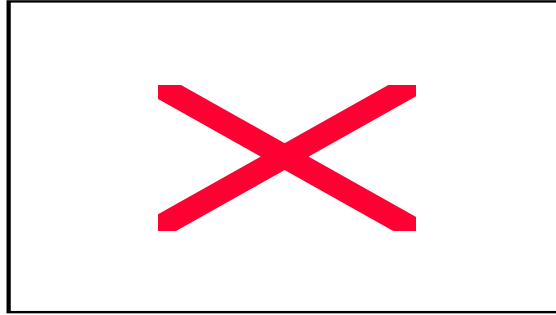


OQPF Commentaries on Deming's Fourteen Points for Management:

DEMING'S POINT SEVEN:

"Adopt and Institute Leadership."



Five monographs were published by The Ohio Quality and Productivity Forum between 1988 and 1994. These were based on extensive discussions by the Ohio Quality and Productivity Forum (OQPF) Roundtable. The first three were part of a planned series on the Fourteen Points for Management (Points 4 and 7 and 1). In the midst of the timeframe in which the Roundtable was discussing the 14 Points, Dr. Deming began to talk about his System of Profound Knowledge. After careful consideration, it was decided not to publish any of the remaining 11 points, and to devote our time and energy to understanding and applying the System of Profound Knowledge, from which the 14 points seemed to be derived. The fourth monograph was titled Reviewing Organizational Policies and Rules, and the last monograph was A Quality Lexicon. These monographs represent our thinking at one stage along the path we were taking in fulfilling our Roundtable mission and are now offered as a contribution to the existing body of knowledge rather than a definitive statement on the subject. Our experience has been that as our understanding increases, we would expect to add to or modify some of what is presented here. The writing and editing was done through the collaboration of Dr. Gipsie Ranney, now consulting with General Motors and Ben Carlson, now retired from Vernay Laboratories. Both have served as members of the Board of Directors of OQPF since 1988.

The OQPF Roundtable was a coalition of six company teams from southwestern Ohio which met bimonthly, from 1986 to 1990 and several times a year from 1990 to 1992. Under the guidance of Dr. Gipsie Ranney, these two-day work sessions had as their mission, the development and expansion of the knowledge needed by the company teams to implement and sustain the organizational changes required to continuously improve quality and competitive ability in their respective companies. The roster of the participating companies as well as the individual team members changed over the years, so it is impossible to identify who contributed to the thinking summarized in these monographs. The participating members acknowledge with appreciation, however, the contribution of Dr. Gipsie Ranney to our understanding of the Deming principles of management and to this publication.

The Ohio Quality and Productivity Forum (OQPF) was founded in early 1985 by volunteers and continues as a proactive organization dedicated to "Promote and further the concept of quality as the guiding principle in management, exemplified by the teachings of Dr. W. Edwards Deming." In addition to the Roundtable which met regularly from 1986 to 1994, OQPF has sponsored 14 annual Deming Conferences. For the first twelve of its fifteen years of existence, OQPF provided numerous quality seminars, monthly meetings

for its membership to hear and discuss quality-related issues; actively promoted the quality message to business, education and government organizations and served as a clearing-house for information about quality management. An OQPF Healthcare Roundtable ran successfully from 1995 to 1999. Financial limitations caused curtailment of all but the Annual Deming Conference.

"The job of management is not supervision, but leadership...The required transformation of Western style of management requires that managers be leaders. ...Focus on outcome (management by numbers, MBO, work standards, meet specifications, zero defects, appraisal of performance) must be abolished, leadership put in place."

(-W.E.Deming, Out of the Crisis Page 54)

"... the most important figures for management are unknown and unknowable (Dr. Lloyd S. Nelson). Variation is a product of any system. Variation may be stable, or it may be afflicted with special causes. As Dr. Nelson says, management's job is to study variation, with the proper theory, to unravel the message that the variation is trying to tell us about how to improve the process--get rid of any important special cause, and to shrink the variation in the future."

