

Societas Quālitātis

Vol 8 No 1 Mar/Apr 1994

Union of Japanese Scientists and Engineers

5-10-11 Sendagaya, Shibuya-ku, Tokyo 151 JAPAN

“EMPLOYEE SATISFACTION- THE SOURCE OF CUSTOMER SATISFACTION”

from “ENGINEERS,” No. 529 (November 1992) JUSE



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This article is based on the presentation given by the author in September 1993 at the 47th Symposium of the Japan Product Quality Control Society.

Now... Why CS? Why ES?

Lately, in the aftermath of the bubble economy, with the economy being sluggish and uncertain, and with companies continuing to fail, now is a difficult time for the enterprise. Presently the most pressing issue for companies is to ensure their own long-term survival.

On the other hand, government policy calls for plans to realize a nation of abundance and comfort with a high standard of living over the next five years. However, such governmental aims somehow do not link up with those of the enterprise.

Dr. Deming once said, “Rationalization of operations is very helpful in formulating company strategy for a given fiscal year or for improving morals, but it is not so useful in maintaining company to stay powerful.” I feel these words are particularly apt in the present day. The simplest way to increase ordinary profits is through rationalization, but this alone has little effect on the longevity of an enterprise. I think that without long-range planning it is impossible to ensure perpetuity.

Further, Dr. Deming also said, “Complete turn-about, not just mere change, is necessary in order that the company may stay powerful. It is necessary to de-

velop policies which are capable of complete turn-about”. Making long-range plans by simply prolonging old ways of doing things will eventually lead to a narrow impasse. The company must do something eye-catching and thereby transform itself. I believe that customer satisfaction and employee satisfaction are two things that can bring about this transformation.

The Age of “Re-”

Our present age may be seen as a bridge into the 21st century. Elements of structural reformation such as restructuring, revolution, renovation, renewal, reform and refreshment all words beginning with the letters ‘re’ are assumed extremely important.

The change, the reformation, and the transformation of the Company has two aspects, which are seen in various concepts represented by ‘re’. The aspect which is chosen represents an important crossroads.

One aspect, I think, is the transformation, change, and reformation that is conducted within the company, for example, the advance from slide rules to calculators and electronic notebooks. Companies formerly using slide rules are now being swallowed up and absorbed, while on the other hand, the remaining companies are surviving by launching into new fields of endeavor.

The other aspect, I believe, consists of the changes in social systems and life-style which will affect the products. The company becomes unable to continue along the same lines as in the past, and consequently

must acknowledge and determine which of the two sides of the change it is presently on, and pursue subsequent operations based on that.

Changes in Management Strategy

Looking back at the history of management strategy will reveal that management has one, two, three, or four dimensions.

One-dimensional management has to do with cost strategies. It involves mass-production of inexpensive products and it is a profitable strategy for large enterprises employing scale merit. Two-dimensional management means strategies pertaining to quality. The power of quality control (QC) is manifested, enabling the production of extremely high quality products. Three-dimensional management involves strategies enabling the limited production of a wide variety of products. It involves the deployment of QC and TQC, a shift of the perspective from the manufacturer to that of the user. In other words, it is a multi-angled strategy stemming from a wholistic perspective. However, I have a feeling that such plans are intended as a shift to a more user oriented approach, often end up with this users' perspective being merely a vehicle to further the ends of manufacturing and the enterprise.

Four-dimensional management may be thought of as the addition of aesthetic, place, and timing strategies to the other dimensions. The motto "Just in time" displayed on the Toyota Motor Corporation signboard is an example of a timing strategy. However, as such an operation expands, various problems will occur, and accordingly, a new sort of timing strategy is now desirable. Place strategies involve creating a sense of values regarding a given type of place, for example, attempting to improve the work environment and providing customers with products to that end. Aesthetic strategies involve imbuing products with beauty or with the flavor of the company, in other words the company's "culture". In terms of product quality management, this calls for the development of products with some sort of special appeal.

Changes and Hidden Desires in the Social Environment

Life-styles are changing. Things which were not dreamed of in the past are a matter of course today. Other things may fall completely out of fashion. In the midst of this, consumer desires have diversified, and companies have followed suit by offering diverse products. However, this may be interpreted as a detachment

of companies from consumers as a result of their product diversification strategies. Here I think it is necessary to clearly understand the difference between product diversity and added value.

