. Usually, the customer requirements regarding a business process

are determined empirically by means of a questionnaire; also in our case study we opted for this procedure. However, from a methodological point of view, customer requirements could also be derived endogenously from the model using both the process-specific and the overall customer satisfaction values empirically obtained. The mutual direct and indirect influences of different customer satisfaction indicators can be generated by using methods of dependency analysis, e.g. by means of the software system TETRAD III (Spirtes *et al.*, 1993). The results obtained also provide an interesting input for the analysis of critical points. Figure 3 shows an example of the application of this method. The directional arrows indicate that there is a direct dependency between the single indicators (X) of satisfaction with the process, i.e. in the case depicted the helpfulness of the employees (X1 and X4) influences the customers' assessment of their product knowledge (X5). On the other hand, there is a basic dependency between the reachability of the firm's office employees (X3) and their helpfulness (X4). From the data available, it was not possible to direct the dependency (edge) so that no pertinent statement can be made.

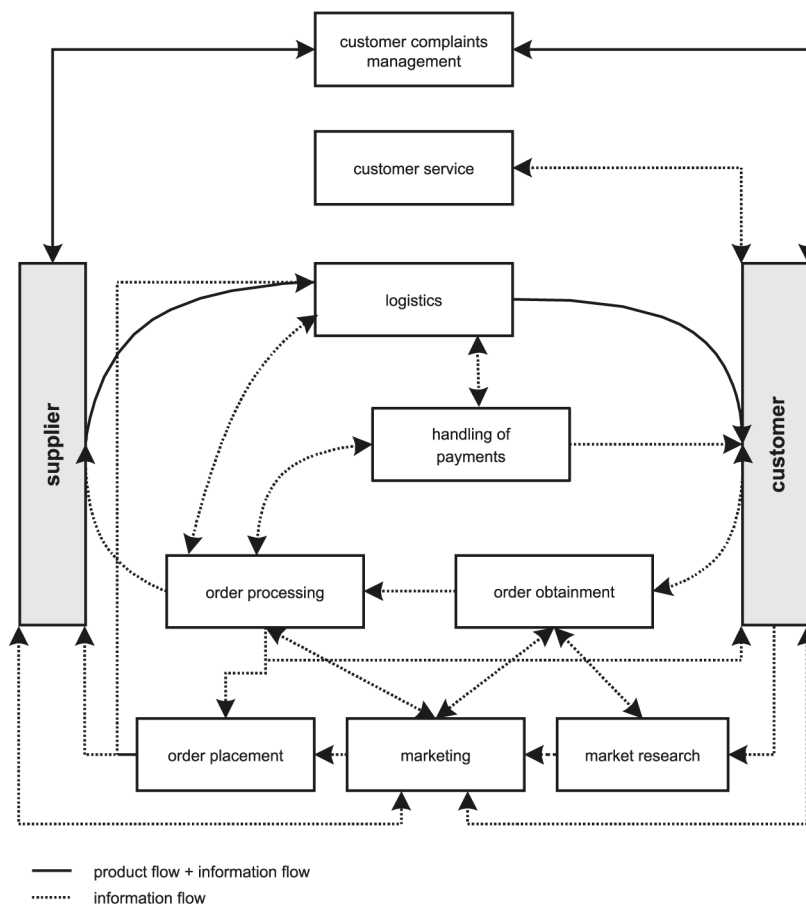
On the basis of this analysis of critical points, action alternatives for improving the order processing process were developed with the collaboration of the employees in charge. Examples of improvement include:

- improvement of the organisation and design of the workplace (e.g. phone headsets, ergonomic solutions);
- better employee supply with information of topical interest (e.g. action programs);
- training in product knowledge and in dealing with customers (e.g. helpfulness); and
- improvement of customer relations (through calls on customers, personal contacts, joint workshops, employee motivation).

Some of these alternative courses of action were already implemented in connection with a restructuring process. By means of the indicator "number of credit notes", the measures put into practice were checked for their effectiveness. The results achieved in the year following the decision show that the goal of a 20 percent overall reduction of the number of credit notes was met – and even exceeded the expectations – as the number dropped to 75 percent.

In the case study presented, performance improvements were evaluated via a second customer satisfaction survey one year later.

Figure 2
Process model of a trading company



Thus, it was possible to prove the effectiveness of the improvements implemented.

The comparison of the mean values calculated for the customers' overall satisfaction shows that through the improvement measures taken it was possible both to reduce the number of credit notes and to enhance overall satisfaction.

Finally, in order to support the model described in this paper, we developed a performance measurement system including performance indicators (e.g. failure rate) and financial indicators (e.g. ROI).

Extending the model

Our model can also be integrated with existing continuous improvement programs. Strategic controlling of such a continuous improvement program can be realized by focusing on customer satisfaction and customer requirements as well as on process management.

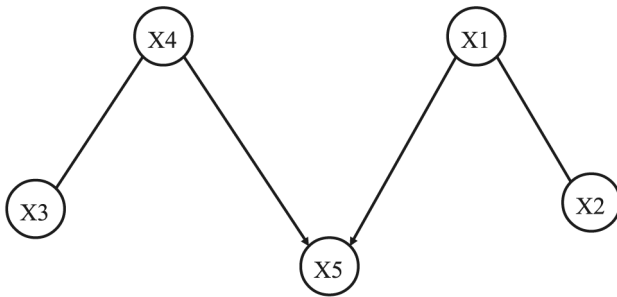
In the course of management workshops, the entire management team recognized that customer and employee orientation interact and even condition one another. To achieve lasting success in the field of customer orientation, also employee orientation was defined as a strategic subject and included in a project called KO/MO (customer/employee orientation).