(-W.E.Deming, personal correspondence to OQPF, Dec.,1988)

"The aim of leadership should be to improve the performance of man and machine, to improve quality, to increase output and simultaneously to bring pride of workmanship to people. Put in a negative way, the aim of leadership is not to find and record failures of men, but to remove the causes of failure: to help people do a better job with less effort."

(-W.E.Deming, Out of the Crisis, Page 248)

AN ENLARGED VIEW OF LEADERSHIP

Much of what has been written in the past about the subject of leadership has examined the leader's personal qualities and characteristics which create the willingness to follow in those persons being led. Terms like trustworthy, courageous, compassionate, visionary, persuasive, and charismatic are often used to describe the observable personal behavior associated with leadership, (The reader may wish to refer to books on leadership noted in Appendix II.) Deming's writings about Point Seven do not dismiss such qualities, but represent an expanded view which extends beyond behavioral characteristics to thinking and practice.

The purpose of this monograph is to examine the practice of Leadership in light of what we understand of Deming's writings and comments on the subject.

In any organization where people have had jobs of "supervising" or "managing" others, Dr. Deming says the traditional activities associated with these jobs should be replaced by "Leadership." Traditional supervisory activities include auditing and inspection of the performance of others. Such activities are reactive rather than proactive. Deming gives very specific examples of what Leadership means with emphasis on organizational management. He comments on what a Leader will know, will do, and what beliefs and assumptions the Leader will operate under to do his/her job in accordance with the Fourteen Points.

It has been noted that Dr. Deming has modified Point Seven several times as his own thinking and understanding have evolved. In the National Productivity Review (Winter, 1981/82), he urged us to "Improve Supervision." Later in 1982, he concluded in his first book that supervision as he perceived it did not yet exist and changed the wording to "Institute Supervision" or "Institute Modern Methods of Supervision".

(-W.E.Deming, Quality, Productivity and Competitive Position)

James Fitzpatrick of General Motors is credited by Dr. Deming as having suggested the term Leadership in place of supervision.

(-Scherkenbach, The Deming Route to Quality and Productivity)

WHY IMPLEMENT POINT SEVEN ?

Adopting the Deming methods of management which differ from those traditionally practiced in the United States is critical to the successful implementation of the other thirteen points. As Deming points out "... most of this book (**Out of the Crisis**) is involved with leadership." The vast majority of an organization's problems (the estimate was recently revised upward from 85% by Dr. Deming) are the result of shortcomings and flaws in processes and the system as a whole. Responsibility for these is clearly in the hands of management.

Understanding **why** those shortcomings and flaws create problems will come only from a thorough understanding of variation and the actions needed to eliminate the causes of variation.

Failure to practice the new methods of management will continue to produce, or will result, in most of the following kinds of consequences:

- * employees submersed in dealing with each day's crisis or quota,
- * improvement efforts stalled by focusing on conformance rather than improvement,
- * people unable to achieve their potential,

- * employees blamed for problems that are actually faults of the system,
- * employees asked to explain variation which results from causes which are common to all outcomes and can only be removed by management action to change the way the system operates,
- * "program-of-the-month" management (lack of constancy of purpose) resulting in employee cynicism,
- * employees frustrated and demoralized by being prevented from doing high quality work and being powerless to change the system,
- * adversarial relationships with customers, suppliers and employees,
- * the cost of products and services bloated by waste,
- * product of unpredictable quality,
- * dissatisfied customers,
- * stagnant or eroding market position.

TO WHOM IS POINT SEVEN DIRECTED ?

It is logical that leadership should start at the top of any organization but it is also clear that it is not limited to top management. In most instances, there will be at least three levels to which the principles of leadership apply:

1. Top management must provide constancy of purpose for the organization...the drive toward continuous improvement and innovation of products and services. This is necessary for the long term survival of the organization. Top management must act with an understanding of variation, cause and effect and Total Cost. As Deming has observed, it is also top management's responsibility to create the system and to provide both the resources and a plan to carry out its mission. And, by example of their actions, top management must lead the organization in fulfilling that mission.

