



The Transformation towards the future Quality Manager

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1 Introduction

1.1 Motivation and Background

The present work is basically a short version of my dissertation on “Development of a Transformation Concept for the Occupation of Quality Manager” („Entwicklung eines Transformationskonzept für den Beruf Qualitätsmanager“¹), which I presented to the University of Wuppertal in 2011 and which resulted in the award of my Doctorate (Dr.-Ing.) in 2012. I have now extended my thesis to show how the insights gained regarding quality managers in Germany can be transferred to other countries and how the European Organization for Quality, its member organisations and their members in European countries can make use of them.

I have already presented my initial premises, theses and insights - before and increasingly following award of my doctorate - in numerous talks and articles in specialist publications. The reaction was and continues to be very strong and positive. My specialist colleagues in the sector have discussed my contributions in great detail and in many cases have greeted them with enthusiasm. Many colleagues have also contributed further ideas on implementation and have agreed to provide their support. As a result, DGQ created a specialist circle with the theme of “QM Occupations” in 2012, in which members of DGQ wish to work together on the further development of the quality management occupations. Dr. Wolfgang Kaerkes, long-time President of the Board of DGQ and supporter and mentor of my doctoral thesis, has been kind enough to take my propositions and insights to the EOQ. Dr. Eric Janssens, Secretary General of the EOQ, has recognised their potential and has agreed to EOQ-funded translation of my extended thesis into English.

My decision to begin by discussing the nature of the occupation of Quality Manager is based on the following observation. Scientific and practical work on the subject of quality management has up to now almost exclusively been concerned with the tools and methods and with the models and systems of quality management, but not with the occupations engaged in implementing quality management² on the ground.

This paper is intended to help draw the attention of quality science, quality managers, the managers to whom they report and last but not least the national quality organisations and companies, to the occupation of Quality Manager. It should also lead to strengthening of the discussions already taking place within the occupational group on theories and forecasts regarding the occupation of Quality Manager. Based on this, the occupational group will receive new stimulus for strong positioning of the occupation of quality manager, focussing on future requirements. This will directly and sustainably raise the effectiveness and significance of quality management. In this way, the specialist community will recognise that concerted action is required in order to launch the

¹ Dissertation of the author [Sommerhoff 2012]

² This conclusion is the result of evaluation of scientific literature relating to quality, the research programmes and projects of the chairs of quality management at universities and the evaluation of more than 50 years of the leading German specialist publication on quality and reliability “QZ – Qualität und Zuverlässigkeit” (formerly quality control - “Qualitätskontrolle”). Here it is certainly possible to find contributions regarding the changing tasks of quality managers and quality representatives. For example, in his dissertation, Krämer [Krämer 1997] discusses the change in the function of quality assurance and quality management and describes changing tasks and designations of quality-related posts in the context of Total Quality Management. Noé dedicates a specialist book to the development “from quality manager to internal management consultant” (“vom Qualitätsmanager zum internen Managementberater”) [Noé 2010] and Castiglione describes the “quality manager as allrounder” (“Qualitätsmanager als Allround-Talent”) [Castiglione 2011] among others in the roles of internal consultant and advisor, coach and change manager. Both of these authors base their observations on their own experiences as quality managers or consultants, but do not make use of any analyses or explanatory schemes from the area of occupational science.

necessary transformation of the occupation of quality manager and to pursue it successfully into the future.

The present work makes use of studies, research and insights which I carried out and acquired within the framework of my activities when writing the above dissertation. The present text is, however, written specifically for publication by the EOQ. Graphics and short text passages in footnotes taken from the dissertation are identified as such. The underlying analysis and the studies that have been carried out relate to the situation of quality management and quality managers in Germany, but I will also explain to what extent and how this can be transferred to other countries.

The aim of the dissertation is to create a transformation concept for the occupation of quality manager in order to orientate and direct it towards new requirements. This text also shows why and how the field of organisation development offers a decisive new positioning for quality management and the occupation of quality manager and how this new positioning can strengthen the effectiveness of quality management.

1.2 Initial situation and propositions

Quality managers are the major protagonists when it comes to quality management. Quite rightly, top and middle management and employees are also very significant, as they also work on and make a contribution to quality management and are internal customers for the services of the quality managers. They determine the objectives, acceptance and effectiveness of the quality management measures. The quality managers themselves are of particular significance as promoters, developers and implementers of quality management. They have to find and apply solutions suitable for the organisations within which they work and for the people whom they wish to address – often meeting resistance along the way.

A first proposition regarding the occupation of quality manager which is used as a basis in this paper states that the success of quality management in an organisation depends more on the person and personality of the quality manager than on the functionality of the quality management methods and tools that are used. It is not only the competence of the quality manager which is responsible for success; this competence is a necessary prerequisite. It is much rather the status and role of the quality manager that are the key factors.

A second proposition is as follows. The occupation of quality manager has been considerably shaped by the requirements of previous decades. As a result, the quality manager occupational group is not able to fulfil additional and different future requirements in an appropriate way. In addition, quality managers have to cover an ever wider spectrum of sectors and themes, but are not in fact equipped to do so. Other occupations such as controllers, human resources managers, IT specialists and consultants are expanding their competencies to the detriment of quality managers, and are continuing to develop their roles. Quality managers are in danger of losing their ability and possibility to act. These developments have a negative impact on the quality capability of organisations. The occupation of quality manager needs to be newly defined.

Companies and public services are under very considerable pressure to change³. The response of quality science and quality management practice to the increasingly complex situation that results from this consists of modern and holistic quality management approaches such as the EFQM Excellence Model, the Aachen Quality Management Model, the St. Gallen Management Model and the Wuppertal Generic Management Concept⁴. These models all have quality management system development in the sense of organisation development⁵ at their heart. However, working on organisation development is not automatically understood to be an integral and vital part of the work of a quality manager today, as understood by quality managers themselves. There is also a general lack of basic education and training in organisation development within the specific context of quality management.

The present document shows what the future requirements for the occupation of quality manager are, and also demonstrates how the occupation can be newly positioned in order

- to fulfil these future requirements,
- to raise the profile of the occupation itself and therefore
- to increase the acceptance and effectiveness of quality management as a whole.

1.3 Way of proceeding

In order to consider the occupation of quality manager in a scientific way, use will first be made of knowledge gained and explanation models from occupational research, and of occupation and profession sociology. These will help to interpret the development of quality management to date from the professional point of view and will help above all to identify the mechanisms suitable for achieving any transformation of the occupation of quality manager which may be necessary.

This is followed by an analysis of the historic development and the current situation, which is based on literature searches, official statistics and also my own studies of the subject⁶. It shows the starting point from which further development and transformation have to occur. The vital aspect is then the identification of future requirements for the occupation of quality manager. This will be possible with the help of a trend scenario, QM 2020, drawn from trend forecasts and studies regarding the future. The identification of future requirements provides a basis for further development and transformation. Then, using these findings, a transformation concept for the occupation of quality manager will be sketched out. Transfer of the approaches developed for Germany to other countries, particularly within the sphere of activity of the EOQ, associated with considerations as to how national quality organisations can drive forward further development of the “quality occupations” in a systematic way, will complete the matters under consideration here.

³ Compare: Abele and Reinhart, who above all describe the challenges for manufacturing companies and, among other things, consider demographic change, new technologies, climate change, low availability of resources and changing mobility as factors which initiate the need for change [Abele 2011]. Strahlendorf and Kleinschmidt state: “Public administration is undergoing a fundamental process of change” [Strahlendorf 2008, S. 3]. Deutsche Bank Research describes the huge factors influencing change in the service sector [Ehmer 2009]. (Footnote taken from [Sommerhoff 2012].)

⁴ For the EFQM Excellence Model, see [EFQM 2010], for the Aachen Quality Management Model, see [Winzer 2006], for the St. Gallen Management System see [Rüegg-Stürm 2004], for the Wuppertal Generic Management Concept, see [Masing 2007]

⁵ The Society for Organisation Development (Gesellschaft für Organisationsentwicklung - GOE) defines organisation development as “a long-term, sustainable development and change process affecting organisations and those who work in them. The effectiveness of this process is based on learning by all those involved through direct participation in the processing and solution of operational and commercial problems.” [GOE 2009]

⁶ Telephone interviews in 2008 and 2010 with a total of 700 top managers, 500 quality managers and 1000 members of the public

2 Approaches and models for analysis and explanation of the occupation of quality manager

Occupational research and occupational sociology contribute

- the characteristics of occupations,
- the features of professions and
- systematic profession theory

to investigations into the occupation of quality manager⁷. These contributions did not come into being specifically in connection with the occupation of quality manager, but are generally applicable to types of work that are classed as professions. It is in fact the case that occupational research and occupational sociology have rarely taken the occupation of quality manager into account up to now, and in any case have not considered it as an independent entity.

2.1 Characteristics of “occupations”

There are many definitions of “occupation”⁸, which are broadly similar to each other. Dostal et al.⁹ [Dostal 1998] have described an occupation as consisting of a complex network of characteristics. From these, four pairs of summarising characteristics for occupations can be drawn:

- jurisdictions¹⁰ and tasks,
- methods and tools,
- qualification and competences,
- status and role.

These pairs of occupation characteristics make it possible to describe the occupation of quality manager as regards its history and its occupation profile today. They identify the central themes for change or new positioning of the occupation profile. The occupation characteristics also help to answer the basic question of whether “quality manager” really is an occupation at all. For in the publication on classification of occupations entitled *Klassifikation der Berufe* (KIdB2010), which was updated in 2010 and which is used in Germany by the Federal Statistical Office and the Federal Employment Agency¹¹, the occupation of quality manager was listed for the first time in 2010¹² but never in the previous documents. The more the occupation of quality manager can be differentiated from other occupations based on its characteristics, the more plausible is its classification as an occupation in its own right. At the international level, the International Labor Organisation (ILO) was also still working in 2013 on implementing the ISCO-08 (International Standard Classification of Occupations 2008), which will then replace the ISCO-88 from 1988.

⁷ Section 2 provides a brief summary of the comprehensive consideration of the contributions of occupational research and occupational sociology which appear in the dissertation of the present author [Sommerhoff 2012].

⁸ Geser [Geser 2005] defines occupations as “institutionalised role-related “activity bundles” (e.g. “Qualification bundles”) within the division of labour that takes place within society.”

⁹ [Dostal1998, S.438-460]. At the time of publication, the authors Dostal, Stooß and Troll were researchers at the Institute for Employment Research of the Federal Employment Agency (Institut für Arbeitsmarkt- und Berufsforschung (IAB) der Bundesanstalt für Arbeit).

