DEMING'S PDCA CYCLE

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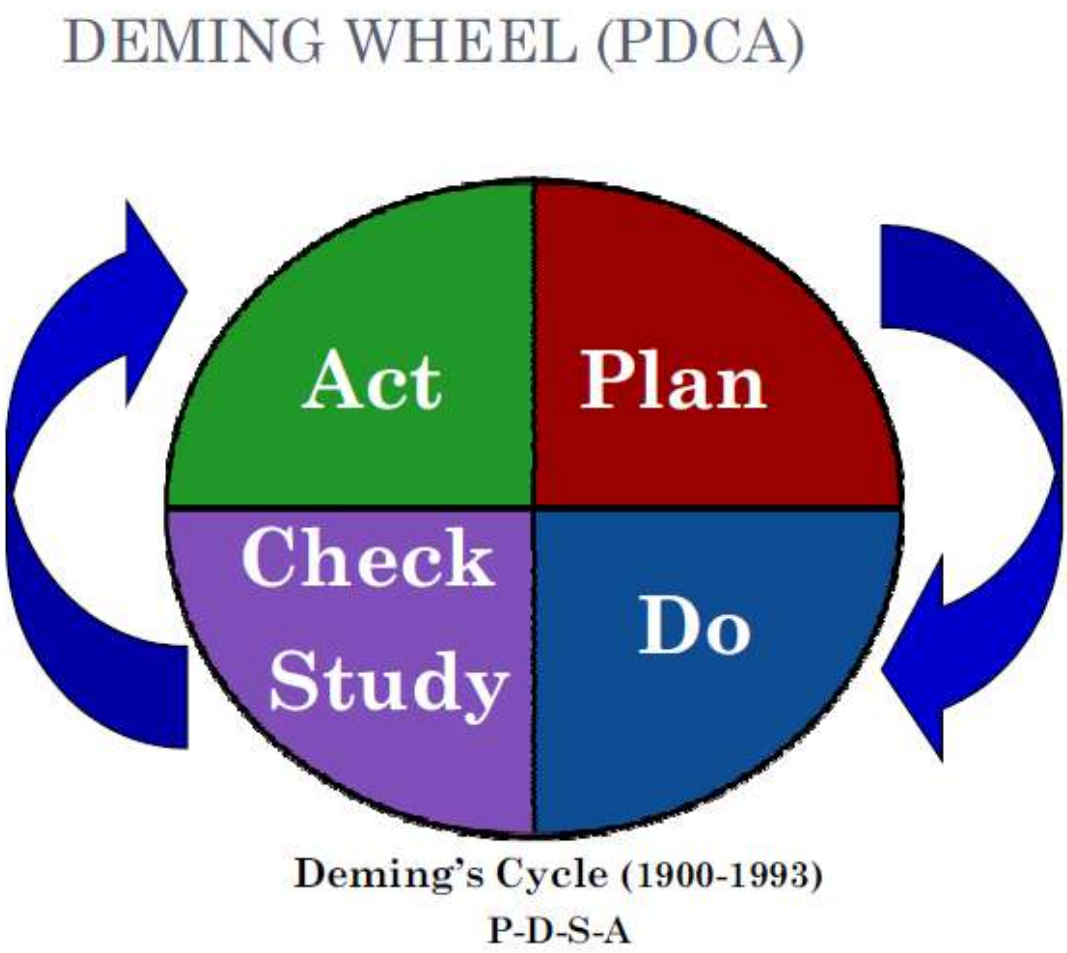
LECTURE CONTENT

- PDCA Cycle – Tool for continuous quality improvement
- KAIZEN



What is the PDCA Cycle?

Plan, Do, Check, Act (PDCA) was first put forward within the works of Walter Shewhart and later popularized by W. Edward Deming who referred to it himself as the Shewhart cycle. Since then it has been more often called the Deming cycle or Deming Circle after Dr.Deming.

PDCA (Plan-Do-Check-Act) is a methodology for continuous improvement of business processes and also constitutes the backbone of the ISO 9001 series of standards for developing a quality management system. It is a simple repetitive cycle to drive continuous quality improvement of any business processes.