2. Departmental and mid-level managers need also to lead, by example, their respective functions with the same understanding of variation and its effects. Their focus will be on improving the processes of the organization and helping top management break down intracompany barriers. Like top management, they too, must lead in accord with the Fourteen Points.

3. First-level supervisors must learn to shed their traditional role and to adopt the principles of leadership discussed by Dr. Deming. Their new role is primarily one of

helping their employees do a better job by providing good tools, materials, equipment, training, instructions and other resources necessary to produce a quality product. "A supervisor must be more than a judge or overseer as the name implies. In this new economic age, he must be a coach and a teacher." (-W.W.Scherkenbach, The Deming Route to Quality and Productivity, Chapter 10)

SOME DEMING COMMENTS ON LEADERSHIP

What Dr. Deming focuses on is not the personal qualities typically associated with leadership, but the deeds, the thinking and the knowledge that distinguish his leader from the typical manager or supervisor.

In his earlier book, in reference to "modern methods of supervision" he notes three points about first-line supervisors' role in helping their employees:

1. Supervisors should "remove barriers that make it impossible for the hourly worker to do his job with pride of workmanship."
2. Supervisors "must be empowered and directed to inform upper management concerning conditions that need correction (inherited defects, machines not maintained, poor tools, fuzzy definitions of acceptable workmanship, emphasis on numbers, not on quality). Management must take action on corrections so indicated."
3. "Most acts of supervision in management and on the floor of the factory and of the department store, instead of providing help to people accomplish just the opposite. [This] book abounds with examples."

(-W.E.Deming, Quality, Productivity and Competitive Position)

One of Deming's key points is that most differences in observed performance in work settings are likely to be due to variation produced by the system in which the workers operate rather than due to actual differences caused by the workers themselves. It is important to be able to distinguish which is which. In **Out of the Crisis** he states: "Specifically, a leader must learn by calculation wherever meaningful figures are at hand, or by judgement otherwise, who, if any of his people lie outside the system on one side or the other, and hence are in need either of individual help or deserve recognition in some form."

In the same section of **Out of the Crisis** (Chapter 8) Deming comments further on the new leadership role of the supervisor or manager: "The leader also has responsibility to improve the system -i.e., to make it possible, on a continuing basis, for everybody to do a better job with greater satisfaction"...and ..."to accomplish ever greater and greater consistency of performance within the system, so that apparent differences between people continually diminish."

It is common practice for many supervisors and managers to pay a great deal of attention to reports and data which tell them what happened yesterday, last week, last month, or last year. Often such reports highlight the things that have gone wrong. Dr. Deming has compared this to attempting to drive a car by looking only in the rear-view mirror. Because of this, in his 4-day seminars he observes that "A supervisor is an auditor of failure, while a leader listens and learns, studies and understands and works to improve the system."

He also notes that "One important characteristic of a leader is that he will forgive a mistake - there will be mistakes."

THE LEADER'S RELATIONSHIP WITH THE EMPLOYEES

Over and over, Deming emphasizes an important point: "A good leader will help people understand what their job is." This recurring theme is worth some attention. First, it is essential to note that the signals a person receives about what he/she is supposed to do can change daily depending on what the supervisor needs in order to achieve today's required results...*unless* there is constancy of purpose. Without consistent priorities and clear direction, the employee may be trying to hit a moving target. The "boss" should not see him/herself as the customer the employee is trying to please, but rather the supplier of resources and guidance to the employee in order to help the employee meet the needs of the organization.