¹⁰ jurisdiction is a specialized term of the occupational sociology and can be interpreted as responsibility

¹¹ [KIdB 2010]

¹² “It was only in autumn 2010 that the Institute for Employment Research (Institut für Arbeits- und occupationsforschung - IAB) named differentiated quality management occupations in the new classification of occupations 2010¹² (KIdB 2010) (the Group “occupations in technical quality assurance” - technischen Qualitätssicherung - and the Group “supervisory and management personnel – technical production planning and control” - Aufsichts- und Führungskräfte - Technische Produktionsplanung und -steuerung). The service sector is not represented in such a differentiated manner, and only the “quality representative for health and social services” (Qualitätsbeauftragte - Gesundheits-/Sozialwesen) and the “IT quality assurance coordinator” (IT-Qualitätssicherungskordinator are listed. Quotation with sources from [Sommerhoff 2012]

In its initiatives up to now which have been aimed at further development of the quality management occupations, EOQ has placed emphasis on tasks and on qualification and competences. This is also reflected in the important CoS 9000 document, which is currently being revised. However, it remains to be demonstrated that jurisdiction is more important for the further development of the QM occupations than the tasks themselves that are performed within the occupation. The status and role of quality managers are also more important drivers for the effectiveness of quality management than, for example, the tools and methods that up to now have been the object of strong consideration within the sphere of quality management.

2.2 Characteristics of “professions”

The so-called “professions” represent a prominent group among the occupations with regard to their status and social significance. The traditional professions include doctors, lawyers, ministers of the church and professors [Kurtz 2002]. The aim here is not to demand or achieve categorisation of the occupation of quality manager as a profession. It is rather the case that the features that define an occupation as a profession can serve as quality characteristics for particularly well-recognised and respected occupations. On this basis, the rank and status of the occupation of quality manager will be assessed and then raised in a targeted fashion within the framework of a transformation aimed at improving its attractiveness and effectiveness (see 5.3). Kurtz [Kurtz 2002, S. 49], also referring to Cogan [Cogan 1953], describes “a catalogue, which contains the characteristics and criteria most frequently used in order to identify professions”. In this connection, he lists seven characteristics:

- organisation within a strong professional association
- presence of a code of ethics
- qualification (academic, influenced by members of the profession)
- orientation towards the common good
- extensive autonomy in the practice of the profession
- monopoly as regards rights of significant action (jurisdiction)
- prohibition on advertising.

2.3 Systemic profession theory

With his systemic profession theory, described in his work “The System of Professions” [Abbott 1988] which is considered the standard work on the subject¹³, Andrew Abbott frees himself from the use of characteristics which define professions. He defines as follows¹⁴: “professions are exclusive occupational groups applying somewhat abstract knowledge to particular cases”. This seems to be a very broad definition, comparatively speaking. For Abbott, the question of differentiation between expert occupation and traditional profession does not seem to play any part. He shows that occupations and professions do not develop of themselves in an isolated

¹³ Even if it was published as early as 1988, Abbott’s work continues to be of relevance. When considering the professions, almost all the authors in the field of sociology refer to Abbott’s System of Professions. The reading list of the section on the sociology of professions of the German Sociological Association for Abbott’s System of Professions under the heading of *More recent theoretical developments (Neuere theoretische Entwicklungen)* is also of interest here (see www.professionssoziologie.de). Kurtz and Klatetzki provide two examples of the current recognition that is enjoyed by Abbot amongst German profession sociologists. Kurtz, Member of the Management Board of the occupational sociology section of the German Sociological Association [Kurtz 2008 S. 15], in his professorial thesis regarding the “occupational form of society” designates Abbott as the person “who has played the major role within profession sociology since its inception [...]”. Klatetzki, Professor of Sociology at Siegen University, in his contribution to the publication “Organisation und Profession” [Klatetzki et al. 2005] explains the structure of professional behaviour based on the concepts used by Abbott. (Footnote taken from [Sommerhoff 2012].)

¹⁴ Abbott [Abbott 1988, S.8]

fashion, but exist within a highly dynamic, interdependent system of occupations. He identifies the “claim of jurisdiction”¹⁵ as a driving force within the context of competition – “competition for jurisdiction”¹⁶. The occupation of quality manager is also in a relationship of intensive interdependence with other occupations, such as managers, controllers, human resource developers, consultants. Competition is becoming more intense for quality managers, for the other occupational groups are penetrating ever further into the traditional responsibilities of the quality manager, such as for example that of the design and installation of management systems. Abbott demonstrates that professions have exclusive jurisdiction – “jurisdiction is exclusive”¹⁷. This observation is also relevant to the occupation of quality manager. Are the competencies of quality managers still sufficiently exclusive? Section 4.2 considers this question.

Abbot describes the mechanism by which occupations penetrate into new competencies or those which are becoming vacant in terms of a *vacancy model*¹⁸, which is based on the premise that such vacancies trigger surges in the development of occupations. Does such a vacancy exist today or in the foreseeable future for the occupation of quality manager? Sections 4 and 5 of this document will demonstrate that organisation development is the jurisdiction that is sufficiently vacant in order to provide the occupation of quality manager with a strong position, and therefore also strengthen the impact of quality management.

The development history of occupations is defined by initial and key events, so-called first events and milestones. Section 3 describes these events in relation to the occupation of quality manager.

And last but not least, professions are characterised by a unique and abstract system of knowledge. Professional knowledge cannot be simply learnt and transferred; initiation into this knowledge constitutes initiation into the profession. Such knowledge clearly differentiates professions from one another. In contrast, the traditional knowledge system of quality management has become more and more generally accessible and used and is now by no means exclusive.

This places the exclusivity of the jurisdiction, and also the status of quality managers, at risk.

Section 5.1.3 shows how the jurisdiction of organisation development provides the occupation of quality manager with this exclusivity.

The systemic profession theory of Abbott therefore provides several explanation models in order to understand the occupation of quality manager, but also describes mechanisms which show how occupations can be developed further. The transformation concept described in 5.2 will be based on these.

2.4 Alternative role scenarios of the occupation of quality manager

Following the identification of explanation models from the areas of sociology and occupational research, a description of alternative role scenarios extrapolated exclusively for the occupation of quality manager now demonstrates the heterogeneous nature of the way in which the occupation is practised today. Concepts for future design and positioning of the occupation can develop as a result of this. A “scenario cross” diagram serves to extrapolate these alternative role descriptions. It requires two variables, which are represented on two axes. A Strategy Map [Kaplan 2004] serves to identify the variables, as is used in the creation of a Balanced Scorecard [Kaplan 1992]. In this

¹⁵ Abbott [Abbott 1988, page 59 ff]

¹⁶ Abbott [Abbott 1988, page 33 ff]

¹⁷ Abbott [Abbott 1988, page 34]

¹⁸ Abbott [Abbott 1988, page 88 ff]

context, the benefit which accrues to the organisation through quality management and also the pairs of occupation characteristics described above can be used in a similar way to the perspectives of a Balanced Scorecard (see Table 2-1).

Table 2-1: Analogies of the occupation characteristics using the traditional Balanced Scorecard

Occupation characteristics	BSC perspectives according to Kaplan and Norton ¹⁹
Benefits to the organisation	Financial perspective
Jurisdictions and tasks	Market and customer perspectives
Methods and tools	Process perspectives
Qualifications and competencies	Learning and development perspectives
Status and role	

Figure 2-1 shows the cause-effect relationship between aspects of occupation characteristics as they affect the benefits to organisations offered by quality management. The benefits consist of:

- reduction in errors and waste,
- increase in efficiency,
- increase in the attractiveness of the organisation for all its stakeholders.

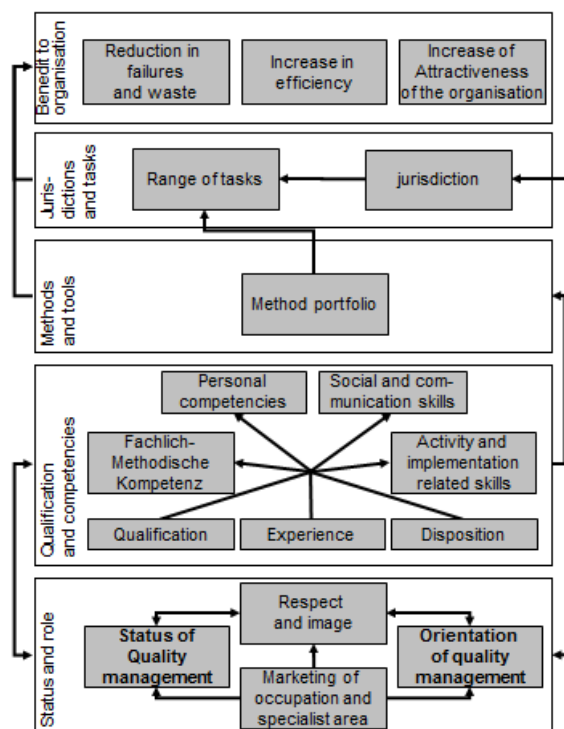


Figure 2-1: Cause-effect relationships for the occupation of quality manager

At the start of the cause-effect chain towards these aspects of benefits to the organisation, the status and orientation of quality management act as decisive drivers. Their characteristics and emphases are decisive for the quality management, and different characteristics lead to differentiable role scenarios of quality management, associated with different roles of the quality managers.

¹⁹ [Kaplan 1992]

The variable status can have a leading or subsidiary character, and it can either retain or change the variable orientation²⁰. Figure 2-2 shows this with the help of a scenario cross diagram which covers the scenarios²¹. The four scenarios, which can now be differentiated from one another, can be effectively designated as policing, control function, project reserve and organisation development.

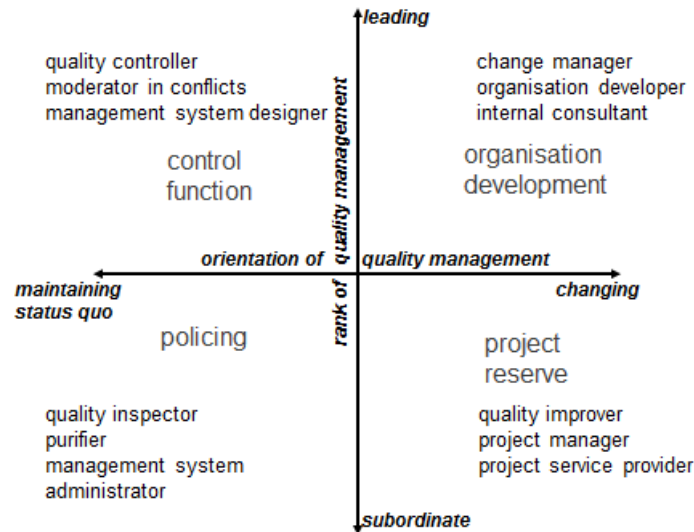


Figure 2-2: Scenario cross, alternative role concepts for quality management

Policing is the scenario of quality management which is strongly subordinate in character and which maintains the status quo. The typical role scenarios are those of quality inspector, purifier and management system administrator. The **control function** scenario includes assertive quality managers, who are nevertheless concerned with maintaining the status quo in the roles of quality controllers, management system designers and moderators in quality-related conflicts between managers. The **project reserve** scenario with subordinate rank and orientated towards making changes, is recognised by top management as an additional resource for working on projects, including change projects. Quality managers are used as quality improvers, but above all as project service providers up to the role of project managers. **Organisation development** is the role scenario within which quality managers positioned in the first rank play an active role in the design of the organisation. It is clear that in particular the extreme scenarios, i.e. policing and organisation development, are very different from one another and that it is difficult for individual quality managers to change between the respective roles.

