

WORKSHOP-WISE MODELS FOR EVOLUTIONAL QCC ACTIVITIES

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1. Foreword

The sweeping changes in the climate of workplaces and organizations in recent years have created intense needs for new styles of organizational management adapted to them. In response, the QCC Circle headquarters is promoting a structural reform of QCC Circles activities (e-QCC2002), with showing three visions for the small group activities that can be implemented in various workplaces: 1) activities for heightening the value of individuals and sharing the sense of gratification, 2) activities for promoting self-fulfillment integrated with business processes, and 3) activities that are not bound by form and are pursued in a wide range of workplaces and organizations. This paper sets forth the activities being attempted in various organizations and the ideas noted in special feature articles of the QCC Circle Journal, and then proposes models for promotion of small-group activities matching the workplace and organization in question.

2. QCC basis and changes in the workplace and organizational climate

QCC Circle (QCC) activities arose in postwar Japan and constitute means of promoting Total Quality Management (TQM) with "effective and efficient organization management through policy management" and "application and use of statistical techniques."

QCC activities are characterized by a positive mutual influence among the following three elements in groups with a small number of members: 1) acquisition of rational perspectives as well as scientific techniques and problem-solving methods through study of QCC way of thinking and approaches, 2) nurturing of teamwork and ties of mutual trust through discussion and collaboration among individuals with a diversity of knowledge and experience on the job, and 3) contribution to the organization and society through solution of problems in the workplace. Another major feature is the possession of specific tools to support these activities (the seven QCC tools, QCC stories, etc.) and a distinctive methodology for organizing and running circles.

Although QCCs first arose in the manufacturing division, there are now mounting requirements for them in the sales, design & development, and administrative and indirect divisions. Meanwhile, they are spreading to hospitals, public welfare facilities, city halls, hotels, and retailers and other establishments in the service sector. Within the manufacturing division, the globalized siting of production locations is being accompanied by major changes in the nature of work and organizational setup. Under these circumstances, there have emerged areas in which good results can no longer be obtained by QCC activities that are merely an extension of the conventional ones.

Table 1 presents the main changes in the climates of workplaces and organizations, the aforementioned areas where extensions of conventional approaches are becoming ineffective along with these changes, and the key points for reform of QCC activities noted in the recent special feature articles in the "QCC Circle" Journal.

The QCC activity originally has a long-term effect in the improvement in individuals' capabilities and workshop teamwork, which accelerates further problem solving and business contributions. Recently, however, top-management/managers have become less interested in the QCC activity than before because short-term business outcomes are required. As a result, the cases occur where the activity has been apart from business processes and made into the erosion. Therefore, it is strongly needed that the activity is changed to the style that can speedily produce sure results, united with managers/staffs. In addition, it is essential for successful QCC activity to continually improve individuals' capabilities through the activity and accumulate/utilize the know-how resulted from the activity in the organization. Recently, however, intense changes of human resources and product types cause the situation where the effect of the activity does