By definition, a manager or supervisor has at least one person for whom he has "supervisory" responsibilities. Here are some questions he/she might ask:

- * Do I know what this person must do in order to carry out his/her job?
- * Have I discussed this with him/her so that there is a common understanding of what he/she needs to do?
- * Have I provided him/her the necessary resources to do this job? (tools, training, time, equipment, information, good materials, etc.)
- * What does this person see as the barriers to doing this job well? (What robs him/her of pride of workmanship?) What have I done to remove those barriers?
- * Have I asked what this person needs from me to do this job?
- * Do I know what his/her needs are as an individual?
- * Am I acting as a coach and teacher... or am I simply grading past "performance"?

* Have I provided opportunities for in-depth discussions with this person about this job and its objectives? Instead of an annual appraisal, "Hold a long interview with [each of your] employees...three or four hours at least once a year, not for criticism, but for help and better understanding on the part of everybody."
(-W.E.Deming, Out of the Crisis)

The leader must also have a good understanding of the **context** for each job. For example, it would be important to know at least the following:

What are the products (results which go on to another stage) from this job?

Who are the users (customers) of the results of this job?

What do the customers need in order to best use the results of this job?

What resources must the employee have to meet those needs?

What are some of the penalties for failure to do this job?

Who supplies the inputs to this job? Are the inputs suitable for use?

In addition, the leader must have an understanding of the skills, abilities and behavior needed to successfully perform this job. If the leader has not personally performed the work him/herself, then time should be allotted to study and learn about the job.

Unfortunately, it is common for organizations to move managers from one assignment to another, resulting in too little time to learn his/her job or gain the necessary knowledge of the jobs of those he/she supervises.

Such movement of managers may also have other implications which could affect the organization's objectives. Changes in supervisors or managers may add a significant source of variation to a process in ways that are not recognized by the organization. For example, differing views of the relative importance of various activities by successive managers may be perceived by employees as lack of constancy of purpose.

In addition, changes in supervisors or managers every year or two may cause employees to be wary of change or "improvement" that results from each supervisor's desire to make his or her own "mark" before moving on. This may create resistance to any and all improvement efforts.

NEW LEADERSHIP ACTIONS

The following contrast actions of the traditional supervisor with those of a Leader:

SUPERVISOR

Attempts to control results.

LEADER

Studies the system of causes

Acts as judge or overseer.

Primary job is "fire fighting"
(problem solving).

Holds people accountable
without providing methods
for improvement.
quality

Calls defects to peoples'
attention and assigns cause
to each.

Identifies who is above
or below average; attempts
to make all performance
above average.

Attempts to ascribe all
performance to the indiv-
idual and ranks employees
accordingly.

Identifies which employees
are not motivated or com-
mitted and works to remove
them.

Works on handling "more
and faster".

Ignores training and/or
allows operator to train
operator. (In some cases

and acts on causes.

Doesn't judge people on results which are
combined effects of the interaction of the
system and the people.

Primary job is to improve processes
and prevent problems.

Studies processes in order to for results
remove or reduce barriers which prevent
people from doing (and taking pride in)
work. Identifies people who are in need of
special help.

Works with employees to improve the
process. Is empowered to inform management
of conditions that need correction

Understands that roughly half of any set
of results will be below the average result.
Knows that all performance cannot be better
than the average.

Recognizes that performance is the result
of the combination of individual effort,
effect of the larger system and the
interaction of the two.

Identifies performance which is exceptional
(rare, outside the system). Works with
those whose performance is exceptionally
poor. Learns from those whose .
performance is exceptionally good.
Realizes there may not be any exceptional
performance in his/her group.

Works with his/her people to develop
new and better methods for doing
the job.

Maintains primary responsibility for
seeing that his/her employees are
trained. Makes use of a training process

this may be de facto organizational policy.

which ensures consistency of training for all operators.

Sees employees as a commodity with limited potential for improving.

Knows employees are a valuable resource, worth investing in.

Attempts to control absenteeism.

Understands the difference between common cause and special cause absenteeism and helps people feel needed so they want to come to work.

Often chooses to take no action because that requires no explanation and no risk.

If his/her manager understands mistakes will occur, takes a reasonable risk Or experiments for the purpose of improvement.

