Deming’s 14 Points Explained and Implementation: Listing and Explanation

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Described are Deming’s 14 Points Explained and Implementation of those points, as a business process management system. Dr Edwards Deming’s 14 points of quality management provide a foundation for good management practices. Listed are his points with a summary explanation.

The first point describes a need from an overall business perspective.

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business and to provide jobs.

   For the company that wants to stay in business, the two general types of problems that exist are the problems of today and the problems of tomorrow. It is easy to become wrapped up with the problems of today, but the problems of the future demand, first and foremost, constancy of purpose and dedication to keep the company alive. Decisions need to be made to cultivate innovation, fund research and education, and improve the product design and service, remembering that the customer is the most important part of the production line.

The second point addresses leadership for change.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

   Government regulations and antitrust activities need to be changed to support the well-being of people. Commonly accepted levels of mistakes and defects can no longer be tolerated. People must receive effective training so that they understand their job and also understand that they should not be afraid to ask for assistance when it is needed. Supervision must be adequate and effective. Management must be rooted in the company and must not job-hop between positions within a company.

The third point says we need to stop the common practice of trying to inspect quality into a product.

3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

   Inspection is too late, ineffective, and costly. It is too late to react to the quality of a product when the product leaves the door. Quality comes not from inspection but from improving the production process. Corrective actions are not inspection, scrap, downgrading, and rework the process.

Points 4-14 describe additional activities that should be incorporated as part of doing business.

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

   Price and quality go hand in hand. Trying to drive down the price of anything purchased without regard to quality and service can drive good suppliers and good service out of business. Single-source suppliers are desirable for many reasons. For example, a single-source supplier can become innovative and develop an economy in the production process that can only result from
a long-term relationship with the purchaser. Lot-to-lot variability within a one-supplier process is often enough to disrupt the purchaser’s process. Only additional variation can be expected with two suppliers. To qualify a supplier as a source for parts in a manufacturing process, perhaps it is better first to discard manuals that may have been used as guidelines by unqualified examiners to rate suppliers. Instead, suppliers could be asked to present evidence of active involvement of management, encouraging the application of many of the IEE concepts discussed in this volume. Special note should be given to the methodology used for continual process improvement.

5. **Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.**

There is a need for constant improvement in test methods and for a better understanding of how the customer uses and misuses a product. In the past, American companies have often worried about meeting specifications, while the Japanese have worried about uniformity, i.e., reducing variation about the nominal value. Continual process improvement can take many forms. For example, never-ending improvement in the manufacturing process means that work must be done continually with suppliers to improve their processes. It is important to note that, like depending on inspection, putting out fires is not a process improvement.

6. **Institute training on the job.**

Management needs training to learn about all aspects of the company from incoming materials to customer needs, including the impact that process variation has on what is done within the company. Management must understand the problems the worker has in performing his or her tasks satisfactorily. A large obstacle exists in training and leadership when there are flexible standards for acceptable work. The standard may often be most dependent on whether a foreperson is having difficulty in meeting a daily production quota. It should be noted that money and time spent would be ineffective unless the inhibitors to good work are removed.

7. **Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job.**

Supervision by management is in need of overhaul, as well as supervision of production workers.” Management should lead, not supervise. Leaders must know the work that they supervise. They must be empowered and directed to communicate and to act on conditions that need correction. They must learn to fix the process, not react to every fault as if it were a special cause, which can lead to a higher defect rate.

8. **Drive out fear, so that everyone may work effectively for the company.**

No one can give his best performance unless he feels secure. Employees should not be afraid to express their ideas or ask questions. Fear can take many forms, resulting in impaired performance and padded figures. Industries should embrace new knowledge because it can yield better job performance and should not be fearful of this knowledge because it could disclose some of their failings.