As well, it is necessary to be aware that among consumers there are both revealed and hidden desires. It is relatively simple to determine consumers' revealed desires by examining user claims, but determining their hidden desires is more difficult. In order to make appealing products, it is necessary to grasp the users' hidden desires. And also it is extremely important to grasp when the hidden desires become the revealed desires.

What Is Customer Satisfaction (CS)?

Dr. Deming often threw out the question, "Is it good enough simply for customers to be able to attain products that are satisfying?" Customer satisfaction is something that moves in accordance with changes in the social environment. It is not an unchanging entity. Since it changes according to the environment, it must be evaluated by a series of appraisals over time. There are no hard-and-fast evaluations of customer satisfaction.

One should remain aware that it is difficult to avoid mistaken illusions if changes in surrounding conditions or in the external environment are not taken into account.

Added value in customer satisfaction is not to be found in product diversification. Rather, I think it has to do with the system of values applied to a single product. I always tell people to think about products in terms of sets or within a context, rather than evaluating things in isolation. When selling a product, added value will be enhanced if the item is presented within a set or within a context.

What Is Employee Satisfaction (ES)?

Dr. Deming also said, "Product quality is not to be found in the product itself, but in the company's basic approach to their business." Product quality stems from the company's attitude or philosophy. The image of the company is an important aspect of any product. Such hidden aspects of product quality tie themselves to the customer's sense of satisfaction. Whether or not the company engages in TQC activities, determines the customer's perception of the company image and the trustworthiness of the company, and in turn the trustworthiness of the product itself.

Therefore, the image of the company is an extremely

important element. It is the employees who create that company. We have established our company's vision, which is "a company where employees may express themselves."

This consists of three elements. The first is to make clear the significance of the existence of one's work within the company, and to create a place where fulfillment and satisfaction with one's work may be enjoyed. The second is to create a place of abundance and sufficient breathing room for creativity to be manifested. The third is to aim at establishing independent new key industries for the 21st century, and to contribute to the development of society on a global level. It is with these goals in mind that we established our vision of a company where employees may express themselves.

In this way products are imbued with the image of the company and through such effect their worth is enhanced. Employees are the foundation of this, and therefore a company can only expect to make good products to the extent that employees find a sense of fulfillment in their jobs. In other words customer satisfaction and employment satisfaction are closely related.

To put it in more concretely, we say to make "products with human warmth." When purchasing products, whether or not the product or the product service gives the customer a sense of this warmth becomes a deciding factor. "Human warmth" in products comes from three things - one, the worth embodied in the product itself; two, the worth of the product as it is used, and three, the psychological worth of the product.

The term "collaboration" refers to a philosophy of making and thinking about things through cooperative efforts, but in the software industry so far much of the work has been based on conceptions of craftsmanship or individual expertise. From now on it will become important to pursue our work based on a philosophy in which the company and the employees are unified by a spirit of collaboration.

The Relationship Between ES and CS

ES is a prerequisite for improving CS. In order to improve CS, products and product service imbued with "human warmth" must be offered, and I think the creation of 'culture' within the company must be at the root of this. It is necessary to have something which elevates psychological values, and it is important to create the company in such a way that employees are free to express themselves.

Professor Tatsuo Ikezawa has said it already in his measurement of employee satisfaction, but the creation of stability and fulfillment in the employee's workplace may be thought in effect to have bearing on customer satisfaction.

I would like to suggest that a company's products are one medium for conveying the human warmth that ties together the customer, the company, and the employees working in the company. It is through this that companies will be able to ensure their survival through the present difficult times, and that appealing, customer-satisfying new products and new creations will be born. ★

Visitors from abroad



Burkina Faso
QC Circle Study Mission
November 29 to December 3, 1993
Number of Participants: 10



Group Training Course in Production Management organized by JICA
February 16, 1994
from Kenya, Poland, Egypt, Argentina and other 5 countries.

“THE ROLE OF CORPORATE TECHNICAL DIVISION MANAGERS AND HOW TO PROMOTE TQC”

from “ENGINEERS,” No. 540 (October 1993) JUSE



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FOREWARD

I joined NEC Corporation in 1955, and during the first fifteen years of my career I took part in the initial development and mass production of semiconductors. Through that period, I learned QC methods and put them into practice.

Then, for the next decade I served as a staff member. It was my job to deal with business policies, production management and information systems. In those years the oil crisis rocked Japan, and we underwent numerous hardships.