Has a passive "I'm behind you all the way" mentality which leaves responsibility for risks unclear.

Has an active "Follow me" mentality showing he/she accepts the responsibility for risks.

ON IMPLEMENTING POINT SEVEN

"What will make for quality products and services as well as renewed leadership in the 1990's? The prime requisite for achievement of any aim, including quality, is joy in work. This will require change, and management's job is to accomplish this change.

My own estimate is that today only two in 100 people in management take joy in their work. The other 98 are under stress, not from work or overwork, but from nonproductive work - churning money, battling for or against takeover and so on. Most of the 98 have their eyes on a good rating and don't dare contribute innovation to their work."

-W.E.Deming, VISTA (journal)

Where does one start, then, to make all this happen? What does it take to "adopt and institute leadership"? How does top management provide the organization with the necessary leadership? Instituting Leadership requires replacing much of what passes as management today with something better.

Deming's suggestions for implementation include (Out of the Crisis, pp. 116/118):

1. Institute education in leadership; obligations, principles and methods. [Such education should occur wherever courses in management or supervision are taught... in the

universities, within the company, and in any appropriate seminar or workshop. The ideas and concepts of Deming that are reviewed in this mono- graph would be a good start for such education.]

2. More careful selection of the people in the first place. [Here we assume Deming speaks of "careful selection" of all employees at the time of hiring as well as selection for supervision or management. Understanding common and special cause variation as well as the new role of Leadership will help to make the selection process more effective.]

3. Better training and education after selection. [Deming comments in books and seminars on the content and on the methodology of training. He observes that worker training worker can be disastrous unless the trainer is trained and the training plan provides for training which is consistent in content and method. Employees at all levels must understand the effects and causes of variation in a process. For supervisors and managers, the ideas and concepts outlined in Appendix I of this paper will be important to know.]

4. A leader, instead of being a judge, will be a colleague, counselling and leading his people on a day-to-day basis, learning from them and with them. [While such a statement may sound idealistic to some, the reasoning for such a relationship with employees is derived from an understanding of the world as it is, not how managers have wanted it to be in the past. It comes from recognizing that achieving results by imposing authority will limit or even prevent improvement and may lead to active or passive resistance. Enlightened management knows this and appreciates the effectiveness of good leadership.]

5. A leader will discover who if any of his people is (a) outside the system on the good side, (b) outside on the poor side, (c) belonging to the system. ["The calculations required are fairly simple if numbers are used for measures of performance. Ranking of people (outstanding down to unsatisfactory) that belong to the system violates scientific logic and is ruinous as a policy...People on the poor side of the system will require individual help."]

6. The people of a group that form a system will all be subject to the company's formula for raises in pay. ["This formula may involve seniority. It will not depend on rank within the group, as the people within the system will not be ranked No.1, No.2, (etc.), (In bad times, there may be no raise for anybody.)"]

7. Hold a long interview with every employee, three or four hours, at least once a year, not for criticism, but for help and better understanding on the part of everybody. [This does not substitute for daily or frequent communication about the job.]

8. Figures on performance should be used not to rank the people in a group that fall within the system, but to assist the leader to accomplish improvement of the system.

["These figures may also point out to him some of his own weaknesses...Improvement of the system will help everybody, and will decrease the spread between the figures for the performance of the people."]

In order to begin the implementation of Point Seven, the first step is to start a process of education for managers in the meaning of the Fourteen Points and the Key Concepts described in Appendix I. The education process should begin with Top Management (it would be instructive for managers to address the questions posed by Dr. Deming in Chapter 5 of Out of the Crisis). They can then begin to teach others by example and to encourage use of the new principles through their interaction with the next level: asking questions and expecting decision-making analyses which utilize an understanding of variation and Deming's principles. This should not be done, however, without providing for training and education in the theory and methodology needed. Having said that "The first step in a company will be to provide education in leadership", Deming notes this new leadership serves to replace the old supervisory relationship and in particular, the annual performance review:

"...The annual performance review may then be abolished. Leadership will take its place. [Performance reviews] became popular because [they do] not require anyone to face the problems of people. It is easier to rate them; focus on the outcome. What Western industry needs is methods that will improve the outcome."