It is possible to check the theories shown in the scenario cross regarding the existence and type of differences between the alternative role scenarios. This was carried out within the framework of a

²⁰ Quality management in companies and organisations can differ very much as regards its orientation. It can be orientated towards adherence to and committed application of the regulations and standards, including strict adherence to any changes – in other words it can be orientated towards maintaining the status quo. However, quality management can also play an active role in initiating changes, having a more transformational orientation. [Sommerhoff 2012].

²¹ The scenario cross diagram shown here is similar to the Sinus-Milieus [Sinus 2011] with regard to its axes and in the last analysis its function, which is to differentiate between alternative “populations” of quality managers. Using the axes “social situation” (lower class to upper class) and basic orientation (holding fast to what is known, maintaining existing circumstances up to action and experience, overcoming barriers), Sinus displays a portfolio in which the population is divided into various different milieus based on surveys.

study carried out by myself in 2010 which involved a survey of 399 top decisionmakers from 200 production companies and 199 service providers. The questions used are shown in Table 2-3²².

Table 2-3: Interview questions²³ regarding scenario descriptions and definitions

A	<p>I will now read you some statements regarding quality management and the position of the person responsible for QM in your company. Please tell me how far you agree with these statements, on a scale from 2 “completely agree” to 5 “completely disagree”.</p> <ul style="list-style-type: none"> • Quality management is the lead system for all other management systems in our company • The quality manager has a higher profile than other managers of the same rank • The quality manager is able to assert his opinions in disputes regarding adherence to quality regulations and standards. • No compromises are made when it comes to product quality. • The area of jurisdiction of the quality management personnel extends beyond aspects of product quality and the quality management system. • The area of jurisdiction of the quality management personnel has been extended in recent years.
B	<p>I will now read you some statements regarding the work of the quality manager in the company. Please tell me how far you agree with these statements on a scale from 2 “completely agree” to 5 “completely disagree”.</p> <ul style="list-style-type: none"> • His day-to-day work is mainly characterised by repetitive tasks²⁴ • His day-to-day work is mainly characterised by project work • The top company management consults him regularly with regard to important organisation development themes. • In our company, major projects for the future are led by the quality manager. • One main focus of his QM work consists of new design of the corporate structure • One main focus of his QM work consists of ensuring that regulations and standards are adhered to in the company.

The results of the study show that the scenario cross drawn from theory is suitable in order to demonstrate the existence and heterogeneous nature of the role scenarios (see Fig. 2-3). The following observations are particularly significant. The four different role scenarios are represented to an approximately equal extent, and there is hardly any difference between manufacturing companies and service providers in this regard. For further considerations regarding transformation of the occupation of quality manager, organisation development presents itself as a realistic role scenario which already exists. If and how the quality managers working within this scenario fulfil the role competently and effectively remains to be clarified.

²² The questions were included in a more comprehensive survey developed by the author, in which further questions relating to occupations and quality management were asked. The survey was an element of the Excellence Barometer of the partners DGQ and forum! market research [Exba 2005, 2008, 2010]

²³ The answers of a respondent to the six questions related to one of the axes (A for Rank, B for Orientation) on the scale from 1-5 were averaged for each axis and converted to a 100 scale, so that one coordinate comes into being in the scenario cross for each respondent.

²⁴ In this Item, there is high agreement with maintaining the status quo, and low agreement with making changes. This item was evaluated in inverse form in the later formation of an index using an average from the answers to the 6 items.

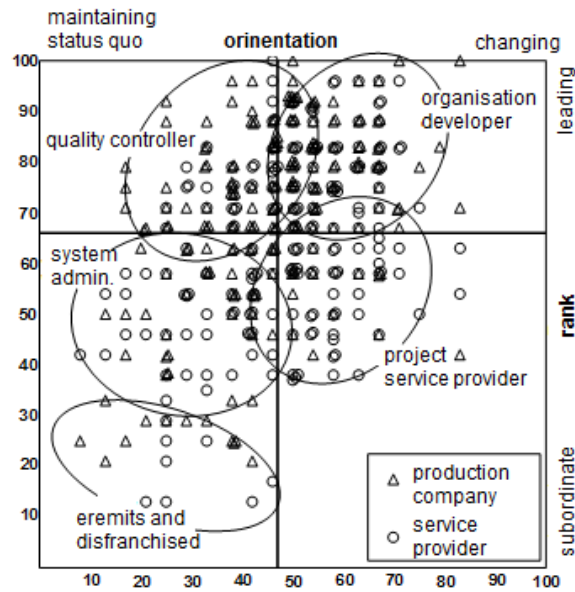


Figure 2-3: Distribution of the different quality manager roles based on perception of their higher-level managers²⁵ [Sommerhoff 2012]

3 History and current situation of quality management from the occupational point of view

The history of quality management has been described in detail by quality scientists²⁶. The consideration of the history of quality management from the occupational point of view which now follows additionally identifies the initial and key innovations within the occupation of quality manager. An evaluation then follows based on the pairs of occupational characteristics from Section 2.1.

3.1 Initial and key innovations

The break in industrial development caused by World War II was so enormous in Germany that it is appropriate to begin with a historical consideration of the occupation of quality manager²⁷ in Germany in the post-war period. In the nineteen-fifties, Statistical Quality Control (SQC) represented a key innovation within manufacturing industry. Its origins extend back to the nineteen-twenties and thirties, but it is only in the fifties that really rapid development of quality management began, with SQC. Existing quality testers had to acquire a level of competence for SQC which meant that traditional universal engineering knowledge was no longer sufficient in order to practise the occupation of quality manager. It started specialisation of the engineering profession in the direction of quality control engineer. The quality managers began to organise themselves early on, with the main emphasis on organisation of qualification. As from 1952, the quality managers organised themselves within the technical statistics group of the Economic Affairs Committee (Ausschuß Technische Statistik beim AWF - Ausschuß für Wirtschaftsfragen), which in 1957 continued its work as the German working group for statistical quality control of the Economic Affairs Committee (Deutsche Arbeitsgemeinschaft für Statistische Qualitätskontrolle beim AWF)

²⁵ The lines within the diagrams show the averages of the results related to the axes.

²⁶ Compare [Winzer 2002], Masing [Masing 2007], [Kamiske 2008], [Pfeifer 2010]

²⁷ The designation of the function and occupation of Quality Manager only comes into being later and establishes itself in the nineteen-nineties. In order to name the occupational group consistently through all phases of its development, the designation "Quality Manager" is used throughout here. (Footnote taken from [Sommerhoff 2012].)

and had 350 members in 1959. The Committee was finally absorbed into the German Society for Quality (Deutsche Gesellschaft für Qualität).²⁸ As early as 1956, the European Organization for Quality Control (EOQC, later EOQ, European Organization for Quality, was established), with Walter Masing as the founding president. From the point of view of occupational sociology, the establishment of these organisations were important milestones in the development of quality managers into an independent occupational group. For the next 30 years and beyond, SQC would be the decisive influence on quality management and, in terms of qualifications required, on the occupation of quality manager. Figure 3-1 shows categorisation of the different quality management occupations²⁹ and contemporary variations and designations of the early phase of the occupation of quality manager.

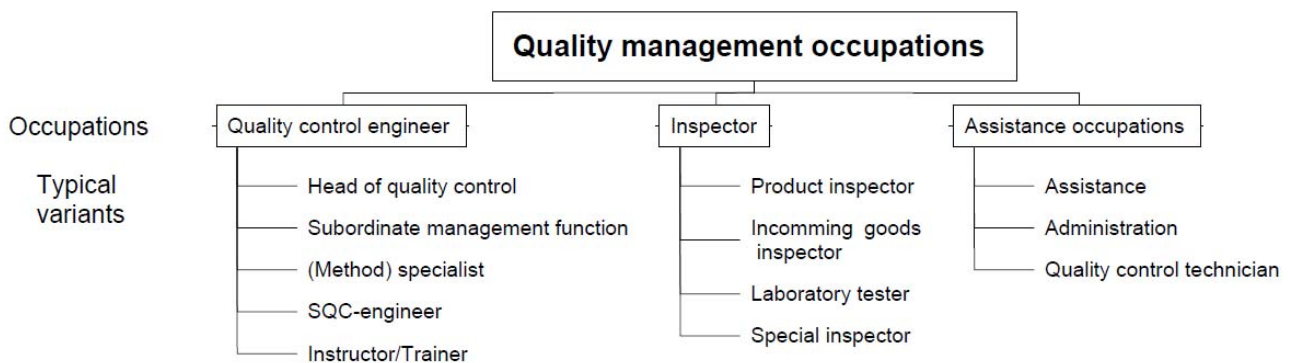


Figure 3-1: Categorisation of the early quality management occupations and typical variants (examples) [Sommerhoff 2012]

A further key innovation was Total Quality Management (TQM), a concept that was inspired by Feigenbaum's Total Quality Control³⁰ and brought to Germany from Japan and the USA³¹, starting in the eighties. TQM has fundamentally changed the occupation of quality manager, even independently of how many organisations in Germany have really implemented TQM in an intensive way. TQM lends the quality manager the "manager" element within the name of his occupation. It gives him or her new positioning in relation to the company management, for TQM requires stronger and more comprehensive cooperation with the top management level than was previously the case with simple quality testing and statistical quality control. The pioneering period of TQM was a time of innovative quality managers and prominent personalities who influenced management theory, such as W. Edwards Deming and Joseph M. Juran - who had a great influence on TQM - Kaoru Ishikawa, who put together the Seven Quality Tools, and Philip B. Crosby, who introduced the Zero Defects principle.