In 1980 I was assigned to NEC Yamagata, Ltd., a plant engaged in the manufacturing of semiconductors. While there I volunteered as a leader of the TQC promotion movement, where I made a bid for the Deming Application Prize. And two years later we indeed won it. 1983 saw me reassigned as a leader of TQC promotion at NEC IC Microcomputer Systems, Ltd., whose main line of business is IC design and the development of software. In that capacity I tackled the firm's “TQC movement of design and development,” which that until then had been regarded as difficult to accomplish. But our efforts paid off, and once again, in 1987, we were awarded the Deming Application Prize.

During my seven years with NEC Yamagata and NEC IC Microcomputer systems I devoted myself to TQC promotion. I learned a great deal from many mentors concerning TQC, and our vying for the Deming Application Prize definitely improved the corporate constitution of both firms. Recently I have come to feel that TQC more or less has rooted itself in these companies.

In 1988 I was promoted to a manager in charge of design and development. Working there with TQC as the base, I became convinced that I had properly led the way. Then at last I retired. Looking back on it, I sincerely believe I was lucky to have encountered

TQC.

As for ways to promote TQC, many persons have authored excellent books on the subject, so there is little I can add. However, three or four years ago at a panel discussion held by the Union of Japanese Scientists and Engineers, I had an opportunity to make a presentation titled “The role of corporate technical division managers and how to promote TQC.” To supplement the paper, I have included a few things that I have experienced since writing it, and at this time would like to present the revised version.

My treatise applies solely to supervisors at firms specializing in design and development. Some may wonder if it describes TQC at all. But my understanding of TQC for the future is:

TQC = Quality Control + Quality Creation

Thus I would be most pleased if you would read the following based on the above equation and submit it for your own evaluation.

THE ROLE OF TECHNICAL DIVISION MANAGERS

“Give dreams, hope and inspiration to young people by showing new products and new technical developments!”

The manager leads his group, and each and every member of the group be enthusiastic. Always.

It is extremely important for the younger generations on whose shoulders rest the destiny of Japan, to have dreams and make challenges as a means to fulfill their responsibilities, living each day with abundant hope. It is also vital that they accumulate experiences of success and be motivated by them, and use each as a springboard to the next challenge. The duty of a manager is to find ways to create this type of working environment.

BASICS IN PROMOTING BUSINESS

- 1 Customer satisfaction comes first.
- 2 Clarify the objectives of business and the ways and concepts for promoting it; make sure that all staff members not only understand but also are convinced of this. This must be promoted in the course of management by policy.
- 3 Collect, analyze and collate a wide range of information and make the best use of it:
 - (a) Changes in the social and economic situations of both Japan and the rest of the world
 - (b) The current status of art, culture, science and technology and their future trends
 - (c) Trends in the sense of values among people, especially the young
 - (d) The present condition and predicted future movements of the business world, clients and stores, corporate groups, and inside data on companies and departments
- 4 Thoroughly grasp the customer satisfaction index as well as the real needs of consumers, make positive proposals useful for them and conduct joint development:
 - (a) The business status of customers and of new products and technology, market shares and their future directions
 - (b) Satisfaction index, apparent and potent needs, the situation surrounding competitors
 - (c) System proposals for new products and technology plus consideration for the need of joint development
 - (d) Now and into the future, further study of not only the customer satisfaction but also the social satisfaction index is essential (community and residents, living things, influence on global environment, energy and resources conservation, recycling, etc.)
- 5 Drafting medium - and long-range plans, budgets for the fiscal year, and policies regarding their implementation; laying plans for new products and development projects, and for training better personnel
- 6 Reviewing points concerning the formulating of fiscal year business policies and the attainment of a budget, clarifying the goal and implementation methods with stress on management priorities.
- 7 Designing products that have promise of selling well and developing useful new technology while rotating PDCA: A plan based on a true market-in concept will decide the future of a company.
 - (a) Understanding the actual needs of consumers and estimating, or at least trying to foresee, future trends
 - (b) Learning the salient points with respect to the promotion of design and development, and resolving whatever the technical problems that may stand in the way
 - (c) Management priority attaching importance to planning and putting stress on process
 - (d) Making the most of QC methods in the analysis and resolving of defects to avoid recurrences
 - (e) Developing new technology, methods and tools through the original thinking of all concerned
 - (f) The participation of younger personnel in planning, and utilizing their imagination based on the breakthrough concept
 - (g) Arrangements for design control and design review plus the creation of tools, and confirming their implementation
 - (h) Drafting systems of causes and effects, and strictly managing these systems
- 8 Organizing quality assurance (Q), cost management (C) and delivery management (D), and implementing the arrangement without fail: QCD management is a key to the success of an enterprise.
- 9 Training staff members = the creation of a V-shaped person
Hereafter even technical personnel must become individuals having a broad range of capabilities, at the same time retaining their specialized skill, and who have true human feelings, rather than remaining as masters of one trade alone. Only persons of this kind will be able to survive in the world to come.
 - (a) Special techniques, surrounding forms of technology, administrative skill, intellectual capacity, language instruction
 - (b) Training in how to write logical expressions (QC story), theses and reports, and making presentations based on them
 - (c) Creativity development training, something destined to become all the more important in the future
 - (d) Placing emphasis on sensitivity and coping with the state of mind = approaching and understanding education in broad humanities: politics, economics, society, literature, history, art, culture, sports
 - (e) Encouragement to obtain qualifications (the