Other management practices that have come under his criticism are also presented in ways that make it clear that we should not only stop doing them, but we should substitute something better in their place. Examples:

STOP defining quality as conformance to specifications.

START defining quality as continual reduction of variability about the optimum or target value as defined by the intended use.

STOP managing "results".

START managing and improving the process (causes).

STOP purchasing on price

START purchasing on the basis tag alone.of Total Cost, working with suppliers to reduce variation, and to make improvements.

STOP "optimizing" the results of individual groups or departments.

START emphasizing internal customer-supplier relationships and taking actions which will result in optimizing the whole organization's performance.

IN SUMMARY...

What is distinctive about Dr. Deming's Leadership is his message that the job of a leader is to help his people. Such help depends on:

Knowledge (examples: knowledge of the business, the work, the process, the job. Knowing that the most important figures for management are unknown and unknowable. Knowledge of variation and the statistical methods appropriate for studying variation.) [See Appendix I]

Thinking (examples: understanding variation and the interaction of forces, recognizing "tampering", recognizing that actual and intent may be quite different.)

Actions to change and improve the system (examples: what we choose to work on, how well we do it, how we go about it, practice of the Deming [Shewhart] Cycle, use of statistical theory and methods.)

Leadership is provided, then, by application of the Fourteen Points every day. Transforming an organization to the point where it begins to reap the benefits of this new way of managing is not an overnight task ("there is no instant pudding..."). "The problem is where to find good management. It would be a mistake to export [current] American management to a friendly country!"

(-W.E.Deming, Out of the Crisis, Pg.6)

Transformational leadership involves a great deal of hard work and will take years to accomplish. But, weigh the increasingly clear risks of continuing to manage as we have been, against the opportunities for competing effectively in the new global marketplace, and you have a very compelling case for getting started **now**.

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REFERENCES:

OUT OF THE CRISIS, W.E. Deming
Massachusetts Institute of Technology
Center for Advanced Engineering Study, 1986

THE DEMING ROUTE TO QUALITY AND PRODUCTIVITY,
Wm. W. Scherkenbach
George Washington University
Continuing Engineering Education Press, 1986

QUALITY, PRODUCTIVITY AND COMPETITIVE POSITION, W.E. Deming
Massachusetts Institute of Technology
Center for Advanced Engineering Study, 1982

DEMING'S POINT FOUR

Commentaries on Deming's Fourteen Points for Management Ohio Quality and Productivity Forum, 1988

APPENDIX

- KEY CONCEPTS -

The Fourteen Points are based on understanding that a business enterprise is operated in a time continuum. The results of today were preceded by results in the past and will be followed by results in the future. The job of leadership is to understand the cause system which produced yesterday's and today's results in order to act on that cause system and improve future results. In working to improve the future, it is necessary to understand that variation in results always exists and an understanding of the nature of variation is essential to managing for improvement.

The Fourteen Points are distinct in their individual messages, but inseparable in achieving an understanding of Deming's theory and in implementation. Running throughout this set of management principles, are some key concepts which a Leader must know and understand. The following brief paragraphs are intended only to provide enough information to identify the nature of the concept. Each is worthy of its own study. The concepts are interrelated and are presented, therefore, without an attempt to discuss them in any order.

Long-term thinking - The actions taken today influence the results of the future. It is important to make decisions and take actions which will not prevent the organization from being able to survive and be economically viable in the future. For example, increasing short term profits by eliminating investment in training, research, maintenance, and so on, is likely to result in costly consequences at a later time.

