Quality management worldwide

Quality in Germany – an overview

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Abstract

Regarding preventive quality management, Germany was lagging behind for many years. Managers relied on the famous mark "Made in Germany" for too long. They did not realize that international competition had tightened. However, times have changed. Starting with the boom in ISO certifications, Germany is getting back on track again. Today, total quality management (TQM) and business excellence concepts are gaining ground. Positive trends regarding both applications for Germany's Ludwig-Erhard-Preis and the use of self-assessment show that the quality movement has got a new impetus.

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Traditional quality understanding

German companies considered quality management and quality assurance to be the same for many years. Quality was mainly a technical task assigned to an engineering department. The focus was on product quality, meaning compliance with specifications from customer orders (Zink, 1998, p. 11). Thus, quality could be defined and measured exactly by (geometric) dimensions, (physical) power, metallurgic properties etc. and respective limits of tolerance.

This understanding led to sophisticated testing procedures at the end of production and assembly lines. Statistical methods were employed not to control processes and reduce spoilage but to prevent defective parts from being delivered to the customer. The system was continuously improved and perfected over the years. It proved successful for a long period of time, rendering the label "Made in Germany" a widely accepted quality mark around the world.

However, times have changed rapidly. International competitors, especially those from Asia and the USA, were more and more successful – abroad and even in domestic markets. Technical expertise and production knowledge spread, excellent product quality was also achieved abroad. Germany suddenly found out it had lost its leading edge. What was even worse, competitors had not only caught up. Being able to produce at lower costs and being quicker in reacting to customer demands, they had even gone in the lead – particularly in the field of mass production.

When competitive pressure grew strong enough, German companies recognized they had to change. Quality control in its widespread and very traditional sense as end-of-the-line testing was not up to date any more. It was rather efficient regarding defect rates of outgoing products. But is was just too expensive for keeping up with international competitors. For that reason, prevention-based approaches were introduced. This was the first step to establishing a quality system in many companies, providing the basis for a late boom in ISO certifications.

The ISO 9000 series of standards gave a strong impetus to the quality movement. However, once more Germany did not manage to be at the leading edge. In 1982, BS 5750 was introduced in the UK. German companies mainly considered this protectionism – which was partly the case of

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course. However, they did not recognize immediately the extraordinary potential inherent in the standard's requirements. The systematic approach to quality management was not yet appreciated. Instead, BS 5750 was often described as an attempt to apply a single pattern to all kinds of companies – regardless of their individual structure, corporate culture and history.

However, since the German edition of ISO 9000 was published in 1987, the tables have been turned. The automotive industry was among the first to recognize the tremendous advantages certification could bring to them. Third party audits replaced company-specific audits carried out by each manufacturer independently. Starting in the automotive sector, this trend soon covered all major industries. Thus, multi-national companies as well as SMEs were confronted with powerful market demands for having their quality system registered. The number of certificates augmented rapidly.

Catching up with international competition

Regarding ISO certification, Germany has not only caught up with international competition, almost 25,000 companies had registered by the beginning of 1998. With that proportion, Germany has reached world-class level again. It now plays a decisive role also in pushing ahead and developing the standards' approach further. This is apparent in VDA 6.1, a national counterpart of QS 9000 issued by US car manufacturers. Backed by its strong position in the world-wide automotive industry, the association of German car manufacturers has developed an independent standard for quality management, being really an alternative to QS 9000 (Zink and Voss, 1997). All major German manufacturers not associated with US-based companies rely on that standard. At present, both parties are negotiating on accepting each other's certificate because there are no basic differences between the underlying quality concepts.

VDA 6.1 is part of VDA 6, "Quality Standards of German Car Manufacturers" (Figure 1). It provides a questionnaire for assessing a company's quality system. Regarding contents, it substantially covers all elements of ISO 9000 and partly goes beyond. VDA 6.1 is divided into two parts: "Management and Leadership" and "Product and Process". This structure reflects the thesis that most problems in quality and quality management are not caused by technical failures alone, but often created by deficits in management systems and organization structures (VDA, 1996, p. 4). Thus, VDA 6.1 is a first step to extend the product-centered notion of quality to an understanding as an organization-wide task.