The project structure utilizes the structure depicted in Figure 4 that features the following attributes:

- Project managers advance KO/MO (integrated working method).

Figure 3

Example of a dependency analysis

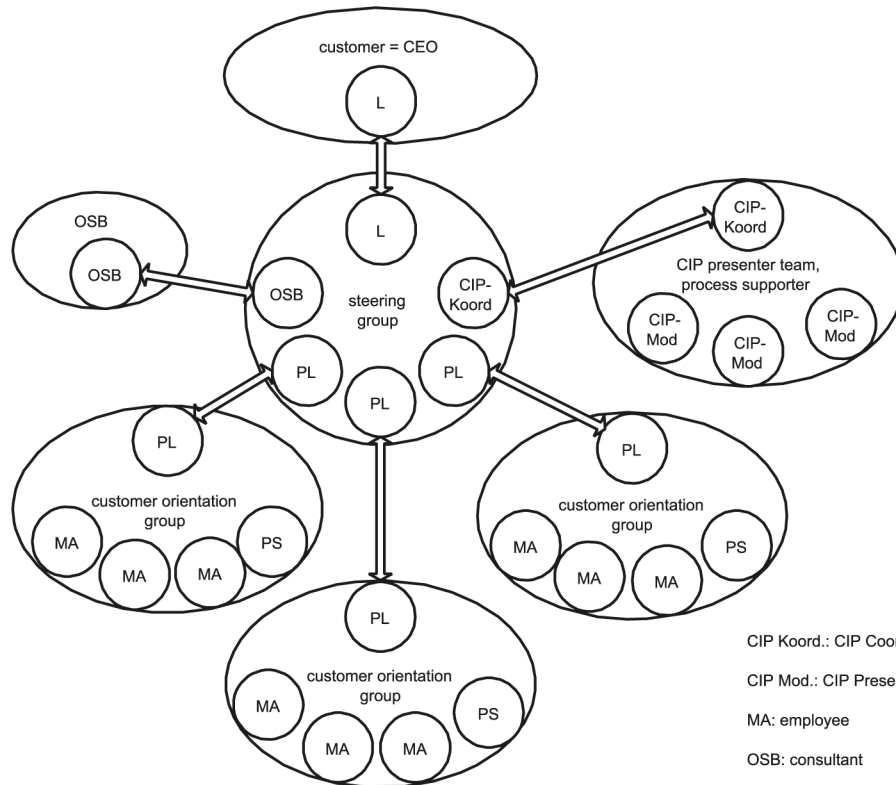


Meaning:

- X1 <-> helpful sales representatives supporting the customers
- X2 <-> reliable sales representatives
- X3 <-> good reachability of the office employees
- X4 <-> helpfulness of the office employees in case of customer problems
- X5 <-> good product knowledge of employees

Figure 4

Example of a dependency analysis



- CIP Koord.: CIP Coordinator
- CIP Mod.: CIP Presenter
- MA: employee
- OSB: consultant
- PL: project manager
- PS = process supporter, member of the CIP Presenter Team

- Decentralized structure so as to be able to best meet different customer wishes.
- Valorization of employees: project managers fulfil a challenging task with direct decision-making power and directly cooperate with the CEO.
- Involvement of external know-how through consultants.
- Organisation development from hierarchical decision making (CEO/top management) to decisions made by project managers.
- Opening up of new fields of learning through a pool for presenters and process supporters.

The integration of people satisfaction and the usage of extended methods for generating customer satisfaction and requirements (e.g. customer workshops with key accounts, critical incident technique, complaint management) represent interesting ideas.

The implementation of the model described can be supported by various software tools. Dynamic queries (e.g. active server pages) may be used to process customer satisfaction surveys via the World Wide Web. Functional process software tools should be employed to support the drawing, modeling, analysis, simulation and evaluation of process improvements. Finally, a software tool based on a data base can be used to optimise management support by recording and comparing performance indicators, financial indicators and related objectives.

References

- Enns, S.T. (1996), "Analysis of a process improvement path using rapid modeling." *Total Quality Management*, Vol. 7 No. 3, pp. 283-91.
- Fornell, C., Johnson, M.D., Anderson, E.W., Cha, J. and Bryant, B.E. (1996), "The American customer satisfaction index: nature, purpose, and findings", *Journal of Marketing*, Vol. 60, pp. 7-18.
- Ghalayini, A.M., Noble, J.S. and Crowe, T.J. (1997), "An integrated dynamic performance measurement system for improving manufacturing competitiveness", *International Journal of Production Economics*, Vol. 48, pp. 207-25.
- Jammerneegg, W. and Reiner, G. (1997), "Customer satisfaction-oriented evaluation of quality (process) improvements", *Total Quality Management*, Vol. 8 No. 2/3, pp. 191-4.
- Kristensen, K., Kanji, G.K. and Dahlgaard, J.J. (1992), "On measurement of customer satisfaction", *Total Quality Management*, Vol. 3 No. 2, pp. 123-8.
- Spirtes, P., Scheines, R. and Glymour, C.N. (1993), *Causation, Prediction and Search*, Springer-Verlag, New York, NY.
- Sterman, J.D., Repenning, N.P. and Kofman, F. (1997), "Unanticipated side effects of successful quality programs: exploring a paradox of organizational improvement." *Management Science*, Vol. 43 No. 4, pp. 503-21.
- Zink, K.J. (1998), *Total Quality Management as a Holistic Management Concept – The European Model for Business Excellence*, Springer Verlag, Berlin.