Total cost - Too often, only the costs which can be captured by existing accounting systems are recognized and taken into account in making business decisions. It is imperative that **all** of the various related and consequential costs associated with a given decision be recognized, even when they may not be easily quantified. For example, the unit cost or purchase price is often the only cost given consideration in making a purchasing decision. In addition to the unit cost, there are costs from downtime, service, warranty, process adjustment to accommodate incoming product variation, and so on, incurred in the use of the product. In some cases these costs cannot be quantified or predicted. The fact that they will be incurred to a greater or lesser degree depending on the selection of the supplier should, however, be taken into account in making the sourcing decision.

Variation - Variation exists in results, whether those results are values of a characteristic measured on successive parts produced by a manufacturing process, or values typically used to observe performance of an entire business enterprise over time, such as costs, profits, or production quantities. This variation can be viewed as the result of two kinds of causes, common and special. **Common causes** of variation are part of the system and act on all results; **special causes** of variation do not act on all results, but rather act sporadically and produce unpredictable results. It is essential to understand the difference between common and special cause in order to take the right kind of action to remove causes, reduce variation and improve results of the future. Deming notes that "the type of action required to reduce special cause variation is totally different from the action required to reduce variation and faults from the system itself..."

Action to change the system on the basis of a result influenced by special cause can damage the system and add cost. Action to continually adjust the system in response to single common cause outcomes can constitute tampering and worsen future results (increase variation), rather than improve them. The vast majority of variation which exists is due to common cause and therefore due to faults of the system. Since management is responsible for the system, the major portion of the work needed to gain improvement is the responsibility of management. Efforts to reduce variation can result in increased quality and consequently, decreased costs, by removing the waste associated with detecting and correcting problems.

In order to know the difference between common cause results and those influenced by special cause and take appropriate actions for improvement, Dr. Deming notes that it is essential to have a "sound understanding of statistical control." Management by Objective (Management by Results) is an example of failure to understand the concepts of cause and effect, variation and global optimization. Much of the waste imbedded in an organization is the result of attempting to improve results without examining the cause system.

Continual improvement - The ability to improve depends on having a significantly different mindset from the popular position of "if it ain't broke, don't fix it." Reactive efforts to fix problems as they occur result in maintenance of the status quo at best. Continual improvement requires proactive efforts to find means to improve quality and remove the causes of waste on the part of every member of the organization, including the top leadership.

The discipline of continual improvement comes through practice of the Deming (or Shewhart) Cycle: Plan, Do, Check, Act...and the use of statistical methods and tools to gain knowledge for improvement. The underlying assumption is that there are always opportunities to improve in an ongoing, incremental fashion. Even small improvements can amount collectively to significant gains in quality and reduction of cost. Continual improvement implies a steady reduction in the number of chronic and incidental problems which must be dealt with on a daily basis and a resulting increase in the resources available for innovation of product and process for the future.

Removal of barriers that prevent people from taking pride and joy in their work - This is a key management principle that is based upon the recognition that best efforts of people at all levels to contribute to the organization are thwarted by barriers put in their

way by the larger system. Hourly workers are often provided with faulty materials and equipment, are given arbitrary work standards and quotas and are improperly trained and coached in their jobs. Many salaried workers are prevented from acting in the best interests of the organization by the need to compete for an annual rating and the need to meet departmental objectives which may not benefit the organization as a whole.

Recognition of interacting forces within a system - This concept recognizes that there are many factors which impact on results achieved by the individual, the department and the company as a whole. The influence of each of these factors may vary over time and the factors almost surely interact with one another in their influence on the results. The relationships among these factors are very complex and may be difficult, if not impossible to analyze. When observing the results achieved by an employee, do we recognize the effect of:

- the quality of the training he/she has received?
- the quality of the information and other resources provided to do the job?
- the quality of leadership provided?
- the complex and multidimensional nature of the job?
- the disruptions that distract him/her?
- the policies and practices that create fear?

All of the preceding are related to the way in which the organization is managed and the employee's performance may be significantly impacted by each of these, but the employee is often held responsible (and blamed) for results which are produced by the combined effect of the individual interacting with the system.