<ul style="list-style-type: none"> Widening of the scope of subject divisions to include development and sales and indirect Inclusion of staff activities (administrative and indirect) Active incorporation of new methodologies and tools as necessary 	<ul style="list-style-type: none"> Inability to fill requirements for apprehending customer needs and creating value with existing tools and procedures Resistance to application outside the manufacturing division due to strong association with "quality" improvement when the times demand improvement in all aspects (QCDSME) 	<ul style="list-style-type: none"> Increasing importance of the development and sales divisions in management Increasing weight of indirect divisions due to offshore migration and corporate branching of manufacturing divisions Increasing weight of tertiary industry in society
<ul style="list-style-type: none"> Forms of activity with flexibility to adapt to change Close coordination between promotion of small-group activities and ongoing improvement of individual skills Setups for full use of the results of small-group activities (i.e., know-how) by the organization 	<ul style="list-style-type: none"> Increased difficulty in organizing and training QCCs in a format with continuity Inability to achieve long-lasting results of improvement due to standardization confined to conventional approaches 	<ul style="list-style-type: none"> Shortening of the product life cycle due to diversifying customer needs Increase in reshuffling for rationalization, hiring of part-timers and temporary help, and use of employees on loan
<ul style="list-style-type: none"> Theme = priority task Achievement of themes united with managers and staff Effective and efficient modes of implementing activities Synergistic promotion along with other activities (TPM, JIT, Six Sigma, etc.) Clear contribution to organization business 	<ul style="list-style-type: none"> Lack of integration with company-wide activities and the activities by managers Lack of time for managers to support QCCs due to the pressures of their own work Lack of enthusiasm for QCCs among top-management/managers, who increasingly view them as comparing unfavorably with TPM, etc., in respect of immediate effect 	<ul style="list-style-type: none"> Stronger demands for obtaining results in a shorter time
<p>Recent proposals for reform of QCC activities</p>	<p>Areas where extensions of conventional QCC activities are becoming effective along with the changes</p>	<p>Climate changes in front-line workplaces</p>

Table 1. Changes in the workplace climate and reform of QCC activities

To achieve management that is both effective and efficient as needed for survival amid the fast-paced climatic changes, managers/administrators must draft strategy with a firm grasp of these changes and the current status of their organization, and identify and set forth the priority tasks to be tackled by the organization. To make the strategy and the identification of the tasks truly viable, however, requires the pursuit of concrete activities based on them in each and every workplace. Three items are of particular importance to this end: 1) linkage of the priority tasks to the themes of e-QCC activities through the mechanism of policy deployment; 2) cultivation and utilization of individual skills through e-QCC activities in small groups enabling close communication, for speedy activities not bound by form; and 3) full sharing and utilization of the resulting know-how and newly identified tasks for carry-over to the next round of activities. Visible results are synergistically induced only when these components are undertaken as a single packaged scheme.

3. Managers/administrators and the role of e-QCC

The three visions for evolutionary QCC activities presented by the QC Circle headquarters correspond neatly with the three key points for reform of QCC activities in response to the changes in the climate of workplaces and organizations as noted in Section 2. Figure 1 diagrams the advisable shape of organizational management for survival, regardless of how the climate changes, around these three visions, with a focus on the roles of managers/administrators and e-QCC (small-group activities).

In the inside with the intense changes, it is required that the activity is changed to the style which ensures steady development of individuals' capabilities and accumulation/utilization of the know-how. The present society becomes more complicated and speedy, with the problems that cannot be solved by simple theories and rules increase. This causes the cases where the transmission of knowledge and skill is not well carried out and various troubles occur in workshops such as sales, development and design, and administrative and indirect divisions. However, it does not go well even if the QCC activity in manufacturing divisions is applied to these divisions, because characteristics of human resources and work are different. It is required that the activity is changed to the style which fit to each workshop, while the essence of the activity is kept.

5.1 e-QCC model for manufacturing

As noted in Table 1, recent years have seen changes in the environment of manufacturing divisions as well. To cope with these changes, an increasing number of companies and organizations are switching QCC activities to styles of activity making a bigger contribution to their business.

5. Key points in e-QCC practice

There are seven key points (items) for e-QCC in any workplace, as follows: 1) commitment of top-management, 2) themes = priority tasks and flexible organization of groups, 3) activities united with managers and staffs, 4) steps/methods of improvements and control adapted to the themes, and steps/methods of implementing activities adapted to the workplaces, 5) close coordination with continuous enhancement of capabilities, and 6) sharing/utilization of resulting know-how in the organization.