Information-Technology Engineers Examination, taking examinations to secure licenses for TOEIC, secretarial positions, proficiency in English, in writing Chinese characters, etc.)

- (f) Praising, commending or scolding
- (g) Thinking in concert with the younger generation in regard to the improvement of their capabilities and advising them

HOW TO PROMOTE WORK WITH FOCUS ON TQC

1 Self-motivation

- (a) Recall the most pleasant and relaxed moment you've ever experienced.
- (b) Imagine your dreams and wishes as they should be in three, five, or ten years later.
- (c) Envision your satisfied face and happy reaction when your dreams and wishes come true.
- (d) Remember your smile when you have exerted your best efforts and they have proved to be successful.
- (e) Convince yourself: No matter how hard it may seem, I have the power to achieve it if I make the effort.
- (f) Enumerate the various problems awaiting your attention in the order of their significance, and clarify those demanding to be resolved.
- (g) Systematically write down concrete ideas for problem solution and include a timetable. While doing so, remind yourself with conviction, "I shall solve this problem without a doubt," or using similar expressions.
- (h) Tell those around you that you will achieve it by such and such a time.
- (i) Itemize your objectives, or measures for resolve, within a time frame, then do your best in reaching a solution rotating PDCA.
- (j) Give yourself time to relax once in a while and use it to consider how to attain your goal from a positive point of view, regarding the situation more fully and from various angles in a systematic way.
- (k) When a new idea inspires you, write it down. While writing it, most likely another new idea will cross your mind.
- (l) Carry out with vigor, what you think you can do.
- (m) Estimate the result looking at it from many angles and consider your pride in accomplish-

ment.

- (n) Decide what you should do next, start moving, and carry it to completion.
- 2 Gathering information, analysis editing and application: The more strongly you feel your objective, the faster information will come together.
- (a) Clarify the purpose of gathering information.
 - (b) Choose sources of data in line with your objective: newspapers, journals, television, lectures, academic society, universities, the business world, corporate groups, the consumer, inside information on companies: shops; Tokyo, Osaka, New York, London, Paris, Singapore, Hong Kong, Beijing...
 - (c) Collate and classify the information gathered: politics, economics, society, history, literature, the arts, psychology, physiology of the cerebrum, sports; science, technology, resources, global environment; sex, age, locales...
 - (d) Select, analyze and edit information to enable utilizing it promptly and efficiently; the KJ method, relation diagram and tree diagram are recommended.
- 3 Grasp data on the needs of consumers and CS firsthand and directly, using your own eyes and ears to the maximum possible extent; be extremely cautious about unverified indirect or secondhand information.
- (a) In particular, when it comes to consumer needs or demands, satisfaction indexes and the estimates of your own company, the status of other firms and future trends, you should contact key persons and learn directly from them their true intentions.
 - (b) Thoroughly understand the needs for system proposals and joint development, and fact them squarely.
 - (c) The give-and-take method is a good way to gain information.
- 4 Clarify the objective of your task and the way it should be, and grasp the points at issue.
- (a) Write down the purpose of your task and its goal, plus the way it should be after you've completed the job.
 - (b) Fully comprehend the gap between the current state of affairs and your future goal; the in-between is what forms the problem separating the present and the future.
 - (c) Make a list of the problems confronting you