Shortly after TQM became better known in Germany, a further development was launched which had a decisive influence on quality management and above all on the occupation of quality manager, namely the ISO 9001 certification. Like TQM it brings quality managers into close proximity with top company management, for the wave of certifications which was now beginning

²⁸ Masing has described the history of the DGQ in 2003 in detail [Masing 2003]

²⁹ The EOQ designates them as quality professionals

³⁰ From [Sommerhoff 2012]: Following several previous years spent in considering the subject of Quality Control [Feigenbaum 1951] in 1956 Feigenbaum uses the concept of Total Quality Control [Feigenbaum 1956]. In 1961 he publishes his standard work "Total Quality Control" in 1961, which had a vital influence on quality science [Feigenbaum 1961]

³¹ As an eye witness at the time, Kamiske described this process in impressive fashion in his work "Als TQM nach Deutschland kam" (When TQM came to Germany) [Kamiske 2010]

was characterised by a certain nervousness and inexperience on the part of all those involved. At the beginning, top management paid a great deal of attention to the subject, but as certification became routine, interest waned considerably. TQM and the wave of certifications basically changed the way in which quality managers were trained, although training continued to take place almost exclusively alongside working life. The numbers of those undergoing training in statistics fell dramatically, whilst the new qualification as quality manager became extremely popular. The reduction in the use of statistical methods in quality management and the reduced importance of statistical QM training can only be attributed in small part to a reduced need due to better statistics software, improved measuring methods and automated data processing. It was much rather the result of the attractiveness of new and different QM tasks and qualifications; quality managers also decided upon a new emphasis in their training for reasons of prestige.

Figure 3-2 shows the development of the quality-related occupations. In addition, Figure 3-3 shows a classification of the quality occupations which depicts the current situation, and gives examples of functional designations which are in standard use today.

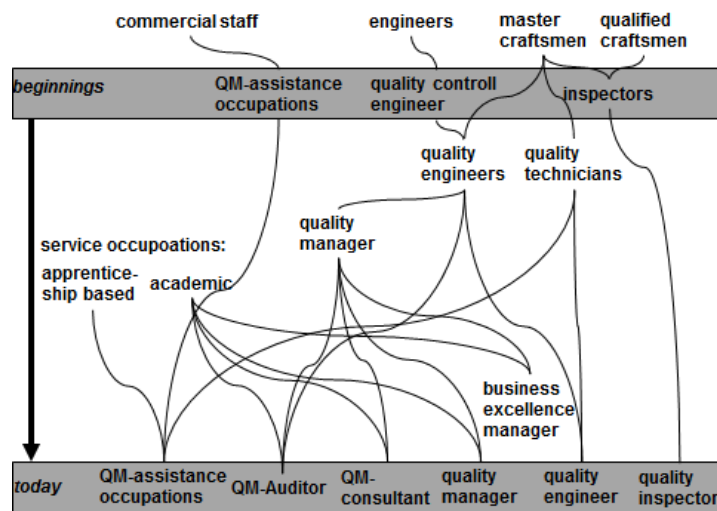


Figure 3-2: Sources of today's quality management occupations

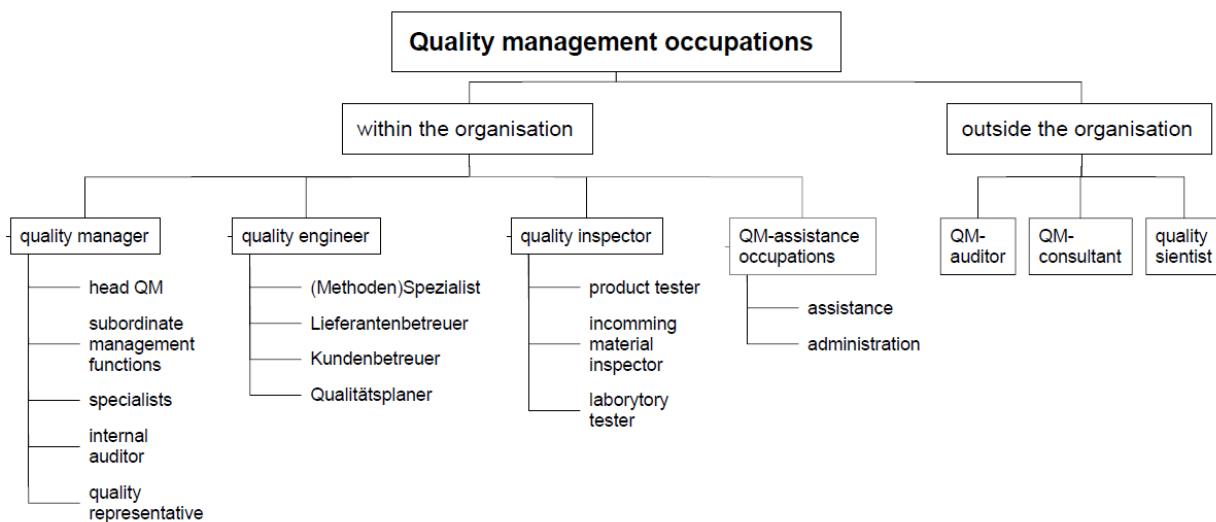


Figure 3-3: Categorisation of the quality management occupations and typical variants (examples)

In the nineties, the increasing integration of subsystems meant that many quality managers also had to concern themselves intensively with environmental management and occupational safety and health systems³². However, it was above all the service sector which changed the occupation of quality manager, because ever more service providers and public service organisations were practising quality management. The difference was that the technically-orientated quality managers, who were socialised as engineers within manufacturing companies and who up until then had been the major influence on the occupation profile, were now caught up and overtaken in terms of sheer numbers by quality managers with quite a different occupational socialisation. This development has not yet been reflected at all within the occupation profile. The method portfolio, shape of tasks and qualification of quality managers have in fact hardly changed.

But how important is the occupational group of quality managers today, measured in terms of its size? As official statistics on occupations are based on categories³³ established by the statisticians, which do not include the occupation of quality manager, it is not possible to draw reliable future conclusions regarding the size of the occupational group of quality managers. An estimate of my own [Sommerhoff 2006], based on the number of companies in each company size class and on the results of the Excellence Barometer studies of DGQ [DGQ 2005], yields a figure of between 35,000 - 70,000 quality managers in Germany.

3.2 Direction and development of the characteristics of the occupation

3.2.1 Jurisdiction and tasks

The basic tasks of the quality manager originally lay within the sphere of jurisdiction for measurement and testing and also for failure management. Soon the area of requirement management was added. TQM and ISO 9001 have additionally called for the tasks of management system and organisation design. Organisation design is used here to designate an area of jurisdiction which represents a preliminary stage of organisation development. Table 3-1 shows the phases of initiation and establishment of assigned areas of jurisdiction and examples of characteristic tasks within these areas. Figure 3-4 shows arrangement of the areas of jurisdiction into the scenario cross from Section 2.

³² Seghezzi [Seghezzi 2007], in particular, made an intensive study of the integration of partial management systems from the point of view of quality science.

³³ UP to 2010, the Federal Statistical Office made use of the KIdB 92 [KIdB 1992] and the Federal Employment Agency made use of the KIdB 88 [KIdB 1988]. KIdB stands in German for classification of the occupations. As from 2010, KIdB 2010 will apply. The draft of this latest document (Issue: May 2010 [KIdB 2010a]) even named the quality manager explicitly as a non-sector specific occupation in the group of "occupations in company organisation & planning", to which also "operational planners, idea and innovation managers, organisation developers, team managers and organisers" belong. All occupations within this group are assigned to the highest of four competency classes. The latest version [KIdB 2010] no longer mentions the quality manager here or anywhere else. However, the organisation developer continues to be listed. [Sommerhoff 2012]

Table 3-1: Jurisdiction and tasks of quality management [Sommerhoff 2012]

Areas of jurisdiction		Tasks (examples)
Phase 1 Beginnings (1949-1965)	Measuring and testing	Receiving (incoming goods) inspection, intermediate and final testing, special and laboratory testing, test planning, test equipment and test method management, test evaluations, internal audits
	Failure management	Failure and failure cause analysis, failure correction, failure prevention, complaints management, process analysis, process control
	Requirement management	Requirement analysis (e.g. contract review), requirement fulfilment, quality planning, supplier quality management, design, implementation of quality assurance agreements
	(General management tasks)	Reporting (here, related to quality management), personnel management (related to QM personnel), personnel training
Phase 2 Establishment (1965-2000)	Design of management system	Design of the company standards, process design, (process) documentation, document control, change management, design/coordination of continual improvement process, integration of partial systems, characteristic number systems
	Organisation design	Organisation analysis, interdisciplinary coordination/cooperation, project management (change projects in particular)

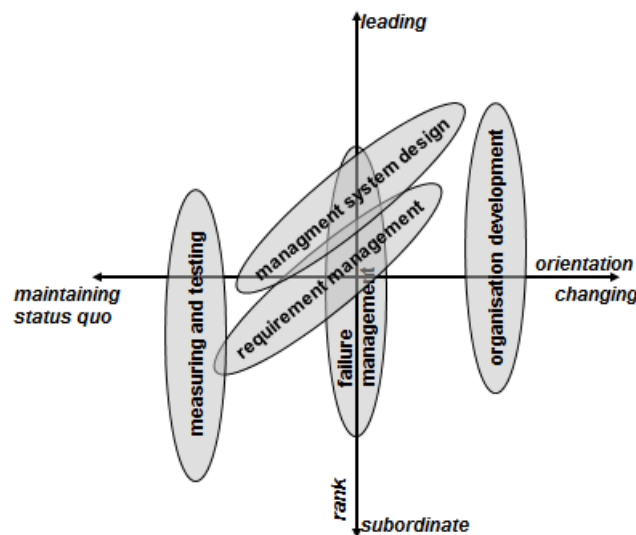


Figure 3-4: Areas of jurisdiction of quality management within the scenario cross [Sommerhoff 2012]

3.2.2 Methods and tools

Table 3-2: Examples of methods and tools [Sommerhoff 2012]

Areas of jurisdiction	Methods and tools (examples)
Measuring and testing	Testing and measuring methods; Modernisation of the tools (in particular through the use of modern hardware and software); Audit checklists
Failure management	Statistics: SPC, 6Sigma, Sampling tables; 7 Quality Tools (Q7); Problem solving techniques; Failure analysis methods: Failure classification, FMEA, 8-D Report
Requirement management	QFD; Quality Agreements
Management system design	Sample manuals; Characteristic number systems; Balanced Scorecard; Continual improvement systems; Flow diagrams; Organigrams
Organisation design	Holistic analysis methods and tools (e.g. EFQM self and third party assessment, including RADAR assessment matrix), Hoshin (strategic target planning), Project management, Moderation and communication techniques, survey instruments (employee and customer surveys), quality circle

Established quality management tools and methods exist for the different areas of jurisdiction, as shown in Table 3-2. The method portfolio is comparatively old and was already available in the

seventies, with the exception of a few latecomers such as the Balanced Scorecard and EFQM methods. Quality management methods and tools that are suitable for service providers are generally not shown here.