9. **Break down barriers between departments. People in research, design, sales, and production must work as a team to foresee problems of production and use that may be encountered with the product or service.**

Teamwork is needed throughout the company. Everyone in design, sales, manufacturing... can be doing superb work, and yet the company can be failing. Why? Functional areas are sub-optimizing their own work and not working as a team for the company. Many types of problems can occur when communication is poor. For example, service personnel working with customers know a great deal about their products, but there is often no routine procedure for disseminating this information.
10. **Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.**

Such exhortations only create adversary relationships, as the bulk of the causes of low quality and low productivity belongs to the system and thus lies beyond the power of the work force. Exhortations, posters, targets, and slogans are directed at the wrong people, causing general frustration and resentment. Posters and charts do not consider the fact that most trouble comes from the basic process. Management needs to learn that its main responsibility should be to improve the process and remove any special causes for defects found by statistical methods. Goals need to be set by an individual for the individual, but numerical goals set for other people without a road map to reach the objective have an opposite effect.

11a. **Eliminate work standards (quotas) on the factory floor. Substitute leadership.**

Never-ending improvement is incompatible with a quota. Work standards, incentive pay, rates, and piecework are manifestations of management’s lack of understanding, which leads to inappropriate supervision. Pride of workmanship needs to be encouraged, while the quota system needs to be eliminated. Whenever work standards are replaced with leadership, quality and productivity increase substantially, and people are happier on their jobs.

11b. **Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.**

Goals such as “improve productivity by 4 percent next year” without a method are a burlesque. The data tracking these targets are often questionable. Moreover, a natural fluctuation in the right direction is often interpreted as success, while small fluctuation in the opposite direction causes a scurry for explanations. If there is a stable process, a goal is not necessary because the output level will be what the process produces. A goal beyond the capability/performance of the process will not be achieved. A manager must understand the work that is to be done in order to lead and manage the sources for improvement. New managers often short-circuit this process and focus instead on outcome; e.g., getting reports on quality, proportion defective, inventory, sales, and people.

12a. **Remove barriers that rob the hourly worker(s) of their right to pride of workmanship.**

The responsibility of supervisors must be changed from sheer numbers to quality. In many organizations, the hourly worker becomes a commodity. He may not even know whether he will be working next week. Management can face declining sales and increased costs of almost everything, but it is often helpless in facing the problems of personnel. The establishment of employee involvement and of participation plans has been a smoke screen. Management needs to listen and to correct process problems that are robbing the worker of pride of workmanship.

12b. **Remove barriers that rob people in management and in engineering of their right to pride of workmanship.**

This means, inter alia (among other things), abolishment of the annual or merit rating and of managing by objective.” Merit rating rewards people who are doing well in the system; however, it does not reward attempts to improve the system. The performance appraisal erroneously focuses on the end product rather than on leadership to help people. People who are measured by counting are deprived of pride of workmanship. The indexes for these measurements can be ridiculous. For example, an individual is rated on the number of meetings he or she attends; hence, in negotiating a contract, the worker increases the number of meetings needed to reach a compromise. One can get a good rating for firefighting because the results are visible and quantifiable, while another person only satisfied minimum requirements because he or she did the job right the first time; in other words, mess up your job, and correct it later to become a hero. A common fallacy is the supposition that it is possible to rate people by putting
them in rank order from last year’s performance. There are too many combinations of forces involved: the worker, co-workers, noise, and confusion. Apparent differences in the ranking of personnel will arise almost entirely from these factors in the system. A leader needs to be not a judge but a colleague and counselor who leads and learns with his or her people on a day-to-day basis. In absence of numerical data, a leader must make subjective judgments when discovering who, if any, of his or her people are outside the system, either on the good or the bad side, or within the system.

13. **Institute a vigorous program of education and self-improvement.**

An organization needs good people who are improving with education. Management should be encouraging everyone to get additional education and to engage in self-improvement.

14. **Put everybody in the company to work to accomplish the transformation. The transformation is everybody’s job.**

Management needs to take action to accomplish the transformation. To do this, first consider that every job and activity is part of a process. A flow diagram breaks a process into stages. Questions then need to be asked about what changes could be made at each stage to improve the effectiveness of other upstream or downstream stages. Everyone can be a part of the team effort to improve the input and output of the stages. Everyone on a team has a chance to contribute ideas and plans. A team has an aim and goal toward meeting the needs of the customer.