Managing causes rather than results - Any process, be it the entire system or a single activity, produces results. At the system level in particular, demanding specific quantitative improvements to certain results can create damage to other results. For example, specifying that costs be reduced by 10% can translate into cutting out activities which can bring long-term improvement of competitive position, such as training, improvement to equipment, research and development, and so on. Another example is the imposition of a 20% across-the-board reduction in the size of the workforce. Such an action can lead to the loss of personnel with critical skills and knowledge, to the detriment of the organization's competitive position. Another example is the reduction of inventory without addressing the cause for its existence. Much inventory exists as insurance for failures; buffer stock to protect against interruptions in production when equipment or quality problems occur. The question which should be asked in these cases is: What are the causes of high cost, of inflated staffing levels, of high inventory levels? Asking questions about cause can lead to more realistic identification of sources of waste and redundancy and allow improvement without unanticipated damage.

Traditional managers have placed a great deal of emphasis on comparing the results of this month to last month this quarter to last quarter, this year to last year, without recognizing that the history of performance extends beyond the previous time period. Informed study of results requires analyzing the results of this period, last period and the periods which preceded them as the outcomes of a process. When the variation in results over several time periods is analyzed for statistical control, knowledge can be gained for planning and taking appropriate action to improve those factors which will determine future results.

Tampering (Rules of The Funnel) - Managers who fail to understand special and common cause variation, have often incorrectly concluded that the variation observed in results was due entirely to special cause. They have attempted to "adjust" (take action) on the process or system in order to improve the next result by compensating for the deviation of the last result from the desired target or goal. However, when the results observed are influenced only by common cause (the system is stable), such attempts at adjustment will increase variation and make future results worse. These misguided attempts to improve results without an understanding of the nature of variation are called "tampering" by Dr. Deming. Examples of four kinds of such "tampering" are provided in his discussion of the "Rules of the Funnel" in Out of the Crisis.

Global optimization - Management of results and rewarding performance of individuals or organizational units on those results is often done without consideration of potential damage produced elsewhere in the organization by achieving them. This creates internal competition to achieve local and individual goals and can seriously damage the competitive position of the organization in the marketplace.

Decisions should be made and actions taken at levels which will produce internal cooperation and a search for options and strategies which optimize the position of the entire organization. Internal competition will likely produce win-lose results; internal cooperation among individuals and units can produce win-win (all-gain) results for the benefit of the organization. Developing and adopting strategies which produce all-gain results requires not only commitment to and practice of teamwork but elimination of reward systems which promote local optimization and global damage.

Customer-Supplier relationships - This concept takes on new meaning within the Deming principles of management. The first is that rather than the usual adversarial relationship created by the economic interests of the two parties, Deming advocates that customer and supplier work **together** to improve quality and reduce costs. A strong case can be made for the benefits to both parties of such an arrangement (see the OQPF Commentary on Deming's Point Four).

The second is a departure from the typical view that a customer is the final purchaser or potential purchaser of the organization's product or service. In the new perspective, each employee also has "internal" customers, the recipients or users of his or her work. In this context, each person is both a supplier and a customer within the organization. Improving the quality of work delivered by each supplier to each customer reduces waste and allows the delivery of a quality product to the marketplace at a competitive price.

Quality redefined - "Quality" has often been defined as conformance to specification and most efforts to achieve quality have consisted of producing, and then attempting to screen out, non-conforming product. Little recognition has been given to the waste and cost associated with this approach to achieving quality. Deming enlarges the view of quality to include every activity which takes place in an organization.

The Deming principles emphasize the importance of the customer and supplier working together to develop operational definitions of product characteristics important to the customer. Deming also emphasizes the need for the supplier to innovate in anticipation of the customer's needs. He cites many cases in which suppliers have provided the customer with a product or service without the customer having thought of it. In the marketplace, the organization which delivers value, innovates and provides goods and services which surprise and delight the customer will have the best chance for long-term success.

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