3.2.3 Qualification and competencies

Qualification of quality managers was for a long time dominated by training in statistics, which was developed into an integrated training concept in Germany – integrated to the extent that it subsumed all further themes considered necessary for qualification of quality managers. As from the start of the nineteen nineties, quality manager training came into existence which focussed on the development of QM systems and which started to subsume the theme of statistics and to greatly reduce its scope. Quality management training intensively communicated the QM-typical canon of methods, quite independently of whether these methods were used widely or often. Qualification in quality management is up to the present day mainly undertaken alongside working life, and is not included in initial occupational training.

Around two thirds of quality managers have a degree from a university or a university of applied science. In 2010, 80% of these had acquired an additional qualification specific to quality management, of which 96% acquired the qualification alongside their normal work³⁴.

Quality managers require a broad range of skills, based on the methods and tools described above. In addition, contemporary authors repeatedly demand and describe the social and communication skills which are necessary in all phases of development of the occupation³⁵.

3.2.4 Status and role

Contemporary articles and even job advertisements reveal that in the times when the quality tests and statistical quality control were carried out there was an ambivalent perception of the status and role of quality managers. Their decidedly quantifiable contribution to cost and defect reduction earned the "respect of engineers", but their intervention in the individual spheres of jurisdiction of others also gave rise to irritation and displeasure. Contemporary sources testify to this ambivalence³⁶. A Kienbaum study from 1977³⁷ places the head of quality assurance at positions 26 and 28 in terms of payment within the rankings of areas of work and specialism that were examined.

TQM produced a shift in status, the quality managers moved upwards, closer to the top management. ISO 9001 and the certification procedures confirmed this proximity to management, but they also gave the quality managers the reputation of being bureaucrats mainly concerned with documentation and non-practical matters. Today there exists a completely heterogeneous picture as regards status and role (see remarks in 2.3 concerning role scenarios).

The occupation of quality manager today is hardly perceived or noticed by society. Occupation prestige scales³⁸, official statistical surveys and presentations of different occupations in the

³⁴ These statements are based on the author's own studies within the framework of the DGQ Excellence Barometer 2008 and 2010 [Exba 2008, 2010].

³⁵ e.g. Thierfelder [Thierfelder 1964], Gaster [Gaster 1985]

³⁶ see Kuhnert [Kuhnert 1965], Willemze [Willemze 1964] and Gaster [Gaster 1974], each in their contributions to "Qualitätskontrolle" (QK) (today QZ – Qualität und Zuverlässigkeit) and job advertisements for QK from the period around 1965.

³⁷ Grätz reports on this in Qualitätskontrolle [Grätz 1977]

³⁸ Based on data records from the official statistics and, in the latest version [Christoph 2005] using ISCO88 (International Standard Classification of Occupations 1988) the Magnitude-Prestigeskala provides a ranking of the occupations. The occupation of quality manager is not considered here.

media³⁹ do not deal with the occupation of quality manager. Surveys of the general public⁴⁰ do show that the occupation of quality manager enjoys a positive association as compared to other management occupations, but there is ignorance as to what characterises this occupation. In contrast, management personnel within organisations have practical experience of quality management and the function of quality managers, and this is coloured by individual experience. For many management personnel, their own theoretical training initially forms the basis for a distorted, incomplete picture of quality management. This is because teaching and specialist publications relating to business administration, organisation theory and company management⁴¹ convey, if anything, an incomplete, unattractive and outdated picture of quality management almost throughout.

³⁹ see [Krüger 2005, pp. 19-154]

⁴⁰ Statement on the basis of the author's own studies in 2010 with a survey of 1000 members of the public on the perception and standing of quality management. Conception and results are described in detail [Sommerhoff 2012].

⁴¹ The evaluation was conducted with reference to a random sample of 15 specialist books of the Library for Jurisprudence and Economics at the Johann Wolfgang von Goethe University Frankfurt am Main. The random sample encompasses the library's whole stock of specialist books on the subjects of organisation (organisation theory), general business administration (principles of business administration) and company management. Specialist books on these subjects with a specific sectoral focus were not evaluated. The random sample encompassed the following publications: [Meyer 1977], [Weidner 1998], [Korndörfer 1999], [Schulte-Zurhausen 2002], [Bloech 2002], [Frese 2005], [Laux 2005], [Olfert 2006], [Kieser 2006], [Weber 2006], [Kieser 2007], [Olfert 2008], [Wittlage 2008], [Schierenbeck 2008], [Wöhe 2008], [Jung 2009].

4 Future requirements regarding the occupation of quality manager

The need for transformation of the occupation of quality manager, along with the direction and nature of such transformation, can only be determined if the future requirements for quality managers which deviate from current requirements can be identified.

4.1 Procedure for identifying future requirements

Identification of future requirements is possible by means of an extensive procedure of derivation from existing trend forecasts and future studies following these steps:

1. Identification, comparison and selection of trend studies and future forecasts (reference study Deutschland 2020, DB Research [Hofmann 2007])
2. Interpretation of trend statements
3. Translation of 116 global trend statements into trend statements for quality management
4. Assessment of the impact on
 - product quality
 - the QM system
 - the occupation
5. Allocation to the occupational characteristics
 - jurisdiction and tasks
 - tools and methods
 - qualification and competencies
 - status and role
6. Derivation of a trend scenario
7. Identification of requirements

The selection of suitable trend forecasts and future studies⁴² is followed by an interpretation of the trend statements made in them. Fig. 4-1 shows the 14 dynamics mentioned by the reference study, and these in turn encompass 116 social trends.

⁴² A conscious decision was taken not to refer to studies specific to quality management, but instead to studies and forecasts which highlight general social and economic developments in Germany in a holistic way. The analysis applied here uses the study "Deutschland 2020" from Deutsche Bank Research [Hofmann 2007] as a reference study and compares it with two other studies from the Office for Estimating the Consequences of Technology (*Büro für Technikfolgenabschätzung*) in the German Bundestag [Kinkel 2007] and by Abele [Abele 2011].

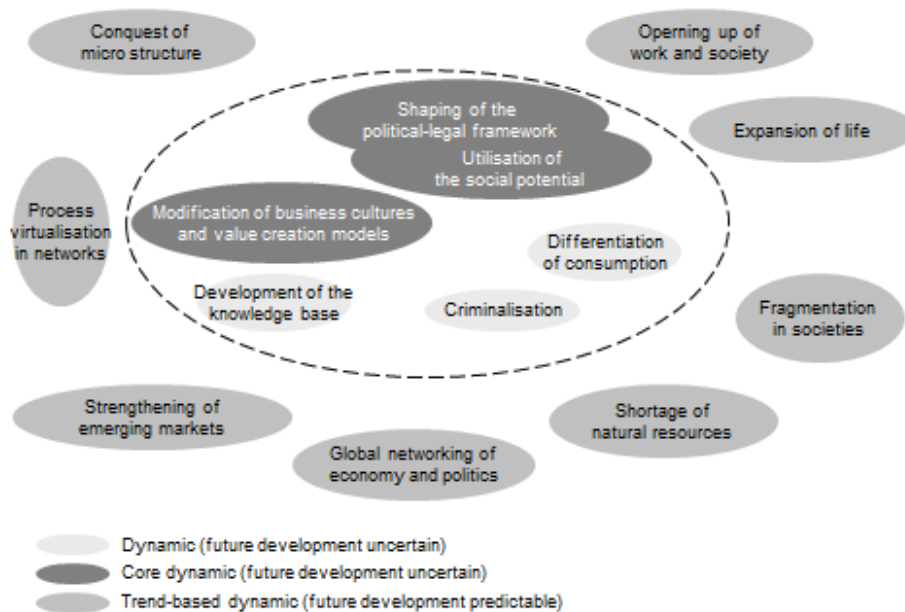


Fig. 4-1: The reference study [Hofmann 2007] lists 116 trends for 14 dynamics

Each of the 116 trend statements of the reference study, with a few exceptions where no relation to quality management could be established, was translated into a trend statement for quality management. The effect of the trend statements specific to quality management on product quality, the quality management system and the occupation of quality manager⁴³ is indicated by scaled assessments. As a next step, a classification was carried out to establish the pairs of occupational characteristics⁴⁴ to which the trend statement related. This structuring and classification of the trend statements makes it easier to recognise subsequent requirements for the occupation of quality manager. The preparatory work now culminates in the formulation of a trend scenario, QM 2020⁴⁵. From the preparatory work and the trend scenario it is now possible to identify the future requirements for the occupation of quality manager.

Another approach to develop a future scenario is the use of the Delphi methodology as the American Society for Quality (ASQ) did in 2011 [ASQ 2011]. The Delphi methodology however bears the risk, that the experts asked are too much QM-focussed and rather extrapolate their past experience and mix it up with personal wishful thinking.

4.2 Trends for quality management and the occupation of quality manager

The transformation of the 116 trends within 14 dynamics of the reference study leads to a new clusters of dynamics for the future of quality management, shown in figure 4.2.

⁴³ Five-stage scale starting at 1 (does not impact the product quality/the QM system/the occupation of quality manager) up to 5 (had a direct and strong impact on product quality/the QM system/the occupation of quality manager)

⁴⁴ See Section 2.1, the occupation characteristics are: jurisdiction and tasks, methods and tools, qualification and competencies, status and role

⁴⁵ The trend scenario and the route to its compilation were published by the author in 2010 [Sommerhoff 2010]

