Strategic ambitions as drivers of improvement at DaimlerChrysler

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Abstract *Strategic ambitions can function as drivers of improvement in organizations. Continuous improvement is driven by strategic ambitions to: design quality into the structure of the organization; plan and control improvements; assure improvements; set and realize improvement goals; position the organization in the market as a "high quality" organization; and create value in interaction with stakeholders. An analytical framework based on these drivers is described. A research project is carried out in the organization of DaimlerChrysler Netherlands. The improvement processes in this organization are analyzed with the framework. The research project indicates that the improvement processes are driven by the strategic ambitions of the organization.*

Keywords *Quality management, Continuous improvement, Automotive industry*

Introduction

Many quality management methods that are used to improve processes in organizations focus on systematic improvement of business processes and their outputs (Robinson and Schroeder, 1993; Choi, 1995; Chapman *et al.*, 1997a, b; Coughlan *et al.*, 1997; Gieskes *et al.*, 1997; Bessant and Francis, 1999; Bessant *et al.*, 2001). For example, the plan-do-check-act method is used frequently by managers to invent and implement improvements (Deming, 1986; Scherkenbach, 1986; Imai, 1997), Japanese managers developed a continuous improvement approach that is called *Kaizen* (Imai, 1986; 1997), and the concept "incremental innovation" or "incremental improvement" is often used as an equivalent of "continuous improvement" (Freeman and Perez, 1988; Bessant and Caffyn, 1997). Many organizations that work with continuous improvement programmes find that commitment of top management is necessary to drive the improvement processes, and that the improvement ambitions of top management are important (Hill, 1991; Alänge, 1992; Bessant and Caffyn, 1997). The question "Which strategic ambitions function as drivers of improvement processes in organizations?" is asked frequently in organizations and in the literature (Perrow, 1961; Richards, 1978; Choi, 1995; Berger, 1997; Lindberg and Berger, 1997; Smeds, 1997; Bessant and Francis, 1999; Bessant *et al.*, 2001) and is the starting point of this article. The article is based on the results of a research project that is carried out in the organization of DaimlerChrysler Netherlands. The central research question is:

RQ1. Which strategic ambitions function as drivers of improvement in organizations?

The research question is split into three sub-questions:

RQ1.1 What are the strategic ambitions that drive the improvement processes in organizations?

RQ1.2 Which management methods are used in these improvement processes?

RQ1.3 Which improvements can be achieved with these management methods?

To give answers to these questions a research project is designed and carried out. The research design, data

collection methods, data analysis and limitations of the research design are described in the second section. A literature study is carried out to develop an analytical framework. This analytical framework is described in the third section. A case study is carried out in the organization of DaimlerChrysler Netherlands. The results of this case study are described in the fourth section. In the fifth section the results of the case study are analyzed and discussed with the help of the analytical framework. Conclusions are drawn in the sixth section. The research points out that six types of strategic ambition drive the improvement processes in an organization.

Research methodology

In this section the research design, data collection methods, data analysis method and the limitations of the research design are described.

Research design

The research consists of a literature study and a case study. The aim of the literature study is to identify which strategic ambitions function as drivers of improvement processes and to develop an analytical framework that can be used to analyze continuous improvement processes in organizations. The literature study focusses on the so-called field of "strategic quality management". This field provides insights in strategic ambitions in organizations and in supporting management methods that are used to realize improvements. The aims of the case study are first, to identify which strategic ambitions function as drivers of improvement processes and second, to identify which management methods are used to realize improvements. The case study is carried out in an organization in the automotive industry because this industry has a long history of ambitions and achievements in the field of continuous improvement (Baba, 1989; Gulati, 1995; Dyer, 1997; Doz *et al.*, 2000). The case study method is used because the researched improvement processes cannot be isolated from their contexts (Eisenhardt, 1989; Yin, 1994; Cunningham, 1997).

