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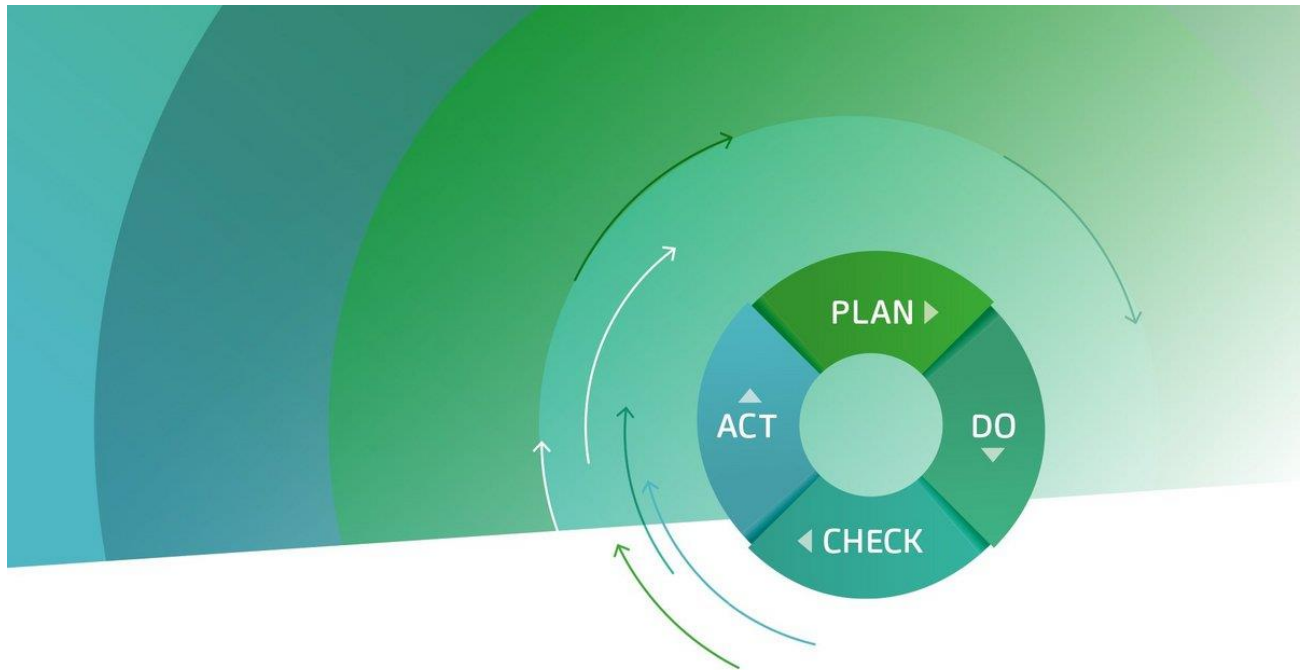
Study Guide: PDCA

This course provides a fundamental understanding of the PDCA Cycle, otherwise known as the Shewhart or Deming Cycle for Continuous Improvement.

Introduction to PDCA

The PDCA Cycle is also known as the Deming or Shewhart Cycle

PDCA is a four-step process that has the following attributes:

- Helps to continuously improve products, services and processes
- Popularized by W Edwards Deming
- Aims to improve quality and reduce costs
- PDCA = Plan, Do, Check, Act
- You improve by iterating through the PDCA cycle

PLAN
Identify needs and establish necessary objectives

DO
Execute the plan and test potential solutions

ACT
Implement the best solutions and take actions to continually improve performance

CHECK
Analyze results in comparison with the expected results

PDCA is a great tool for avoiding analysis paralysis. It gets you quickly testing ideas and moving forward. Each loop through the cycle either improves your situation or provides valuable feedback that increases your chances of fixing the problem in the next iteration.