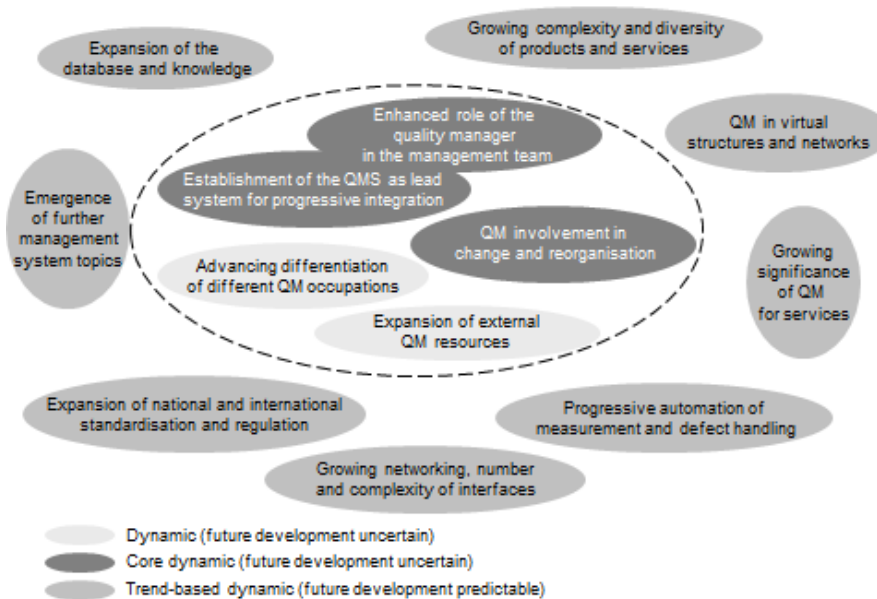


Fig. 4-2: The QM-Scenario derived from the reference study

The trend towards holistic quality management approaches extends the already broad portfolio of themes for quality managers. The introduction of these models and approaches – as with TQM – is already difficult in many organisations; such introductions or further developments constitute profound processes of change, depending on the quality management’s original level of maturity, and can therefore trigger major change projects. The complexity of business models, partner relations, technologies and material is increasing in many sectors and this also gives rise to major challenges for quality management. Regardless of internal company decisions to deploy holistic quality management approaches, many more companies are experiencing frequent external and internal incentives to change. These changes often impact quality management systems which were originally designed to embody comparatively stable phases. In addition, workforces are still being cut back in the course of rationalisation, and many sectors are also experiencing an increasing shortage of quality management specialists. Other occupational groups such as controllers, human resources developers and IT managers are extending their range of themes and competencies, and they are taking an increasingly active role within the holistic systems. These functions are then more and more frequently in competition with the quality manager. A progressive tertiarisation⁴⁶ in society, i.e. ever-stronger emphasis on the service sector, is increasing the need for quality management and quality managers within service companies. In future, there will be more quality managers in the service sector than in productive industry. Finally, measuring, information and communication technology are developing very rapidly and creating new possibilities for the quality assurance of products and processes. Table 4-1 summarises these trend observations and indicates the opportunities and risks involved. Overall, the risks have the effect of limiting the quality managers’ ability and possibility to act.

⁴⁶ The primary sector produces raw materials, the secondary sector processes them to make products and the tertiary sector offers services. Tertiarisation therefore means a "shift to the service sector" within society.

The leitmotif of future quality management development throughout is that of change. This includes changing business models, organisation structures, co-operation models, working cultures, market needs and market behaviour, regulation and technology. All these areas of change have a major impact on quality management systems or trigger a need for their adaptation. Organisation development means the integration of all change projects into a holistic, long-term overall strategy. It therefore stands to reason that, as a result, organisation development should be identified as a task which will be urgently needed within organisations in the future.

Table 4-1: Opportunities and risks for the occupation of quality manager [Sommerhoff 2012]⁴⁷

	Opportunity	Risk
1. Trend towards holistic QM approaches	Quality managers play a leading role in the introduction and further development of holistic, generic management systems. They support and advise management personnel. Quality managers are assigned the jurisdiction for organisation development.	The importance of quality management and hence quality managers declines. Quality managers focus on technical tasks. They are not sufficiently capable of shaping holistic development in companies to a decisive extent. The ability to act declines.
2. Increasing complexity	The quality managers bring knowledge and experience to the design of structures, regulations and methods which can reflect the complexity in an appropriate form.	The enormous complexity and the wealth of themes place excessive demands on quality managers. The ability to act declines.
3. Increase in the frequency and intensity of change	On the basis of their existing competencies, quality managers model process landscapes and detailed processes which are amenable to change.	Existing management systems are too static, and their effect diminishes, as does adherence to their requirements. IT managers, external/internal consultants and process specialists shape quality-related processes without the quality managers. The possibility to act declines.
4. Cut-back in the workforce	Quality managers are assigned further management tasks.	Management's attention towards quality management declines and the jurisdiction for it is delegated to subordinate locations. The possibility to act declines.
5. Competition between the occupational groups	Quality managers with a generalist orientation are respected contact persons for top management, they expand their theme portfolio and they qualify for management tasks.	The responsibilities of the quality managers are cut back and largely restricted to subordinated, conserving activities. The quality management system declines in terms of the attention it receives and its effectiveness. The possibility to act declines.
6. Tertiarisation	Quality managers are networked across sectors. They leave their mark on the organisation development of service companies and public services. Quality managers from all sectors form a strong occupational group.	The heterogeneous nature of the sectors of the occupational group leads to a splintering of the occupational group. The possibility to act declines.
7. Technification	Automation due to the development of measuring technology, hardware and software relieve the burden on the quality managers and provide space for greater engagement with organisation development.	Quality managers are concerned more and more intensively with technology and deploy a major portion of their resources in this area. The ability to act declines.

The competition between the different occupational groups is of particular significance for the transformation of the occupation of quality manager. As Abbott has shown⁴⁸, occupations develop

⁴⁷ supplemented and developed further

within the system alongside other occupations in the struggle for jurisdiction (responsibility). For the quality managers, competition is becoming more and more intense, see Table 4-2. In particular, there is competition for jurisdiction with respect to organisation development, without any indication that one of the occupational groups could claim this jurisdiction exclusively for itself.

Table 4-2: Internal and external competitive situation of the quality managers

	Field of competition	Position of quality managers, a direct comparison
Controller	1. Key figures system 2. Target systems 3. Internal consultancy	Weak, Fields of competition 1+2 represent core jurisdiction and competency of the controllers. Controllers also rise more frequently than quality managers into the top management bodies. The occupational profile of controllers is just as clearly defined as that of quality managers and the degree of organisation is high.
Organisation developers	1. Organisation development (reorganisation, change projects) 2. Development of the management and corporate culture 3. Internal consultancy	Indifferent, the function of the organisation developer is substantially more heterogeneous. There is no clear professional profile associated with organisation development and the level of organisation amongst organisation developers themselves is very low. On the other hand, the organisation developers are ahead in terms of methodological competence and acceptance in the relevant fields.
Management assistants	1. Change projects 2. Special projects	Strong, because typically the function of management assistant is held on a temporary basis and does not have a clear occupational profile. However, the assistants have good and permanent access to the top company management.
Human resources manager	1. Development of the management and corporate culture, 2. Internal consultancy	Weak, in relation to Field 1. Field 1 represents the core jurisdiction and competency of human resources managers. Strong in relation to Field 2 because the quality managers can offer a substantially more extensive performance portfolio.
IT specialists	1. Process design 2. Key figures system	Weak, because expensive software dominates processes to a major extent in many areas and the IT specialists have the power of design.
Operative management personnel	1. Process design 2. Requirements management	Indifferent; on the one hand the quality managers master the suitable methodological portfolio, and on the other the operative management personnel occupy a strong position on account of their responsibility for implementation. However, their function is completely heterogeneous and unorganised in occupational terms.
Representative for subsystems	1. Requirements management 2. Management system set-up	Strong, because quality management is suitable as a lead system on account of its maturity and tendency towards being a holistic approach. Quality managers can draw support from occupational structures which have been established for longer and more intensively.
External consultant	1. Organisation development (reorganisation, change projects) 2. Strategy development 3. Process design	Weak; the consultants are highly specialised in these Fields and aggressively lay claim to the corresponding responsibilities.

The requirements for the occupation of quality manager are described below in line with the occupational characteristics.

4.2.1 Jurisdiction and tasks

There will in future be a great need for engagement with themes related to quality management, such as risk management, energy management, knowledge management and innovation management. The relationship with quality management is due primarily to the fact that system structures and processes are needed to deal with these themes. They are predestined to be included in integrated management systems. However, there is the danger that each area of management will develop other jurisdictions of its own and that management systems will fragment. With their previous knowledge of systems and system set-up, however, quality managers are well equipped to handle the competition for this jurisdiction.

The progressive tertiarisation (“shift to the service sector”) of the economy means that quality management will have to be increasingly concerned with services. This does not only apply to the

⁴⁸ see Section 2.2 and the remarks of Abbott [Abbott 1988, pp. 33ff and pp 59ff]

growing service sectors themselves, which are increasingly using quality management. It also applies to production companies with respect to their internal service processes and the external service processes – such as engineering and support services – that they call upon. In many companies this requires a clearly extended area of jurisdiction for the quality manager.

The large number of change initiatives and the increasing complexity of business models and partner networks that are still anticipated for the future are the reasons for the great need for change management and hence for organisation development. Organisation development embodies the new and challenging area of jurisdiction for quality managers.

All in all, the diversity of themes and the many jurisdictions and tasks expected for the future will require a special mode of working within quality management, which will take the form of internal consultancy. But since it can be foreseen that ongoing specialisation in many areas – combined with progressive thinning out of the workforce and the shortage of skilled personnel and specialists – will also favour the use of external consultants, one significant requirement will be to co-ordinate internal and external consulting services. A possible task for quality managers is therefore the co-ordination of the selection and deployment of external consultants.

4.2.2 Methods and tools

Increasing “technification” – from ever-advancing hardware and software capabilities through to man-machine interfaces, bionic extension of the senses and motor capabilities – is creating much wider possibilities in the areas of measuring technology, data linking and product handling. Greater automation in the areas of measurement and handling as well as an additional possibility for poka yoke can relieve quality management of their still intensive concern with test planning and test evaluation.

But in particular, the growing need for change management and organisation development is generating a need for suitable methods and tools specific to quality management. There are different schools of organisation development (example: systemic organisation development), but the methods and tools used there cannot necessarily be transferred. They are mostly applied by persons external to the organisation who will then leave the company again after their intervention. Quality managers, on the other hand, are rooted in the company on a long-term basis. This means that new and useful possibilities arise for their work over time, along with other possibilities that are not or not so suitable. If internal consultancy is to play an effective role, quality managers must utilise an appropriate method-based and process-related procedure as well as suitable consultancy tools. The compilation and development of a method portfolio specific to quality management is essential for organisation development and internal consultancy.

4.2.3 Qualifications and competencies

The increasing complexity of products and services, and of the preliminary stages, materials and processes that generate them, gives rise to a corresponding need for competence within the affected companies. The question arises whether quality managers must and can, as has been usual to date, possess the necessary specialist competence. They need an understanding which is good enough to enable them to operate management system development and also integration and organisation development within their highly specialised companies.

Organisation development needs analytical competency in order to determine the need and potential for the development, as well as conceptual and implementation competency to accompany structural changes and advance the development of the corporate culture. The bundle of competencies required can be summarised as organisation development competency and consulting competency. Competencies needed for this are at present only included in quality management qualification in a rudimentary fashion and are not included systematically.

4.2.4 Status and role

The jurisdiction for organisation development demands a status which makes it possible to work on an equal footing with the company management and high-ranking management personnel. The role as internal consultant leaves little scope for intensive operative day-to-day quality management, or it changes this fundamentally. Quality managers in the QM scenario 2020 work largely in projects, primarily as project managers for change projects, or they co-ordinate and manage the total portfolio of change and organisation development projects.