Data collection

Data were gathered at DaimlerChrysler Netherlands, part of DaimlerChrysler, a worldwide operating manufacturer of automobiles with a yearly production of four million vehicles. Approximately 199.000 employees work at the automotive divisions of DaimlerChrysler. DaimlerChrysler Netherlands is part of the European sales organization of DaimlerChrysler and is responsible for distribution, marketing and sales of car brands like Chrysler, Dodge, Jeep, Mercedes-Benz, Plymouth and Smart. A total of 400 employees work at DaimlerChrysler Netherlands and the sales volume in 1998 was about 16,500 vehicles. This represents an amount of €1 billion. The improvement processes at DaimlerChrysler Netherlands were studied intensively during a two-year period: July 1997 until June 1999. In this period the management of DaimlerChrysler Netherlands designed, developed and implemented a continuous improvement programme. In this period 21 managers were interviewed, 36 observation intervals were documented, and 40 documents were gathered and analyzed.

Data analysis

The gathered information is organized and analyzed with the analytical framework (Yin, 1994). The analytical framework consists of strategic ambitions and management methods that can be used to achieve improvements that fit with these ambitions. The analysis of the case material with the analytical framework provides insights in the strategic ambitions that function as drivers of continuous improvement in organizations.

Limitations of the research design

The DaimlerChrysler case provides analytical insights into the drivers of continuous improvement in organizations (Yin, 1994). A limitation of the research design is that the results cannot be generalized statistically. A second limitation of the study is that strategic ambitions that are not part of the body of knowledge in strategic quality management and contribute significantly to continuous improvement processes are not studied.

A framework for description and analysis of improvement processes

In this section the analytical framework is described. The framework is based on a literature study of strategic quality management.

Many research projects in quality management are dedicated to the strategic function of quality (Shetty, 1987; Walsh, 1987; Ali and Seshadri, 1993; Barclay, 1993; Belohlav, 1993; Kennerfalk and Klefsjö, 1995; Smith and Angeli, 1995; Anand, 1996; Aravindan *et al.*, 1996; Calingo, 1996; Madu *et al.*, 1996; Tummala and Tang, 1996; Vinzant and Vinzant, 1996; Wilcox *et al.*, 1996; Chapman *et al.*, 1997a, b; Ittner and Larcker, 1997; Alkhafaji *et al.*, 1998; Jones, 1998). Six different strategic ambitions that drive improvement processes are distinguished in the literature about strategic quality management:

(1) ambitions to design quality into the structure of the organization;
(2) ambitions to plan and control improvements;
(3) ambitions to assure improvements;
(4) ambitions to set and realize improvement goals;
(5) ambitions to position the organization in the market as a "high quality"; organization; and
(6) ambitions to create value in interaction with stakeholders.

The strategic ambitions and accompanying management methods to realize improvements will be described successively.

Design quality into the structure of the organization

Algorithms, systems and statistical methods are used to design quality into the structure of the organization (Feigenbaum, 1983; Smith and Angeli, 1995). Characteristic

management methods that support this ambition are failure mode and effect analysis, flow charting, (new) seven quality tools, single minute exchange of dies, statistical process control, quality function deployment, quality improvement programmes and Taguchi methods (Smith and Angeli, 1995).

Plan and control improvements
Organizations have the ambition to improve quality with a planning system. Quality is implemented stage-by-stage in the organization. Plans are developed to conceptualize improvements and are implemented in the organization. Control systems are used to control the improvement realization process (Foster and Whittle, 1989). Characteristic management methods that support this ambition are formal planning techniques, the plan-do-check-act cycle and quality plans (Kennerfalk and Klefsjö, 1995; Aravindan *et al.*, 1996; Calingo, 1996).

Assure improvements
Organizations have the ambition to assure and improve their processes and products systematically. Product quality is assured and improved with interrelated quality coordination, monitoring and documentation systems (Feigenbaum, 1983). Characteristic management methods that support this ambition are audits, quality information systems and quality systems (Ittner and Larcker, 1997).

Set and realize improvement goals
Organizations have the ambition to be goal oriented. Improvement management is organized by defining and realizing quality goals (Bossink *et al.*, 1992). Characteristic management methods that support this ambition are performance indicators, policy deployment, quality costs, right first time and zero defects (Tummala and Tang, 1996).

Position the organization as "high quality" in the market
Organizations have the ambition to position themselves in the market as a "high quality" organization. Organizations try to gain competitive advantage in the marketplace and quality management is their positioning tool (Aravindan *et al.*, 1996; Calingo, 1996; Tummala and Tang, 1996; Chapman *et al.*, 1997a, b). Characteristic management methods that support this ambition are benchmarking, ISO 9000 certification and quality competitions (Ali and Seshadri, 1993; Madu *et al.*, 1996; Chapman *et al.*, 1997a, b).