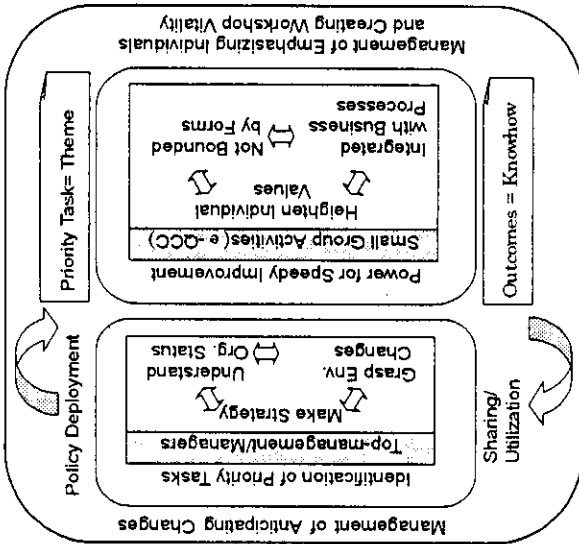
der-based sales) models.

supermarkets and retail stores are positioned intermediate to *services* (nursing and care) and *sales* (or-struction, to the *development & design* (software development) model. In addition, workplaces such as closer to the *manufacturing* model, and those engaged in design/planning of processes, facilities, or con-production plants, workplaces for performance of routine inspection, maintenance, and clerical work are sideration of the activity aims and features of the actual workplace in question. For example, even in all types of workplace, the purpose was instead to provide a basis for the creation of new models with con-management, and personnel affairs. As this indicates, no attempt was made to provide models that cover stoned departments for tasks such as companywide quality assurance, production control, environmental ment in that of *development & design*. In the category of *administrative & indirect* workplaces, we envi-*development & design*, and *administrative & indirect*, *sales*, *services*, *sales*, *development & design*, and *administrative & indirect*. In the category of *administrative & indirect* workplaces, we envi-

Manu- factur- ing	Activity Aims	Features of Workplace	Committ- ment Theme...	Items to be Implemented	
				Promo- tion...	...
...	What and how to be done		

Table 2. e-QCC models for each workplace

Figure 1. Roles of top-management/managers and e-QCC



4. e-QCC models for each workplace

To clarify what must be done to implement e-QCC, we prepared a matrix of the kind shown in Table 2. Containing the items of implementation on the vertical axis and types of workplace on the horizontal axis, it denotes the specific activity to be undertaken in each category. (For details, see Issue 500 of the "QC Circle" Journal or the website at the following URL: <http://www.indsys.chuo-u.ac.jp/~nakajo/eqcc.html>) An attempt to build a model applicable to all workplaces would merely produce something that ignores the distinctive features of each and consequently is of no use. It is instead necessary to build models that have a common underlying essence but also features which vary with the workplace. The table contains 12 common items (from "commitment of top-management and sharing of management information" to "promotion and operation of activities as a whole), and indicates how they should be approached in each of five different workplaces.

The third key point is the *steps/methods of improvement and control adapted to the theme*. Problems in operating activities can be identified and resolved using a process flow chart in many cases. It is vital to avoid a hard-and-fast application of techniques and to take steps/methods that are adapted to the

The second key point is the *process of selecting themes, organizing groups, and sharing know-how*. In workplaces marked by a high degree of specialization, it is hard to find problems involving all members. The top-management and superior managers must institute ad-hoc committees and venues for discussion to identify problems as viewed from the perspective of satisfaction felt by customers and their use of services with confidence. Besides information about complaints, accidents, and near-accidents, this process should incorporate the opinions of employees in direct contact with customers. In addition to the groups organized by occupation or workplace, there should be some groups that cut across occupational lines and workplaces and have managers as members for broader approaches to selected themes. Furthermore, provisions must be made for the ongoing implementation of the resulting measures and know-how in spite of personnel changes, and their application in other workplaces. This can be done by instituting units such as a standardization committee that has a membership including top-management

The first key point is *commitment of top-management*. Because the organization consists of a corps of professionals with specialized capabilities, the top-management must post clearly defined aims and goals, determine policy for promotion of small-group activities to attain these goals, and ensure that this policy is conveyed to and strictly applied by all members. The aims and goals should be of the sort to achieve the objectives of the organization and mobilize its capabilities to that end, such as a rise in the degree of customer satisfaction (CS) and prevention of accidents.