5 The quality manager as organisation developer

The assumption of jurisdiction for organisation development answers many of the future requirements regarding quality management and the occupation of quality manager. The role scenario of organisation development appears to be both plausible and useful for the companies and desirable for the occupation of quality manager.

5.1 Organisation development – the new area of jurisdiction for the quality manager

5.1.1 Plausibility and benefit

The plausibility of assumption of the jurisdiction for organisation development is derived from the trend scenario QM 2020. There is, however, also a certain direct logic in expanding decades of concern with the design of management systems by quality managers so that it culminates in organisation development. The author's own studies have also shown that the role scenario of organisation development already exists for about one quarter of quality managers (see Section 2.4). In particular the organisation development area of jurisdiction offers a bundle of tasks which are suitable for introducing and further developing holistic quality management approaches within a company, such as the EFQM excellence approach. Holistic quality management approaches have four important functions:

- a normative function; they name the themes management must engage with,
- an analytical function; they pay attention to strengths and improvement potentials, including possible neglect of relevant themes, deficient linking of themes, inadequate effect of operationalisations,
- a didactic function; they offer management personnel a structure of modern management knowledge and represent the complex relations within the company in the form of models,
- a communicative function; they ease internal and external communication with regard to holistic quality management and organisation development.“ [Sommerhoff 2012]

If quality managers assume jurisdiction for organisation development, this is of benefit both to the companies and their managements.

“The company management

- gains a competent contact person for all organisation development themes,
- obtains an operative resource for the management of change and organisation development.

The company

- develops itself and its economic success more effectively and in a holistic and sustainable way and avoids a number of dead-ends and diversions,
- purposefully enhances its attractiveness for employees, partners and customers,
- is less reliant on external consultants or can evaluate and implement their concepts and performance better.” [Sommerhoff 2012].

Although there are not only external organisation developers but also internal ones⁴⁹, the jurisdiction for organisation development may be deemed to be vacant since no individual occupational group occupies this field completely. It may be the case that the previous organisation developers are not seen as organised as regards their occupation⁵⁰, which acts to their disadvantage in the competition for jurisdiction against a large occupational group of quality managers if these present themselves as largely cohesive in the future.

5.1.2 An approach to organisation development that is specific to quality management organisation development

The German Society for Organisation Development (Gesellschaft für Organisationsentwicklung) defines organisation development as “a sustainable development and change process designed for the long term for organisations and the people working in them. The effect of this process is based on the common learning and knowledge of all individuals involved, which is gained through direct participation in the processing and solution of operational and business problems.” [GOE 2009] However, it is appropriate and helpful for quality managers to find suitable and independent access to the subject of organisation development.

The EFQM Excellence approach is a possible option, for example; in view of its extensive use and high level of acceptance it can be considered as a representative holistic quality management approach. One of its fundamental functional mechanisms is the measurement and development of the maturity of the organisation. The RADAR assessment method exists for this purpose, which is used by experts to measure the level of maturity on a scale of 0-1000 points. Since both the quality of the procedures and the quality and sustainability of the company results are included in the assessment, a high level of maturity according to RADAR indicates a well managed, well set up and successful company which is deemed to be excellent. If the company reaches the very highest levels of maturity, it can act as an example for others. Based on this, maturity is a measure of the quality of the company and a suitable target variable for organisation development. Essentially, there are two aspects which contribute to a high level of maturity, the maturity or quality of the company structure⁵¹ and the maturity or quality of the corporate culture. Figure 5-1 illustrates how

⁴⁹ In the author's own study in 2010 involving a survey of 400 top decision-makers, one third of them indicated that their company had an organisation development function.

⁵⁰ the Society for Organisation development [*Gesellschaft für Organisationsentwicklung*], for example, only has about 30 members

⁵¹ The term structural quality comes from the specialist quality management literature for the social welfare and health system. Donabedian described health care quality in terms of the elements structure, process and outcome as early as 1966 [Donabedian 1966]. It is significant that these terms and the notions behind them have not found their way into the terminological system of production-focussed quality science, although they are very common in the literature of nursing and health science. (Footnote taken from [Sommerhoff 2012])

different organisations with the same level of maturity can be from one another and that, depending on the initial situation, organisation development needs to act in quite different directions in different situations in order to achieve a state of maximum maturity, or excellence, as the EFQM calls it.

With these preliminary thoughts in mind, the author's own definition is as follows:

Organisation development means purposeful, holistic design of an organisation's structure and culture in order to sustainably raise its degree of maturity or keep it at a high level, or in order to manage and master necessary change.

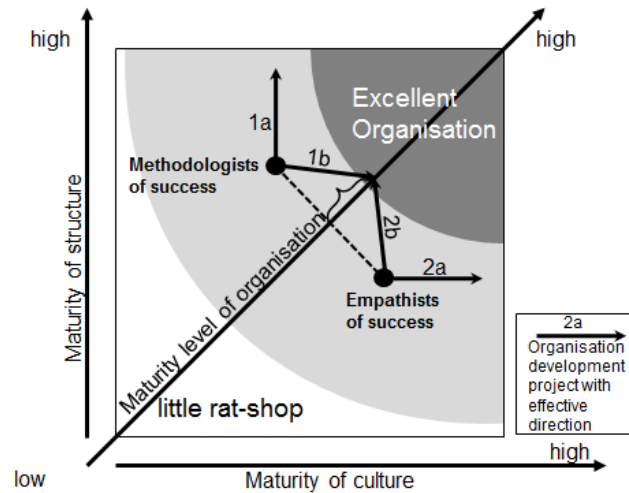


Figure 5-1: Organisation development viewed as the development in maturity of the structure and culture of the organisation [Sommerhoff 2012]

Table 5-1 shows the author's own estimation of how the EFQM Excellence Model takes account both of aspects of corporate structure and aspects of corporate culture in the sub-criteria. The notion of organisation development defined here is, however, not tied to the EFQM Excellence approach and does not rely on it. In fact, organisation development can fundamentally be used as a way of introducing and further developing any modern, holistic quality management approaches.

Table 5-1: Percentage of structural and cultural aspects in relation to the sub-criteria of the EFQM Model (2010)

Sub-criterion (Criterion)	Structure component	Culture component	Sub-criterion (Criterion)	Structure component	Culture component
Corporate policy	20%	80%	Partner management	80%	20%
Management system	80%	20%	Finance management	100%	0%
Interest groups	40%	60%	Asset management	100%	0%
Excellence culture	20%	80%	Technology management	100%	0%
Change	60%	40%	Knowledge management	60%	40%
Management	44%	56%	Partnerships & Resources	88%	12%
External input strategy	100%	0%	Process management	100%	0%
Internal input strategy	100%	0%	Development	100%	0%
Strategy development	100%	0%	Marketing, distribution	100%	0%
Strategy implementation	80%	20%	Rendering of service	100%	0%
Strategy	95%	5%	Customer relations management	60%	40%
Human resources planning, recruitment	80%	20%	Processes, Products, Services	92%	8%
Competence development	60%	40%			
Employee involvement	40%	60%			
Internal communication	60%	40%			
Recognition of employees	60%	40%			
Employees	60%	40%			

5.1.3 The quality manager as organisation developer

Acting as organisation developer places the quality managers in the roles of internal consultant, theme scout and coach. Their mode of working is thus increasingly similar to that of external management consultants, with the difference that the latter intervene for a short time and can then leave, whereas quality managers – mostly – aim at a long-term collaboration. Their primary target group comprises members of the top management, with other management personnel as the secondary target group. The division of roles between organisation developers and top management is such that the top management set goals for organisation development, take decisions and provide the relevant resources, while the quality managers are their internal service providers. The tertiary target group consists of the employees of the company, who experience the service of the quality managers as those involved in and affected by change projects.

Project work is the main component of the work of the internal consultants. Consultancy activity is broken down into the steps of analysis (*analysing potentials*), conception (*drawing up a (solution) concept*) and implementation (*implementing a (solution) concept*). This covers the same ground as the identification of the *steps of professional work* which Abbot performs⁵². Abbot describes these as diagnosis, inference, treatment. The special feature of this approach is that a clear definition of an occupational activity in terms of these three steps not only reveals the professional nature of the work. The more complex and difficult the three steps are, the higher the rank of the profession itself. It can be seen that quality management work has always been strongly dominated by the steps of analysis, conception and implementation. These steps were initially focussed on failure reduction and then, increasingly, on implementation and development of the management system. Now, to consider the company as a whole as an object of the steps of professional work undertaken in the context of organisation development means a shift in significance for the occupation of quality manager. This is also helped by the fact that the quality managers need and build up an abstract knowledge system for organisation development (see 2.3 and [Abbott 1998]). This provides them with exclusivity in relation to occupational groups with which they are in competition.

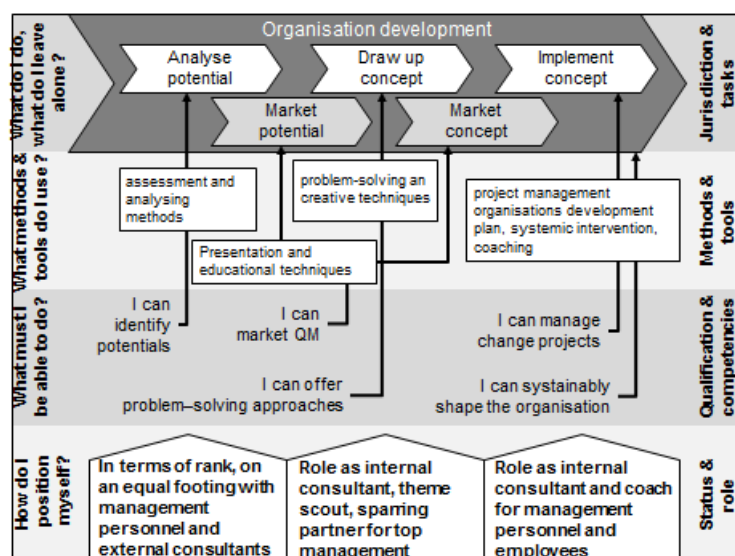


Fig. 5-2: The occupation characteristics of quality managers for organisation development

⁵² [Abbot 1988, p. 40]

Figure 5-2 summarises the major aspects of the activity of organisation developer in a structured way following four pairs of occupational characteristics. In addition to the three steps of professional work there are two steps of internal marketing. The effectiveness of these steps is a major factor for the possibilities and success of quality management work.

5.2 Transformation

For all the plausibility and usefulness of the quality manager's assuming jurisdiction for organisation development, nothing in the trend scenario QM 2020 indicates that this role scenario will establish itself as a matter of course or do so without further intervention. It must rather be assumed that achieving it will involve active intervention, in other words that it will require transformation. Four fields of transformation appear essential: professionalization, marketing, differentiation and qualification. The interview instrument presented in Section 2.4 even provides the possibility of measuring the progress of transformation in the future.