The standard has an interesting audit approach. First, evidence is sought for each question that it is fulfilled in day-to-day operations. Only in the second step is the quality manual taken into account. Then a company can show if its structures and processes are completely defined and documented. The standard does not want to focus on paperwork and red-tape, but on the way the quality system is actually working in daily business.

Although both VDA 6.1 and QS 9000 are dealing with management issues, the traditional notion of quality focussed on a product's technical properties was only partly overcome. The vision of business excellence is not yet widely accepted. It relies on the idea that, in the long run, a company will only perform excellently (and meet the expectations of its shareholders by making good profits) when it succeeds in balancing the needs of all stakeholders. Long-term success requires customer satisfaction and loyalty, which in turn is based on employee satisfaction etc. Thus the focus shifts from mere product to corporate quality – summarized in the vision of business excellence.

First hints on this idea can be seen in Japan's Deming Prize which was introduced already in 1951! They get even clearer in the set of criteria for the Malcolm Baldrige National Quality Award issued for the first time in 1987 (NIST, 1997). Even Australia – mostly disregarded when looking at recent developments in management sciences – has had a quality award since 1988 (Australian Quality Awards Foundation, 1997). At that time, Germany was just going for ISO certification!

Total quality management on the rise

However, total quality management (TQM) and business excellence gained some ground in 1992 when EFQM – European Foundation for Quality Management – was founded. Germany's Robert Bosch GmbH and Volkswagen AG were among the members from

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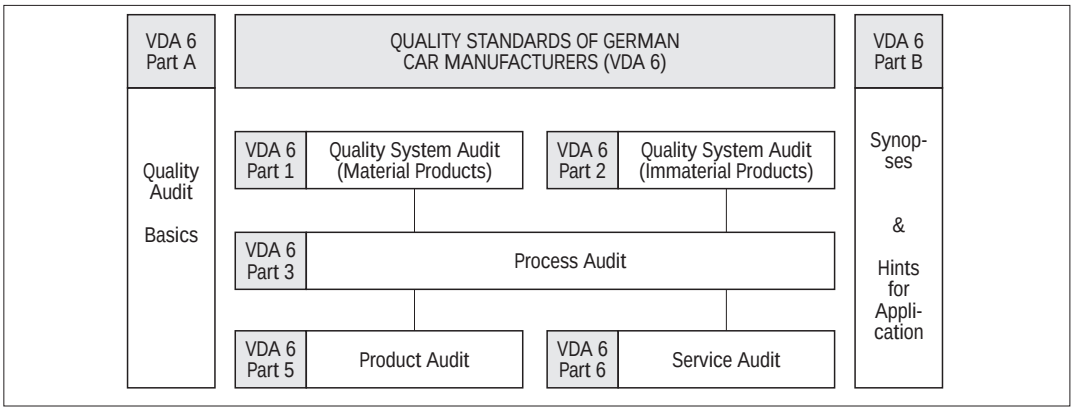
Figure 1 Germany's VDA 6