Create value in interaction with stakeholders
Organizations have the ambition to create value in continuous interaction with their internal and external environments. Value is created by aiming simultaneously at customer and employee participation and satisfaction (Aravindan *et al.*, 1996; Calingo, 1996; Tummala and Tang, 1996; Chapman *et al.*, 1997a, b). Characteristic management methods that support this ambition are cross functional management, empowerment, interdepartmental cooperation, interlinked quality teams, quality awards, stakeholder management and visionary leadership (Anand, 1996).

This overview of ambitions and supporting management methods represents the analytical framework. The analytical framework is summarized in Table I. In this framework also, an indication is given of the improvements that result from the use of the management methods.

The framework will be used to analyze the improvement processes in the organization of DaimlerChrysler. The next section contains a description of the improvement programme at DaimlerChrysler.

Continuous improvement processes at DaimlerChrysler Netherlands

In this section the improvement programme in the DaimlerChrysler organization is described. DaimlerChrysler uses an annual improvement programme consisting of eight steps. These steps are: identification of stakeholder groups, development of improvement goals, assignment of improvement goals, assessment of performance, identification of improvements, realization of improvements, coupling with stakeholder groups, and reporting to stakeholders. The steps will be described successively.

Identification of stakeholder groups
The management team identifies the main stakeholder groups the organization has to serve and makes a list of the size, relative importance and demands of these groups. In 1997 the chief executive officer (CEO) of DaimlerChrysler Netherlands stated that a marketing and sales organization of a leading car manufacturer cannot be "just good", but has to strive for better than that. The CEO wants to develop DaimlerChrysler – an organization that already has a good performance, into an excellent organization. Under the leadership of its CEO, DaimlerChrysler decides to start with the development of a continuous improvement programme in the organization. The stakeholder groups DaimlerChrysler identifies are dealers, fleetowners, private customers, employees, suppliers, shareholders, governmental institutions and press.

Development of improvement goals
DaimlerChryler defines a clear mission statement:

> We want to be number one. We concentrate on satisfied customers, satisfied employees, market leadership, and efficiency.

The top management of DaimlerChrysler defines improvement goals with a corresponding measurement method. The result is 23 company-wide improvement goals. The aspects that have to be improved are dealer satisfaction, the quality of relationship with dealers, customer satisfaction, reliability of vehicles, societal appreciation, market share of passenger cars, market share of delivery vans, market share of trucks, market share of after sales services, claims, customer complaints, failure costs, total quality management, employee satisfaction, employee participation, absenteeism, improvement activities, participation in improvement processes, employee mobility, depreciation ratio, stocks, goal realization and process

Table I — Framework of analysis of improvement processes

Ambition	Method	Improvement
Design quality into the structure of the organization	Failure mode and effect analysis	Prevention of failures
	Flow charts	Coherence in business processes
	New seven tools	Small variation of output specifications
	Seven tools	Small variation of output specifications
	Single minute exchange of dies	Improvement of efficiency
	Statistical process control	Small variation of output specifications
	Quality function deployment	Integration of market demands in products
	Quality improvement programmes	Coherence in business processes
	Taguchi methods	Small variation of output specifications
Plan and control improvements	Formal planning techniques	Process control
	Plan-do-check-act cycles	Process improvement
	Quality plans	Process improvement
Assure improvements	Quality auditing	Clear view on business processes
	Quality information systems	Alignment of business processes
	Quality systems	Alignment of business processes
Set and realize improvement goals	Performance indicators	Quantification of process output
	Policy deployment	Coherence in business processes
	Quality costing	Reduction of costs of poor quality
	Right first time	Prevention of failures
	Zero defects	Prevention of failures
Position the organization as high quality in the market	Benchmarking	Process improvement
	ISO certification	Process control
	Quality competitions	Motivated employees
Create value in interaction with stakeholders	Cross functional management	Alignment of business processes
	Empowerment	Alignment of business processes
	Interdepartmental cooperation	Alignment of business processes
	Inter-linked quality teams	Alignment of business processes
	Quality awards	Motivated employees
	Stakeholder management	Coherence organization-environment
	Visionary leadership	Guidance

management. The improvement goals are the foundations of DaimlerChrysler's so called "masterplanning".