PDCA in Detail

There are four stages and 12 steps involved in the PDCA process.
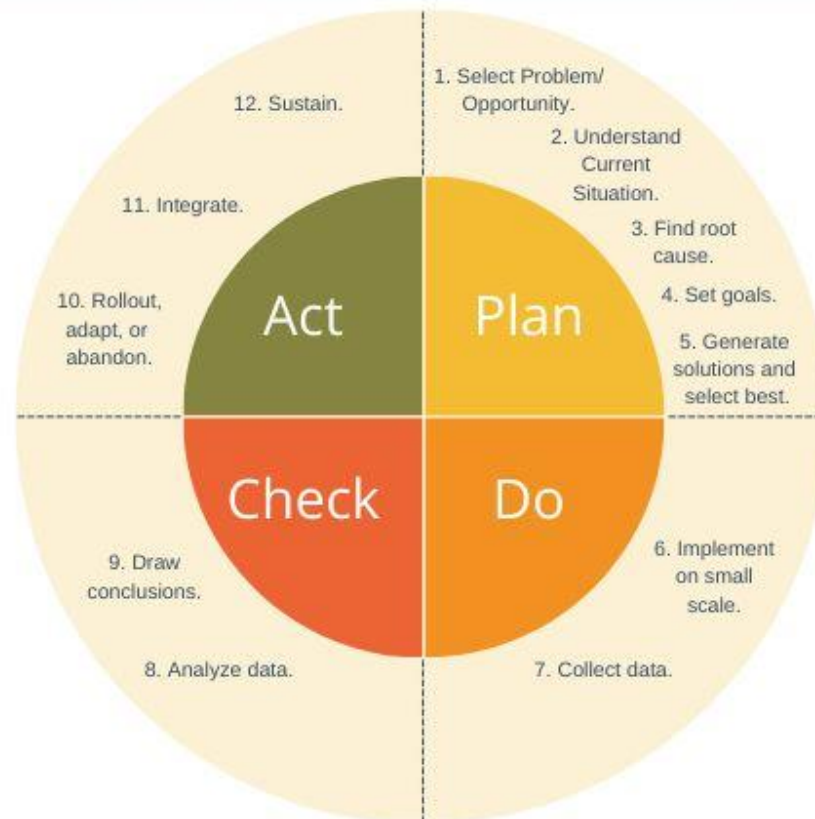
Let's review them in detail:

1. Plan
   - Select your problem or opportunity
   - Accurately appraise the situation and understand the root cause of the problem
   - Generate potential solutions and pick the most promising. Remember that solutions should be small, quick, and measurable
   - Set targets
2. Do
   - Implement your chosen option
   - Small-scale - It should produce minimal disruption to the business
   - Collect data

3. Check
   - o Analyze the data you've collected
   - o Compare actual results against desired results
   - o Determine if your solution has worked or not
     - ▪ No - return to step 1
     - ▪ Yes - advance to next step
     - ▪ Sort of - consider tweaking and trying again
   - o Investigate unexpected issues by examining causes
4. Act
   - o Implement your solution fully
   - o Your solution = the new baseline
   - o Sustain the change

Applying PDCA

The PDCA cycle is a loop. Therefore, once you complete one cycle, you repeat the process, creating a virtuous cycle of Continuous Improvement. Each loop of the process brings you closer to your ultimate goal.