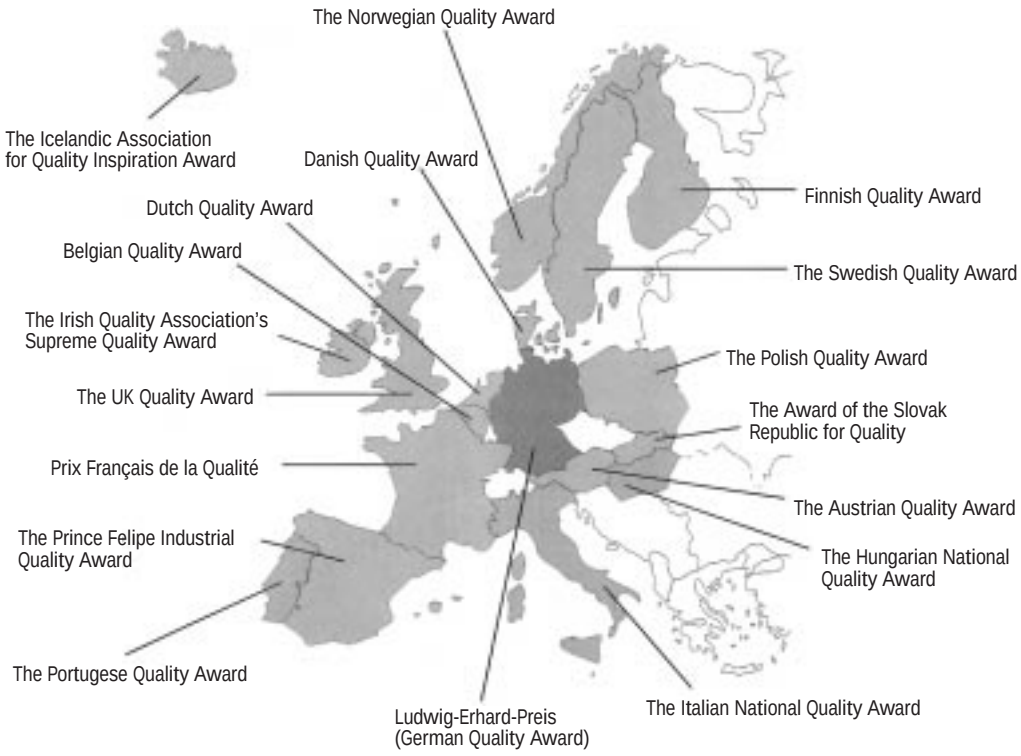
Source: VDA (1996, p. 4)

the very beginning. Since then, the vision has constantly spread (Figure 2). Today, there are more than 100 German EFQM members, which is the second largest national section – only surpassed by the UK. Furthermore, in 1997 Landhotel Schindlerhof, a hotel situated near Nuremberg, was the first company to reach the finals for the European Quality Award (SME-Award).

As further incident pointing in that direction, the "Ludwig-Erhard-Preis – Auszeichnung für Spitzenleistungen im Wettbewerb" was established in 1997 as the German quality award. Named after Ludwig Erhard, the first minister of trade and commerce and one of the exponents for Germany's economic miracle after World War II, it shows the country's willingness to strive for the leading edge in quality again. However, it will be a hard way to go for that ambitious goal.

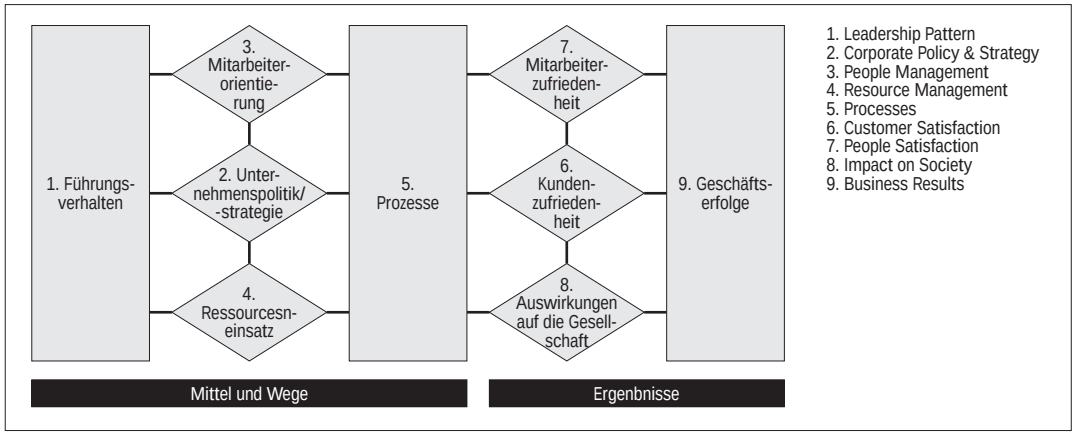
Regarding content, the Ludwig-Erhard-Preis (Figure 3) relies on the European Quality Award (EQA). The aim for choosing this model was to make it easier for companies either to apply for both awards simultaneously or go from national to European level without

Figure 2 Quality awards in Europe



Source: Zink and Voss (1998, p. 131)

Figure 3 Germany's Ludwig-Erhard-Preis



Source: Initiativgemeinschaft, Ludwig-Erhard-Preis (1996, p. 8)

switching the model. However, there have been some minor adjustments in wording in order to make objectives and contents clearer to German companies.