In service industries and divisions, work must be adapted to the situation of the particular customer in question, and the success (or failure) of dialogue and communication with the customer has an immense impact on quality. At the same time, services are becoming increasingly specialized and segmented, and the member make-up frequently changes with the work load. The direct dealing with consumers leads to strict administrative instruction for respect of human life and assurance of safety, and activities must be in compliance with these requirements.

5.2 e-QCC model for services

The third point is *assessment of capabilities on the individual and group levels and its effective use*. At the end of each group activity, an assessment must be made to check the degree of targeted improvement in quality, productivity, the environment, safety, and costs, as well as the accumulation of know-how by the organization, and degree of increase in individual and group capabilities. The assessment is to be made by the group or/and the manager, and the results are to be reflected in individual performance evaluations. They must also be put to use in the selection of themes and organization of groups for the next round of activity as well as instruction and training plans for each group member. These measures will lead to a steady rise in capabilities available for effective application in the organization.

The second key point is *activities united with managers and staffs*. This is to say that, although the groups are to promote activities autonomously, they must make progress reports at proper intervals to the manager. Similarly, the manager must regularly monitor the status of group activities and provide suitable advice and support when progress is impeded by bottlenecks. Also, activities can be given greater breadth by designing staff members with specialized knowledge of the theme to serve as mentors (advisors and guides). The manager will also be responsible for reflection of the know-how obtained through the activities to upper level system procedures, such as technical standards and administrative regulations.

The first key point (for this workplace in particular) is the *selection of themes*. In each workplace, the manager must deploy the policy determined at the top to the lower levels, prepare a list of tasks for the unit in question in line with this policy, and then themes to be approached by each group must be selected from this list. In this process, precedence must be accorded to themes with a larger effect on business while taking account of the group capabilities. In addition, the themes are to be allocated through a process of dialogue between the manager and groups as opposed to assignment arbitrarily by the former. Furthermore, arrangements such as a registration scheme must be made so that the themes selected are positioned and authorized as priority tasks in the organization.

The second key point is *the process of selecting themes and organizing groups*. In development & design, the actual work varies with the project in question, and this makes it difficult to find common problems that would be linked to process improvement and innovation. It takes a good knowledge of the current status to identify problems, and data enabling this are often not available. As such, analytical teams should be formed across departmental lines to gather and analyze data and identify the focus of factors impeding higher productivity. This must be followed by a sharing of the results among all in the workplace, definition of themes under the leadership of top-management, and organization of teams for improvement. The teams should be organized without adherence to the existing organizational or project units.

The first key point is *commitment of top-management*. Development & design workplaces are apt to have a deep-seated resistance to group activities even if needed. To break through the barriers represented by this workplace culture requires intervention by the top-management of the division to breed an atmosphere encouraging small-group activities. In many cases, productivity and speed carry much importance. For this reason, top-management should post specific targets for increased productivity over a period of from three to five years in accordance with the medium- or long-term business plan, identify problems that must be overcome to this end, and incorporate process improvement and innovation as essential in policy on the subject.

Because they value creativity, development & design workplaces are marked by a pronounced sense of professionalism and positive attitude toward the acquisition and application of new technology. Conversely, they tend to have a less acute awareness of processes and management systems. Con-

5.4 e-QCC model for development & design

The third key point is *sharing of know-how*. The solution of problems and attainment of objectives require a rise in the capabilities of each member. In addition to the conventional education and training, leaders must offer appropriate advice and guidance every step of the way after getting a firm grasp of the strengths and weaknesses of each member. To give the entire organization more sales power demands widespread application of the know-how acquired through the activities by setting it down in manuals and guidebooks as far as possible. This can be done by staffs overseeing the entire sales workspace. The employees should be recommended to use the resulting manuals, etc., as they deem necessary (as opposed to being compelled to do so). They should also be furnished with information on cases of success that aid their understanding of the effects and with programs of education and training.