Plan – This is all about analyzing the current context / situation and setting business objectives and respective targets / goals. Hence, many times, there is also a pre-step called **"Observation"**. The target setting process uses approaches such as process / product bench-marking, activity time study, theoretical scientific calculation (Example: heat losses in a furnace, equipment

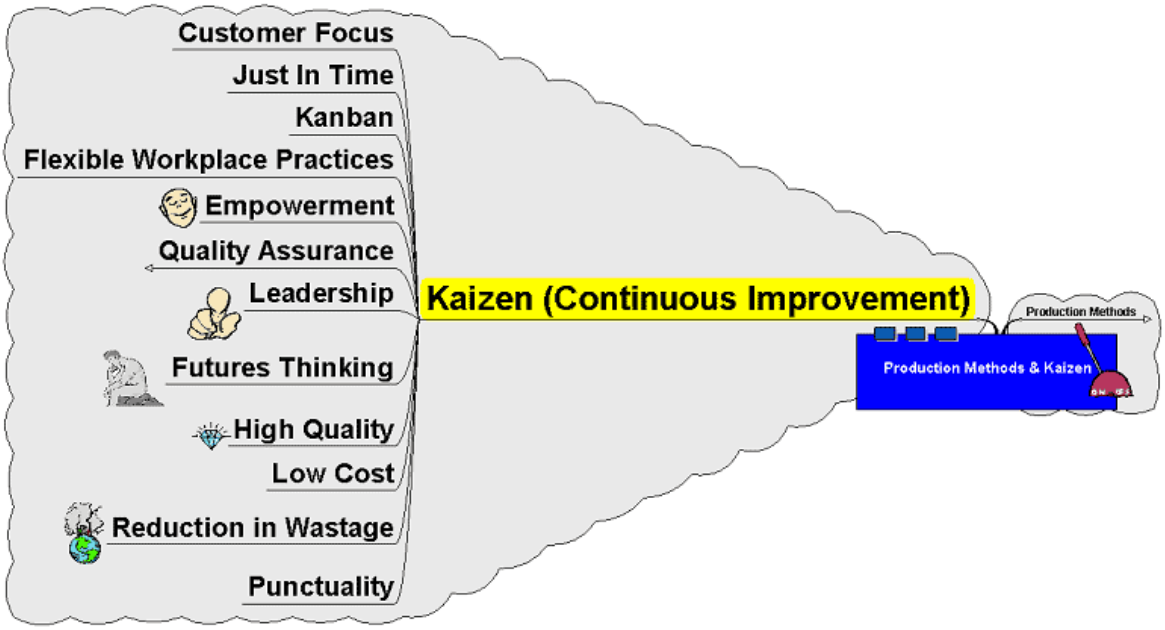
designed operating performance parameters) or even it could be sustaining best achieved results. However, there is often a debate on setting stretch / aspiration targets, which may not have a scientific basis, but help push people towards lateral and innovative thinking to achieve these aspirations. Absence of scientific basis for target setting may result in action plans without necessary and sufficiency conditions.

Do – Implement the actions, do the process / product trials, collect / capture data and deviations including in-process and final data. This step is all about execution / implementation through arranging and deployment of resources (manpower, time, financial, technology etc..)

Check / Study – Study the deviation of the actual results from the expected results. This stage needs use of various statistical analytical tools such as histogram, box plots, scatter diagrams or simple charts and Pareto (80:20 principle) analysis. The key over here is to generate information and knowledge from result deviations so as to ensure development of focused actions to close out the deviations.

Act / Adjust – The word “Act” seems confusing with the second step “Do”. Thus the word “Adjust” which represents the essence of this fourth step. This step includes focused changes in the areas of related deviation (target and actual) across the process / product stages. The “Adjustment” changes could be fed back into the “Plan” stage and thus the PDCA cycle for Continuous Improvement, keeps on wheeling.

KAIZEN – Quality Improvement Tool



What is KAIZEN ?

- A system which generates and implements ideas regarding improvement which come from the employees
- A formal recognition of the need for continuous improvement and plans to achieve it are now a part of all quality systems.
- The Kaizen philosophy needs to be applied to all aspects of a business
- A tool to help improve quality and productivity.

Why KAIZEN ?

Kaizen, the core concept of TQM, is a cost effective result oriented technique which helps to identify root causes of inefficient working and offer systematic approach to change the attitude of people and to eliminate causes of problems in the process leading to improvement in quality of output and to miraculous organizational changes.

Kaizen signifies step by step, gradual, large number of continuous improvements no matter how small which should be taking place all the time in every process involving everyone from management to workers.