(1) "Leadership pattern" matches the role of management with requirements of TQM. As implementing a continuous improvement process and going for business excellence require visible management commitment and powerful support for change, superiors acting as role models and showing leadership are a key prerequisite for a successful TQM process.

(2) "Corporate policy and strategy" deals with a company's objectives, values and strategies and their implementation in day-to-day business. Policy and strategy must be based on valid and comprehensive information and translated into definite goals and objectives for organizational units, individuals, and teams. A consistent policy deployment makes sure all people know what they are expected to do in order to achieve a company's overall strategic objectives.

(3) As total quality also means integrating an organization's people, the model's third element "people management" describes the approach to set free the individuals' potential for continuously improving the business. The element appeals to empowerment and communication as well as education and training.

(4) "Resource management" refers to the way a company employs its production facilities and all other input factors. The approach is assessed to manage, efficiently use and save all resources and to support policy and strategy.

(5) "Processes" describes all value-adding business activities in the company. The element refers to proceeding to identify, review and constantly improve them whereby a process consists of several steps transforming input factors to an output product or service and creating added value.

(6) "Customer satisfaction" has its focus on the company's performance as perceived by its external customers. It refers to all people purchasing products and services directly from the company and all other customers in the sales chain towards the end consumer.

(7) "People satisfaction" assesses the employees' perspective on the organization. Respective data should cover all people working there regardless of their labor legislation status.

(8) "Impact on society" shows how the interests of society as a whole are taken into account. A company should describe how it is perceived in public regarding its contribution to the quality of life, to environment protection, and its commitment to save global resources.

(9) "Business results" has its focus on the company's performance compared with its strategic objectives. In summary, this element reflects the interests of all shareholders and the extent to which they are met.

The first five elements are addressed as *"Mittel und Wege"* (concept and strategy). They show the enablers, i.e. the structural preconditions of superior corporate performance. The other four elements are *"Ergebnisse"* (results) to measure the company's

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performance and success from different stakeholders' perspectives. The assessment scheme corresponds with the EQA. It is based on two dimensions: "approach" and "deployment" for enablers and "quality/excellence" and "scope" for the result items.

The Ludwig-Erhard-Preis was bestowed for the first time in 1997. In the first year of its existence, the jury decided not to confer the award but it chose two prize winners. One of these was Otis GmbH, a manufacturer of elevators and escalators, the other was Centra Regelungstechnik, a control engineering division of Honeywell AG. The award winner for 1998 has not been selected yet. However, the administrative associations have already received considerably more applications than last year. Obviously, interest in the award and the underlying model is on the rise.

Self-assessment increasingly employed

Applying for an award is not the most important step when implementing business excellence concepts. It just means going public with one's commitment to quality management. Internally, the whole process should be based on regular self-assessment, matching the organization against the criteria of a model for business excellence – provided by quality awards such as European Quality Award, Malcolm Baldrige National Quality Award or Ludwig-Erhard-Preis.

Self-assessment is a tool to systematically monitor and control a company's continuous improvement process. This understanding is more and more accepted. Results of two surveys from 1994 and 1997 (Figures 4 and 5) with almost identical addressees show that the proportion of companies having introduced systematic self-assessment has considerably increased. While in 1994 more than one third did not intend to employ the tool, only 20 percent have retained this decision in 1997.

Companies are increasingly convinced that self-assessment can help them to go for business excellence. This becomes obvious when the impact on business results comes into play. At present more than 70 percent of the persons asked have recognized a positive effect on their organization's performance – compared to 38 percent in 1994.

