Exploring Deming’s Fourteen Points for Management Applied to Industry

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I. ABSTRACT
In this paper the author explains the fourteen points of Deming for management applied to industry. Examples are given to each point such that there is a clear understanding of each point. Explanations are given in such a way that the management of the industry may directly apply the thoughts of Deming to practice.

II. KEYWORDS
Mission, Improvement, Measurement, Quality awareness, Corrective action, Strategic plans.

III. PROCEDURE
3.1 Create and publish to all employees a statement of the aims and purposes of the company or other organisation. The management must demonstrate constantly their commitment to this statement.
The statement here is the Mission statement. The example of a mission statement of a large textile mill is stated below
a) We endeavour to reach the leadership position in each Segment/Sector of our Product / Service
b) We are committed to satisfy our customers by providing such quality Product / Service which gives highest value for money.
c) We believe that Employees are our most important asset through which we can reach to the top in each category of our Product / Service. Therefore, we will emphasis on their continuous improvement through up-gradation of relevant knowledge and training.
d) We commit ourselves to continuous growth, so as to fulfil the needs and aspirations of our Customers, Employees and Shareholders.
The quality policy statement is given below
a) Ensure continuous improvement of quality of all products through control of variations.
b) Ensure improvement of productivity of all resources viz. Man, machine and materials.
c) Ensure the involvement of all personnel affecting quality through training.
d) Anticipate and identify the customer needs and aspirations and satisfy them on time and every time.
The above statements stress the need to create long-term strategic plans that will steer the company in the right direction. Everyone in the organisation should understand the above statements clearly. The above two statements must be displayed in the proper place of the organisation such that it comes to the notice of all employees.
3.2 Learn the new philosophy, top management and everybody
Delays in delivery, mistakes, poor quality and poor workmanship are no longer tolerated. The total cost of producing, finding, and disposing of or repairing defective item exceeds the cost of producing a good one. Initially people resist to change and to adopt the new system. But they should be explained the benefits of the new philosophy and then gradually they will welcome the new. Defects are not acceptable to any level. No defect philosophy must be adopted by all.
Example: Say, in a customer contract it is stated that a defective rate of 4 units in 1000 is acceptable ; this ensures that 0.4% will be defective. This philosophy must be abandoned and a no-defect philosophy must be adopted in its place.
3.3 Understand the purpose of inspection, for improvement of processes and reduction of cost.

In an industry there are three stages of inspection.

a) Incoming Inspection: Through this inspection improvement is done at the raw materials stage. Inspection test plan should be used and proper record of incoming inspection should be maintained.

b) In-process Inspection: This inspection is done in between incoming and final inspection. This is also important in a sense that no defective product should be passed to final stage. In process audits can be performed at this stage.

c) Final Inspection: Final inspection is done in a sense that our product is defect free. It is ready to despatch.

Inspection data can be plotted in a suitable control chart and should be analysed for the process for out of control situation

3.4 End the practice of awarding business on the basis of price tag alone

For purchase of materials the following criteria may be used

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Marks (Maximum)</th>
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<tbody>
<tr>
<td>a) On time delivery</td>
<td>40</td>
</tr>
<tr>
<td>b) Highest quality</td>
<td>40</td>
</tr>
<tr>
<td>c) Best service</td>
<td>10</td>
</tr>
<tr>
<td>d) Best price</td>
<td>10</td>
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</tbody>
</table>

Total score = 100 marks maximum

3.5 Improve constantly and forever the system of production and service.

Quality Guru Deming believes in defect prevention process rather than defect detection and continuous improvement in process to meet and exceed customer requirements on a Never-ending basis. Statistical process control tools should be used to improve upon processes.

Deming Cycle - PLAN, DO, CHECK ACT (PDCA) must be used.

PLAN - Recognize the opportunity for improvement
DO - Test the theory on a small scale
CHECK - Analyze results of the test phase
ACT - Implement the plan to improve customer satisfaction.

3.6 Institute Training.

The following points may be used regarding training

<table>
<thead>
<tr>
<th>Criteria</th>
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<tbody>
<tr>
<td>a) Identification of the training needs</td>
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<td>b) Training chart to impart training</td>
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<td>c) Monitoring output of training</td>
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<tr>
<td>d) Re-train the incompetence persons</td>
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3.7 Teach and institute leadership

Supervisors serve as vital links between management and the workers. They should understand both the problems of workers and the top management’s goals. They communicate management’s commitment to quality improvement to the workers. To be effective leaders, the supervisors must no longer think punitively –they must think in terms of helping workers to do a better job. Supervisors need to be trained in statistical methods.

3.8 Drive out fear. Create trust. Create a climate for innovation

Fear in the mind of workers becomes counter productive. They try to please supervisors rather than meeting the long-term goals of the organisation. There is economic loss in that .Employees hesitates to ask questions about their job, the methods involved in production, the process conditions etc. A fear-filled organization is wasteful.

For example consider an employee who produces a quota of 60 parts per day-without regard to whether they are all acceptable –just to satisfy the immediate supervisor. Many of these parts will have to be scrapped, leading to wasted resources and a less than optimal use of capacity. He could not disclose because of fear.

3.9 Optimize toward the aims and processes of the company, the efforts of teams, groups, staff areas

There are two types of barrier .One is internal barrier and the other is external barrier. Internal barriers exist within the organization; these include barriers between the supervisors and workers, between departments. Communication hampers because of these barriers. So break down barriers between staff areas. External barriers
include those between the vendors and the company; the company and the customer, the company and the
community, and the company and its investors. The detrimental effect of any of these barriers is obvious.

3.10 Eliminate exhortations for the work force
Unrealistic goals like zero defects should not imposed upon the work force. Eliminate numerical goals, targets,
slogans, posters. Give them freedom to work. They will be much more motivated to yield improvement in
processes, systems.

3.11 Eliminate numerical quotas for production. Instead, learn and institute methods for improvements
Eliminate M.B.O. (management by objectives). Instead, learn the capability of process and how to improve
them.

3.12 Remove barriers that rob people of pride of workmanship.
   a) Treat employees with dignity
   b) Communicate mission of the company to all employees
   c) Management should admit their own fault if any
   d) Eliminate many categories across employees

3.13 Encourage education and self-improvement for everyone

3.14. Take action to accomplish the transformation.
An organizational structure must be there to implement the above 13 points.

IV. CONCLUSION
In this paper the Author has tried to explain the fourteen points of quality guru Deming. This can readily be
applied to any kind of industry.

V. SCOPE FOR FURTHER STUDY
There are many other quality gurus like JURAN. TAGUCHI.
One can explore their quality points in their papers.

REFERENCES