The second key point is *the methods of implementing activities adapted to the workplaces*. Nearly all sales persons visit customer locations, and it is crucial how they get and handle meetings for the activities. When they come back to the office for weekly reports or other such gatherings, they should be brought together, if even for only a short time, to share information on their progress and problems, and to confirm their next assignments. Also, IT could be harnessed to hold virtual meetings by means such as e-mail and electronic bulletin boards.

The first key point is *the process of selecting themes and organizing groups*. It is important to set sights on bolstering the sales capability and organize groups that are linked directly to the operating activities. More specifically, each group should consist of sales persons and their direct superior, with the latter serving as leaders (subgroups should also be organized as necessary). Considering the sales process of calls (visits), inquiries, and order receipt, problems for attainment of targets must be circumscribed on the basis of data for items such as the number of calls to targeted customers, the presence or absence of inquiries, and win or lost in the competition to get orders.

In the sales workplace, the targets to be attained are quite clear. By the same token, however, the process is apt to be vague due to the influence of products and business conditions. In addition, each employee has different customers, and it is hard for them to make mutual use of each other's know-how, knowledge, and experience.

5.3 e-QCC model for sales

nature of the theme and circumstances of the organization.

Reference

[1] Takeshi Nakajo et al, "Evolutional QCC Activity: What is e-QCC?" *Quality Circle*, No. 500, March 2003, pp. 12-33.

[2] ICQCC'03 Tokyo Executive Committee ed., "New trials for small group activities in the twenty-first century", *Quality Month Textbook*, No.319, Quality Month Committee, October 2003.

6. Conclusion

The specific methodology for promoting e-QCC remains unclear in many respects. Nevertheless, without losing sight of the essence of small-group activities, it is vital to modify them for a constant match with the changes in the business climate, upon acquisition of a good understanding of their role in the context of the organization as well as the attributes and climate of the workplace. It is important to build up a systematic methodology to this end based on many actual cases of such activity.

The third key point is *the steps/methods of improvement and control adapted to the theme*. To execute themes, teams must first draw a distinct picture of the ideal status of management system and then identify the obstacles to its achievement. Because numerical data are generally not available, they must make deft use of language data. In addition, the subject of work on the theme would often be information contained in forms and other such documents, and it is consequently advisable to prepare charts so their flows can be visualized.

The second key point is *the organization of groups*. In almost all cases, themes cannot be completely executed by these workplaces alone. This implies a need for organizing a team that runs across organizational borders and involves other concerned divisions, and to determine its leaders and members. Because this team would be disbanded once its objective (theme) is achieved, its membership should include personnel contained in future job rotation plans, even if they are not directly assigned to the theme at the time.

The first key point is *the selection of themes*. The head of the division must lead efforts to ascertain the types of result (e.g., quantity, quality, environment, etc.) for which his or her workplace is responsible at the organization. This is to be followed by an identification of the major problems to be resolved in accordance with the medium- or long-term business plans as viewed from the president's standpoint, clear delineation of the actions required for resolution, and determination of the policy to this end. The next step is to break the job down to the level of themes for activity by the individual teams.

The administrative and indirect divisions are engaged in work related to the company or site as a whole. Because their duties must be undertaken in connection (or coordination) with other workplaces, the job cannot be completed by their own workplace acting alone.

5.5 e-QCC model for administrative & indirect workplaces

The third key point is *the steps/methods of implementing activities adapted to the workplace*. The progress of efforts on major themes and furnishes the necessary support. The other members of the workplace must also participate in the meetings so that the activities unfold through a pooling of wisdom. The meetings will not serve as venues for a mutual understanding and sharing of ideas if too much attention is paid to formalities, and they therefore could be conducted in the format of workshops. A wider spectrum of opinion could be sampled by inviting the participation of outside professionals. It is also recommended to establish a vehicle for discussion to identify problems in the existing processes based on a parallel review of the overall workplace.