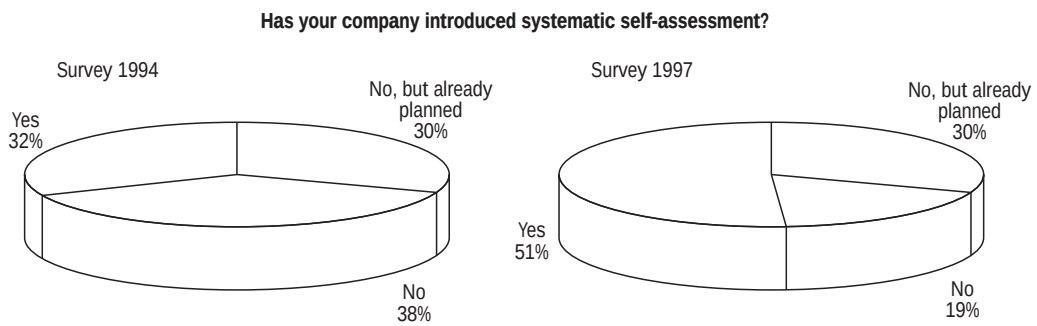
Most business excellence models are based on the premise that meeting all stakeholders' interests causes excellent business results in the end. According to this understanding, caring for employees, customers and society as a whole is a secure way to serve an organization's shareholders' interests, too. Although management science has not yet succeeded in providing clear evidence for this theory, people obviously experience the interrelations in day-to-day business.

Consistently, many of them will carry on self-assessment in the future; 40 percent answered they planned to go on for ten years or more (Figure 6). At least, they presently do not intend to abolish the approach. All these data show that German companies get more and more keen on self-assessment and the vision of business excellence. They are constantly striving to achieve that ambitious goal.

Germany is on track again

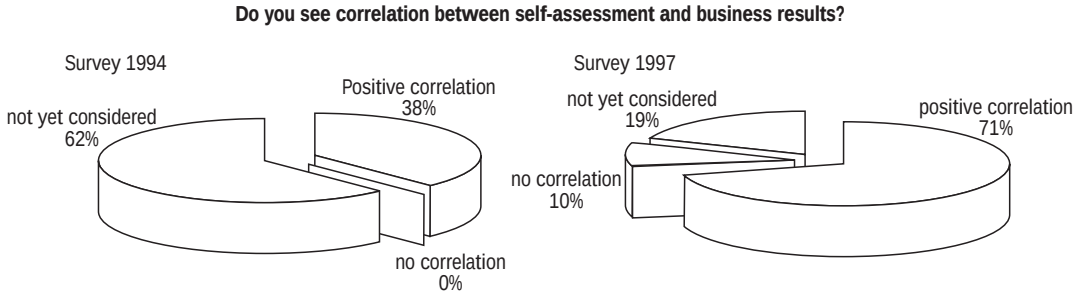
Striving for the vision of business excellence, most companies need not start from scratch. They can rely on their highly skilled employees who often take a pride in making high quality products or delivering excellent service. Furthermore, quality assurance in production and assembly is often world-class level. These strengths provide a strong basis

Figure 4 Implementation of self-assessment



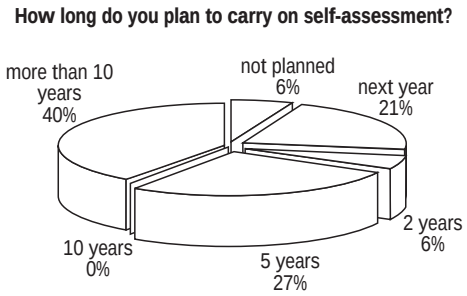
Source: Zink *et al.* (1998)

Figure 5 Impact of self-assessment



Source: Zink *et al*. (1998)

Figure 6 Plans to continue self-assessment



Source: Zink *et al*. (1998)

to develop further. The next step is to come to a new quality understanding shared by all people from executive to shopfloor level. It must go beyond traditional product or service quality and include an overall perspective in the sense of business excellence. However, the afore-mentioned data show companies are working on that.

In the past, Germany was lagging behind regarding preventive quality management. Managers relied on the famous mark "Made in Germany" for too long. They did not realize that international competition had tightened. The economic threat became visible when Japanese and US companies gained market shares. But even then the NIH-syndrome ("not invented here") proved extremely strong and prevented them from taking over up-to-date quality concepts.

However, managers have changed their mind. Starting with ISO certification, Germany is getting on the bandwagon again. TQM and business excellence concepts are gaining ground. As mentioned above, two incidents show that quality is pushed to the fore with renewed drive. Self-assessment concepts are increasingly used again for internal purposes. At the same time, positive trends can be seen in applications for the Ludwig-Erhard-Preis as an outward sign of the companies' quality commitment. So Germany has the chance to catch up and stand in a line with international competitors again.

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Commentary

Useful round-up of practice in one of the benchmark economies for quality management.