Sustain and Share the Standard
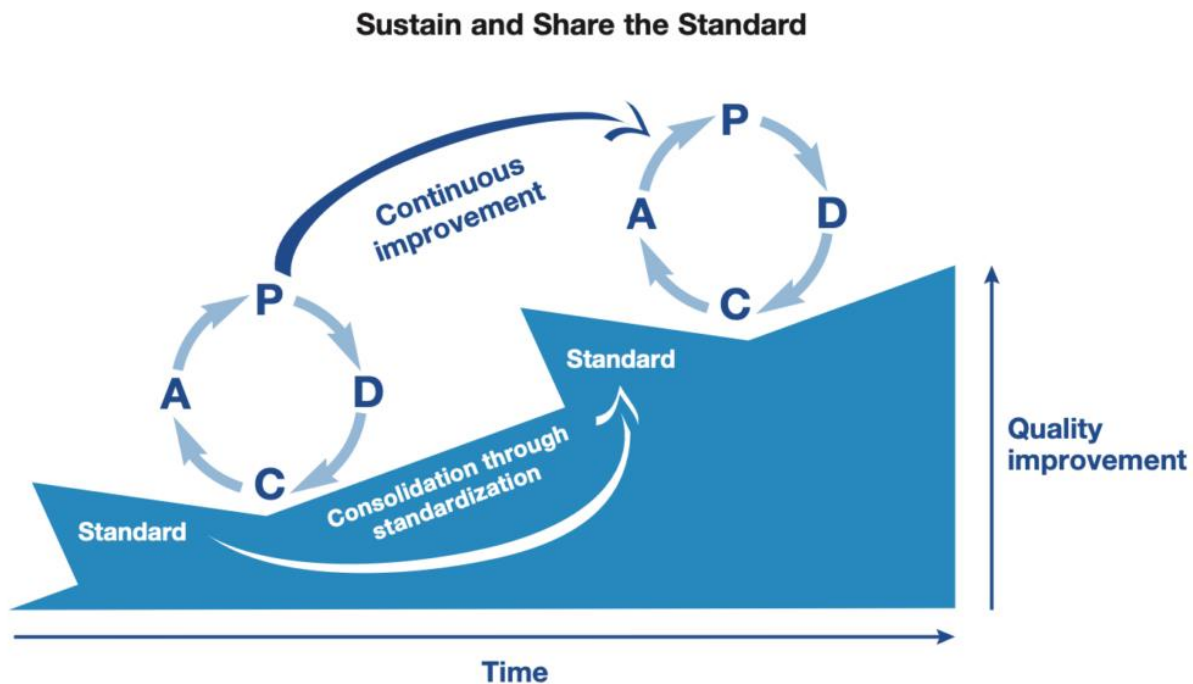
When to use PDCA:

- Improve a product, service, or process
- Explore multiple solutions
- Avoid waste by identifying effective solutions before you roll them out at scale
- Implement organizational change
- Implement Lean, Six Sigma, or Total Quality Management

Advantages and Disadvantages

- Advantages
  - Versatile as it can help you achieve any business or personal goal
  - Simple but powerful. Helps drive meaningful change over time.
  - Encourages you to take action quickly. Each iteration moves you closer to your goal.
- Disadvantages
  - Isn't something to use once. Requires buy-in from all levels.
  - Difficult to assess cost savings before you begin. They can only be discovered while running cycles.
  - Reactive not proactive. Encourages you to analyze and react and avoid creating detailed plans.
  - Not suitable when rapid decision-making is required. Time must be allowed to perform analysis and brainstorm.
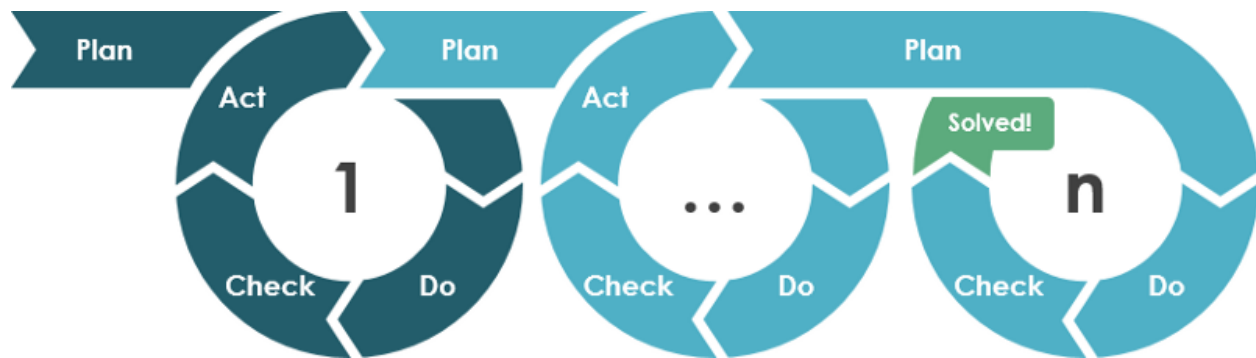
Summary

A great tool for reaching a goal or introducing improvements in a sustainable, thoughtful, and long-term way. Each cycle begins with a "Plan" stage where you decide what to improve and how; solutions get implemented in the "Do" stage; You then evaluate effectiveness in the "Check" phase; and finally, in the "Act" phase, you decide the next appropriate action to take.