Transformation will not proceed easily or immediately and will also not be achieved quickly. It requires a largely cohesive approach on the part of the occupational group itself. The German Society for Quality (Deutsche Gesellschaft für Qualität), with its 6000 personal members, achieves the highest degree of activity in the occupational group⁵³ in Germany, and with its resources and networking it can play a major role as a multiplier in all four fields of transformation. Even so, a minimum period of ten to fifteen years must certainly be assumed in order to achieve a high degree of implementation of the transformation. The academic chairs of quality management and the Society for Quality Sciences (Gesellschaft für Qualitätswissenschaften) also play a multiplier role and can in particular play a major part in shaping the transformation fields of professionalization and qualification.

Transformation, however, is not dependent on a change in the functional and occupational description of quality managers. If the transformation succeeds, management personnel will experience quality management as organisation development and organisation development will itself be quality management. The power of definition and interpretation with regard to organisation development will then lie with quality science. The current picture of organisation development is too diffuse and heterogeneous, and today's organisation developers are too weakly organised as a profession to counter an active take-over by quality managers and quality science. There are four major levers for transformation, which are described below. They are professionalization, marketing, differentiation and qualification.

5.2.1 Professionalisation

For the occupation of quality manager, professionalization means that quality managers must perform the aspects of their activities which have a professional character more extensively than before, not in order to become classified as a profession by the sociologists of the professions, but simply because these aspects represent quality characteristics in relation to respected, high-ranking occupations. This means specifically:

- raising the level of professional organisation in order to represent and assert interests more effectively,

⁵³ whose size can be estimated at 35,000-70,000 persons (see Section 3.1)

- creating and operationalising an occupational ethic in order to strengthen quality managers where there are conflicts of interest and to underpin their integrity,
- academicising and helping to shape qualifications in order to bring them more in line with requirements and to provide them with higher ranking and status,
- highlighting quality management's orientation towards the common good in order to make society aware of the significance of the occupation of quality manager and hence enhance its influence,
- raising the degree of autonomy in the exercise of the occupation in order to design the essential steps of quality management and organisation development in accordance with need,
- defending the monopoly of practical competence against professional competitors in order to obtain and expand significance and effectiveness as an occupational group.

5.2.2 Marketing

For the occupation of quality manager, marketing means highlighting to management personnel – and primarily to the members of top management – the potential of the quality managers as internal service providers and organisation developers.

“There are two levels of marketing [Sommerhoff 2012]:

- marketing of the new occupational image of quality manager in society and the economy,
- marketing of the new role of the individual quality manager in his organisation.”

The line of attack of marketing may be, for example:

- making the Federal Government aware of how strongly the quality of German companies impacts the success of the economy as a whole and of the role quality management and the occupation of quality manager have in this,
- highlighting the contribution of quality management and quality managers to the area of consumer protection,
- supporting authors of specialist literature on organisation and business administration in describing quality management in an appropriate way,
- deploying traditional advertising material and careers consulting in order to interest school students and high-performance career entrants in the occupation of quality managers,
- implementing projects which generate attention for quality management and the occupation of quality manager and presenting both in a modern form.

5.2.3 Differentiation

Assumption of jurisdiction for organisation development gives rise to two dilemmas which can be resolved by differentiation and separation:

- the dilemma of overstressing resources if previous activities are not reduced to the extent that new activities of organisation development emerge,
- the dilemma of overstressing roles if “policing” activities thwart the change of role to that of organisation developer.

For the occupation of quality manager, differentiation can mean consistently separating in terms of personnel the operative tasks of quality assurance and the strategic tasks of quality management and organisation development. Further relief is obtained if the operative tasks of quality assurance

are no longer implemented by quality personnel, but by other employees and line management personnel. This transfer of jurisdiction should be practicable if it is carried out under the surveillance and supervision of quality managers specialised in organisation development.

5.2.4 Qualification

Finally, successful exercise of the jurisdiction for organisation development stands or falls with the competence of the protagonists. If we consider history (see Section 2), it can be seen that quality managers have acquired a methodological competence in the development of many aspects of the structure of organisations, but not in the development of corporate culture. In the final analysis there is a lack of systematically designed competencies in the field of organisation development. To date, quality managers have also not been systematically qualified to adopt the mode of working of an internal consultant.

Today, quality managers mainly have an academic training, but only isolated individuals have acquired a specific qualification in quality management within the framework of this training. It would be appropriate to set up an academic training programme specifically for quality managers. Quality management is today a supplementary qualification or specialisation for engineers or other occupations. In future it would be possible to have instead an original academic quality management training which includes a more advanced consideration of technology, service or public administration.

5.3 Boosting the effect of quality management

Repositioning the occupation of quality manager to become that of organisation developer will invigorate the discussion around quality and quality management in individual companies and also within the wider economy and the public services. Quality management will then become a focal concern of higher management staff. If the active representatives of the occupational group and its multipliers conduct this discussion whilst clearly highlighting the benefits to managers and companies as a whole, quality management can take on a positive dynamic.

A joint project for the occupational group aimed at transforming the image of the occupation will unify the members of the group and strengthen them considerably when it comes to practical implementation. The steps of professionalization and marketing needed for the transformation will build up competencies in terms of self-marketing. This in turn will help individual quality managers within companies and organisations to improve the position of quality management and hence boost its effectiveness.

If the transformation succeeds, the tasks of organisation development and the high status this involves, together with the role of internal consultant to members of top management and other management personnel, will make quality managers into key individuals in the company. They will obtain direct access to top management and establish a good basis for directing top management's attention to themes and projects and for competing with other management personnel for resources. However, not only the proximity to top management, but also their own specific competence in the field of organisation development – in other words analytical competence and the competence to draw up and implement solutions – will enable the quality managers to leave their mark on their company and to make an acknowledged contribution to securing the company's future existence, enhancing its maturity and coping with change. In this

way quality managers can build up, expand and maintain a highly effective holistic quality management system.

All in all, the occupation of quality manager itself exerts a major influence on the effectiveness of quality management. Effectiveness and also influence are reduced if modern requirements are not met. In contrast, influence boosts effectiveness if the occupation of quality manager enjoys a high status and occupies a role which is supportive of the company management. If this occurs, the professional actions of the quality managers enjoy a high level of acceptance – and it is precisely this acceptance which makes it easier for management personnel in turn to accept and support the solutions proposed by the quality managers for the further development of the quality management system and organisation.

6 EOQ perspective and European transfer

The present consideration and scientific results on the transfer of the occupation of quality manager is based on the German situation, society and economy. There is however a possibility to transfer the findings to other countries. The methodological scientific approach is transferable anyway.

To carve out the specifics of the situation and surrounding conditions of the German quality manager may help to transfer the current approach and finding.

The German economy is more than others based on production companies with a very specific mix of sectors and industries. The occupation of engineer is a leading profession in business and society. As many German quality managers are engineers by education, they tend to share the specific dispositions and views of engineers. But concerning organisational development fairly different educations will be relevant. Educationalists, psychologists and sociologists carry much knowledge and skills needed to develop and transform organisations. But those professions are rather less prestigious than engineer in German industry. Germany is characterised by many nations to have attributes and characteristics that are related with quality as e.g. reliability, honesty and diligence. The “Made in Germany” is a quality brand in itself.

These and further settings influence the current situation and future prospects of the occupation of quality managers in Germany. That are likely to be different in other countries due to their mix of industries, society, education and other national characteristics.

A high degree of organisation is needed to drive the change and transfer of the quality occupations in anticipation of future needs. In Germany this degree of organisation of the quality managers is low. There is a national quality society, Deutsche Gesellschaft für Qualität (DGQ, German society for Quality), but it is not yet acting as a strong professional association as e.g. the medical association, influencing academic education and centrally defining the job profiles. The findings on the transformation of the quality manager show, that it will not occur as a self-initiated or imperative process but rather will have to be stimulated and directed by a central force. That can in any country be the national quality association if it already is or is willing to become a professional association. But trying to drive the development of the quality manager towards a new jurisdiction of organisation development really is a change process. That change process arouses strong resistance by many current quality managers, managers and other occupations that may compete with the new quality managers. A quality association trying to manage the occupational change process under these circumstances must be very focussed and robust. It must develop a clear view on the benefits of the potential transformation and be able to involve the forces of innovation and change and

to contain the many conservative forces. And those forces seem to be strong as always in processes of fundamental change.

The European Organisation for Quality (EOQ) can provide a European framework for the occupational transformation as it already has established structures and gathered experience for and in developing competence schemes and curricula. Nevertheless the task ahead goes far beyond former developments of the quality management occupations.

7 Conclusion and prospects

An evaluation of future studies and trend forecasts reveals future trends that can be expected in quality management. They require fundamental further development of the occupation of quality manager. Assumption of the jurisdiction for organisation development is a plausible further development of the occupation. Such organisation development is beneficial to companies and management personnel and worthwhile for the quality managers themselves. One quarter of quality managers are already in a scenario where top managers place quality management in a position with changing orientation and a leading rank. In such a scenario, quality management can constitute organisation development if quality managers consciously reflect on the role this requires and occupy it in a competent fashion.

For this purpose, quality management needs an approach to organisation development which is specific to quality management. Quality science and the practice of quality management itself form the framework for organisation development, along with the early TQM approaches and, to an even greater extent, the modern holistic quality management approaches which are widely in use today. On this basis, organisation development can be seen as the development of the level of maturity of companies towards a higher result capability, a subset of that being the quality capability of an organisation. This includes the developments in the structure and culture of the company, designed for the long term and geared to individual needs. Quality managers are traditionally well equipped and qualified in order to develop the structure, but there is a lack of methods and competencies in relation to development of the culture.

The occupational group as a whole is highly heterogeneous today; existing roles, such as “policing” and organisation development, differ fundamentally from one another. Assumption of the new jurisdiction for organisation development and the acceptance of the corresponding role of change manager, coach and internal consultant will not come about automatically and as a matter of course based on a knowledge of future trends. Active transformation is needed. Four major levers of transformation are professionalization, marketing, differentiation and qualification.

If the launch and subsequent transformation are successfully implemented – a project which could certainly take as long as ten to fifteen years – both the process of transformation and the new positioning of quality management will help to boost the effectiveness of quality management. The following factors contribute to this:

- intensive discussion which will accompany the transformation towards the new type of quality management,
- improved, direct access to the company management for quality managers in future, and related to this, maintenance of the necessary attention and resources,
- a newly acquired organisation development and consulting competence which enables quality managers to identify projects which will secure the company’s future existence and enhance the company’s success and to implement them within the framework of holistic management concepts.

Further work can from now on help to shape a quality management specific approach to and also a model for organisation development. An essential element within this will be the compilation of a methods portfolio.

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