Plan-D0-Check-Act (PDCA) Cycle

What is it?

Plan-Do-Check-Act (PDCA) is an iterative four-step approach which is at the heart of the continuous improvement process (or *kaizen)*. It is also known as the **Shewhart cycle** or **Deming Cycle**.

Benefits at a glance….

- instrumental in continuously improving processes in a methodical way
- you can explore a range of solutions to a problem by implementing them incrementally in a controlled way and assessing the impact on a small scale
- you can build upon the learning from previous cycles in a structured way and avoid waste as an ineffective solution will not have been rolled out widely
- it can help you learn to become more comfortable with ambiguity by encouraging you to experiment with something new incrementally
- it can be used as a daily activity to review a process as well as the results

Figure 1: The Plan-Do-Check-Act (PDCA) cycle

As a philosophy, to practice *kaizen* is to respect people first. **PDCA** is at the core of the practice of continuous improvement and it involves the whole team at all levels in:

- reflecting on the process as well as the results
- considering immediate issues locally at hand

When to use it?

Daily to review progress

The *Daily Update* is an example of how **PDCA** can be used daily. Focus teams meet briefly every morning to review performance using *Visual Management* and agree actions to deliver improvements.

Figure 2: A Daily Update in progress

To continuously improve a process

The Focus team use **PDCA** to continuously improve their physical working environment. It is also being used by HR to make their forms more user friendly.

How to use it?

1. **Plan:** Start by creating a Specific *SMART Problem Statement* , use *Creative Problem Solving (CPS)* tools to pinpoint a specific problem, identify potential solutions and create a plan for change identifying what you want to change.

2. **Do:** Test or trial potential solutions on a small scale under controlled conditions.

3. **Check:** Examine your results. If you can verify that you've improved the process, consider how you can implement more widely. If you haven't improved the process, try out another potential solution.

4. **Act:** Implement the changes more widely. Where possible, use the concept of *Standard Work* to agree a consistent, best way of doing things as this will stop it rolling back to the previous state.

Tip: Ensure that you don't miss out on the 'check' and 'act' phases of PDCA. Traditionally, it has been 'once and done' as we implement the 'plan' and 'do' phases and we don't get as far as assessing the impact and acting on what we have learnt!

Case study 1: The Recruitment Protocol project used the 'check'/'act' part of the cycle to gather feedback from users on forms that had been published when the recruitment freeze was first implemented. As a result, they were updated and re-published to make more user friendly.

'Every day, everybody, and everywhere improvement.'

Plan: A *6S* workspace organisation activity was planned to tackle the problem of an untidy workspace and cluttered desks.
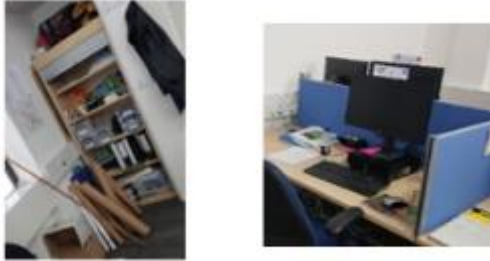

Figure 3: Examples of cluttered and disorganised workspaces

Do: A *Standard Operating Procedure (SOP)* (consistent way of working) was developed by the team to use for improving the working environment.
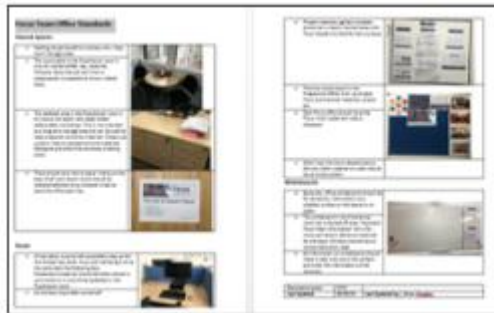

Figure 4: An example of a SOP for keeping an office tidy

Check: *Process confirmation* is regularly performed to review against the agreed SOP.

Figure 5: An example of a process confirmation checklist

Act: Issues are highlighted; the causes are understood and addressed; the issues are resolved; the SOP is revised.

Figure 6: An example of feedback with issues highlighted