Assignment of improvement goals

Members of the top management are designated as owner of one or more improvement goals. After careful consultation with middle level managers, top management assigns improvement goals to groups in the entire organization. The masterplan is specified into improvement goals for departments and functions. Top management wants to work with improvement goals that are mutually related. As a consequence cooperation between groups and individual is required. Departments and individuals are intensively involved in the determination of their contributions.

Assessment of performance

The improvement goals are translated into measurable performances. Necessary improvement actions are defined. On every level in the organization executives and their subordinates discuss the improvement goals, the necessary actions, the measurable performances and the measurement methods. For example, performances are measured with environmental registrations, masterplan evaluations, complaint registrations, absenteeism registrations, dealer satisfaction indexes, management reviews, sales figures, market shares, and financial ratios.

Identification of improvements

Improvement projects are defined and executed by managers, departments and employees. Improvement projects that are defined are "involve dealers into problem solving and improvement of primary processes", "deliver shareholder value", and "benchmarking of competitors". The masterplan is worked out into detailed improvement plans for departments and individuals. These plans are discussed and evaluated frequently.

Realization of improvements

Improvement projects are carried out. A management information system is used. In this system the improvement goals and the departmental and individual plans, including all improvement goals, actions and evaluations, are gathered and updated. Top management carries out management reviews to control the improvement process. Employees are trained into problem solving techniques, interpersonal skills, and teamwork. More than 75 percent of the employees participate in one or more improvement projects. Four times a year the departmental improvement goals are evaluated. Twice a year the individual improvement goals are discussed

and evaluated. Employees that contribute to the improvement projects are awarded with a bonus. Improvements are integrated in a quality system that complies with the norms of ISO 9002. This quality system includes a system of audit procedures.

Coupling with stakeholder groups

Top management reflects on the overall, departmental and individual performance from the viewpoint of the wishes and demands of the stakeholder groups that were defined in the first step. In this stage all departmental and individual improvement goals are coupled with one or more of the 23 improvement goals in the masterplan and the improvements are linked to the demands and wishes of the stakeholder groups.

Reporting to stakeholder groups

The results are reported to the different stakeholder groups. The reports are part of the annual financial, social, and environmental reports of the organization, or do focus specifically on one stakeholder group. For example, every year the satisfaction index is presented to dealers and employees. Benchmarks are used to position the organization in the high quality segment of the market. DaimlerChrysler wants to improve and further develop its reporting activities.

Analysis

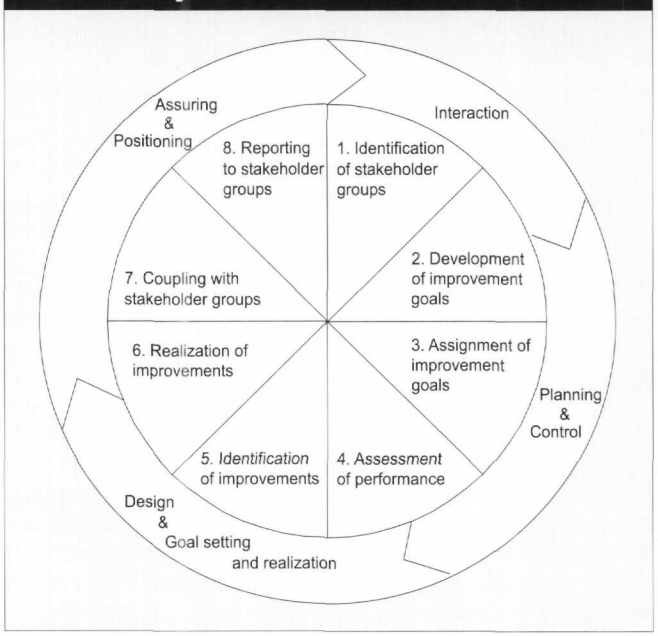
In this section the DaimlerChrysler case is analyzed with the analytical framework. The section starts with a description and visualization of the strategic ambitions that function as drivers of improvement processes and continues with an overview of the management methods that are used to achieve improvements.

Strategic ambitions that function as drivers of improvement processes

The improvement programme at DaimlerChrysler is a cyclical process. The improvement cycle is symbolized by Figure 1. The heart of the figure represents the eight steps of the improvement programme. The strategic ambitions that function as drivers of the improvement processes are symbolized by the arrows that surround the heart of the figure.