- and collate them, giving each a priority rating.
- 5 Clarify the items and goals that you must achieve no matter what, then declare to yourself, “I shall accomplish this by (such and such a time).”
 - 6 Systematically conduct policy management and daily management turning PDCA. There are many kinds of PDCA: daily, weekly, monthly, quarterly, semiannually, yearly, triennially... There are big and small, long and short circles.
 - 7 Specify a clear arrangement of design, development, procedure, and the role of superiors to prepare a QC process chart (it also may be called a QC design manual).
 - 8 Develop and make use of measures, methods and tools as a means to elevate the level of design, development and management for more efficient application.
 - (a) Q7, N7, SQC, quality table and quality engineering (the Taguchi method) will prove to be useful in design and development if they are employed with skill.
 - (b) It is best to prepare tools convenient to use. Making them yourself is recommended.
 - 9 Management should take part in design review and conduct thorough research.
 - (a) Design review provides a good opportunity for experts to impart their knowhow to younger personnel.
 - (b) Especially during the stage of planning, a lot of time should be spent for research and discussion.
 - 10 Analysis of defects, or unfitness, should aim not so much at finding who was responsible but at pinpointing the cause so that it can provide feedback to management, arrangement, standardization and education.
 - 11 Assign work goals to young personnel, but give them leeway in attaining them.
 - (a) Let them take responsibility, and give them free choice regarding measures and methods. In the words of Prof. Nishibori, “Even ninjutsu (the art of making oneself invisible) will do.”
 - (b) Let them know the meaning of pressure: “Right now it’s okay, but if you leave it, you never know what’ll happen next.”
 - 12 Gather wisdom from among the young.
 - (a) However busy they may be, give them time for relaxation.
 - (b) Meditate, and you will calm down and you’ll find yourself in a happier mood. Later, if you put on your thinking cap, wisdom and good ideas will arise one after another.
 - (c) Think in terms of a breakthrough. Clarify your goal and conceive of measures to realize it applying fresh and free ideas.
 - 13 Standardize the knowhow of learned individuals for everyone to use.
 - 14 Summarize what unfolded as well as the result of everyone’s wisdom and apply for a patent, or make a collection of ideas.
 - 15 When your task is completed, write a report (thesis) and present the results. Then hold a “job well done” party.
 - (a) Together with talent, writing stimulates the mind and elevates it.
 - (b) The QC story presents an excellent and logical way of expression that can easily enjoy the understanding of others and secure their advice.
 - (c) The “job well done” party forms another rung on any teamwork ladder and serves as a device to stimulate new dreams and hopes among the personnel concerned.
 - 16 Matters like “sensitivity” and “mind” should be highly valued. The question “What is humanity?” rates exploration from many angles. Visits to art galleries and museums should provide hints.
 - 17 Young personnel should be sent to academic meetings or an in-service training school. Have them read reports as means to gain confidence.
 - 18 When young employees produce good results, commend them officially.
 - 19 Encourage self-enlightenment and mutual enlightenment and see to it that they obtain qualification licenses. Not only your staff, but also you yourself should get qualification licenses. Specialty qualifications form a precious asset in proving one’s ability objectively.
 - 20 Make it a point to associate not only with individuals retained by your own company but also with knowledgeable persons in other lines of endeavor, and broaden your worldly outlook and scope of ability. Acquaintances gained in this manner will become lifelong assets.
 - 21 Never forget: If you try hard, you can accomplish almost anything; you will begin to like your work, and others will help you. Also, be sure to promote your work creatively pleasantly, happily and daily.★

JUSE
INTERNATIONAL SEMINAR ON TQC
FOR TOP MANAGEMENT
—ENGLISH COURSE—

Date: June 13 to 23, 1994
Venue: JUSE Higashi-Koenji Annex
Accommodation: Tokyo Hilton International etc.

All the subjects concerned TQC/TQM includes New Methods such as QFD, and N7, ISO 9000, Case Study on Deming Prize winning Companies are also discussed, by prominent lecturers and company directors in charge of TQC, with simultaneous English/Japanese interpretation.

Fee: ¥800,000 per person

The fee includes 12 nights accommodations for single room from June 12 to 23 with breakfasts, Seminar fee with lunches, Plant tour fee with lunches, and sightseeing fee.

* Brochure of Announcement is now available.

JUSE
INTERNATIONAL SEMINAR ON TQC
FOR TOP MANAGEMENT
—SPANISH COURSE—

Date: August 15 to 25, 1994
Venue: JUSE Higashi-Koenji Annex

All the details as participation fee and program etc. will be announced later on.

Organized by **Union of Japanese Scientists and Engineers (JUSE)**
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