During the first and second step the ambitions to interact with the internal and external stakeholders drive the improvement processes. Interaction is typified by a focus on the wishes and demands of stakeholder groups. During the second, third and fourth steps the ambitions to plan improvements and control improvement processes function as drivers of the improvement processes. Goals are planned systematically and management and employees agree on the control procedures. During the fourth, fifth and sixth steps the ambitions to design improvements into the structure of the organization and the ambitions to set goals and realize improvements function as drivers of the improvement process. The planning and control agreements are translated into a design for planning and control and this design is implemented in the organization. The organization

Figure 1 — Ambitions and improvements at DaimlerChrysler



identifies improvements and uses project teams to realize them. During the sixth, seventh and eighth steps of the improvement cycle, the ambitions to assure the quality of processes and products and the ambitions to position the organization in the market as "high quality" function as drivers of the improvement processes. Process and product improvements are integrated in the quality system of the organization and the results of the improvement processes are linked with and reported to the stakeholder groups.

Management methods and improvements

Several methods are used to realize improvements. The strategic ambitions and accompanying management methods and improvements are listed in Table II.
The interaction ambition is a driver of the use of the management methods: cross functional management, empowerment, interdepartmental cooperation, interlinked quality teams, stakeholder management and visionary leadership. Cross functional management, empowerment, interdepartmental cooperation and interlinked quality teams are used to align primary, supporting and management processes in the organization. Stakeholder management is used to tune the organization to the environment. Visionary leadership is used by top management to guide the organization through an interactive improvement process.

The planning and control ambition is a driver of the use of the management methods: formal planning techniques and quality plans. Planning techniques are used to control the processes in the organization and quality plans are used to improve them.

The design ambition is a driver of the use of quality improvement programmes. These programmes result in a growing coherence in the primary, supporting and

Table II — Drivers of continuous improvement at DaimlerChrysler

Ambition	Method	Improvement
Interaction	Cross functional management	Alignment of business processes
	Empowerment	Alignment of business processes
	Interdepartmental cooperation	Alignment of business processes
	Interlinked quality teams	Alignment of business processes
	Stakeholder management	Coherence organization-environment
	Visionary leadership	Guidance
Planning and control	Formal planning techniques	Process control
	Quality plans	Process improvement
Design	Quality improvement programmes	Coherence in business processes
Goal setting and realization	Performance indicators	Quantification of process output
	Policy deployment	Coherence in business processes
Assuring	Quality audits	Clear view on business processes
	Quality information systems	Alignment of business processes
	Quality system	Alignment of business processes
Positioning	Benchmarking	Process improvement
	Communication programmes	Feedback of results to stakeholders
	ISO 9002 certification	Process control

management processes in the organization. Goal setting and realizing ambition are drivers of the use of the management methods of performance indicators and policy deployment. Performance indicators are used to quantify the output of the improvement processes and policy deployment is used to improve the coherence of the primary, supporting and management processes of the organization.

The assuring ambition is a driver of the use of the management methods of quality audits, quality information systems and quality systems. Quality audits are used to describe the processes in the organization, and quality information systems and quality systems are used to align them. The positioning ambition is a driver of the use of the management methods of benchmarking, communication programs and ISO certification. Benchmarking is used to compare the results with competitors. Communication programmes are used to report the improvement results to the stakeholder groups. ISO certification is used to show to the stakeholders that the business processes are controlled.

Conclusion

The research indicates that strategic ambitions are drivers of improvement in organizations. Analysis of the improvement processes in the organization of DaimlerChrysler Netherlands shows that improvement processes are driven by strategic ambitions to design quality into the structure of the organization, plan and control improvements, assure improvements, set and realize improvement goals, position the organization in the market as a "high quality" organization, and create value in interaction with stakeholders. These ambitions drive the use of management methods like cross functional management, empowerment, interdepartmental cooperation, quality teams, stakeholder management, visionary leadership, planning techniques, quality plans, improvement programmes, performance indicators, policy deployment, management audits, management information systems, benchmarking, communication programmes and ISO 9000 certification. These management methods contribute to the control and improvement of, and coherence between business processes. ■

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