What are we trying to accomplish? *Tip Link A*

What is the AIM of the project? List the process(es), product(s), or service(s) for improvement.

_____

How will we know that a change is an improvement?

Include what you will measure, and/or observe that will tell you that the change resulted in improvement.

_____

CYCLE NUMBER _____ **DATE** _____

Retain cycle worksheets. Multiple cycles are usually required.

PLAN-DO-STUDY-ACT WORKSHEET

PLAN - PLAN A CHANGE OR TEST AIMED AT IMPROVEMENT.

Theory or Prediction

What change can we make that will result in improvement? *Tip Link B*	P
Complete this thought, "If we make [this change]…then we would expect to see [that improvement]." Or, "If we learn [x]…then we can discover [y]."	

P1 - What?

What is your PDSA Objective? *Tip Link C*	P
Note if your objective is to develop a change, test a change, or implement a change. Data collection is required for all 3 types of PDSA cycles.	

P2 - Who/When?

Who will participate in the PDSA ? *Tip Link D*	P
List your team and each person's role. Try to include a mix of Subject Matter Experts, front-line workers, stakeholders.	

PLAN

When?	P
Note the estimated timelines for the DO portion and schedule meetings to STUDY results and determine how to ACT on those results.	

P3 - How?

List steps needed to execute the PDSA. The steps should be clear and match the scope of the project. *Tip Link E*	P

Data Collection Method.	P
Data can be quantitative (numerical results) or qualitative (observations, questionnaires, or other non-numerical results).	

DO - CARRY OUT THE CHANGE OR TEST.

D1 - Compile the data.	D

D2 - Note observations.	D
Mark any unexpected observations that need to be communicated to others in the organization.	

STUDY - STUDY THE RESULTS.

S1 - What did we learn?   *Tip Link F*   S

Learning can be about the Aim of the PDSA, the way in which the PDSA was conducted, or unexpected discoveries.

S2 - What did observations or data reveal or fail to reveal?   S

This may require placing data in a control chart.

ACT - ADOPT THE CHANGE, ABANDON IT, OR RUN THROUGH THE CYCLE AGAIN.

A1 - What was concluded from this PDSA cycle?   *Tip Link G*   A

### A2 - Consider, how did it work in practice?   A

What other systems, processes were affected and in what way? If we implement this change, what else could be impacted? Monitor the system for ongoing success and for the possibility of unintended consequences of the change.

A3 - If running another cycle, what changes, if any, should be made?   *Tip Link H*   A

If running another cycle, what changes, if any, should be made to the PDSA process(es) and/or what revisions need to be made to the theory?
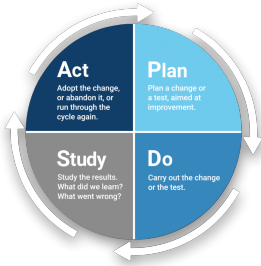
TIP A - What are we trying to accomplish?

An effective PDSA is one that is a realistic size; needed to ensure it is low cost, low risk, and fast. Create a straight-forward problem statement, using clear and meaningful operational definitions of "better," "good" "fast" "simpler" and other key terms. Use the boxes below to define your problem statement and narrow the scope of your AIM.

Identify a "Big Picture" PDSA.

Example:

If we can…(example: Improve communication between departments…)

Then we can…(example: more easily prevent conflicts, bottlenecks, rework, and stepping on each other's toes.)

If we can…

Then we can…

If needed, break down the "Big Picture" PDSA into smaller PDSAs with specific actions.

Example:	*Example:*	*Example:*
If we can…(example: Discuss hand-offs with departments that are 'upstream' and 'downstream' from us…)	If we can…(example: Identify and understand the barriers to cooperation between our departments…)	If we can…(example: work together with another department on one simple improvement project to remove a barrier…)
Then we can…(example: provide more opportunities for understanding."	Then we can…(example: collaborate to remove a barrier that is causing win-lose results instead of win-win results.)	Then we can…(example: improve communications & outcomes, then repeat the process with another dept.)
If we can…	**If we can…**	**If we can…**
Then we can…	**Then we can…**	**Then we can…**

TIP B - What change can we make that will result in improvement?

Continue with "IF"/"IF-THEN" statements, as they describe the process or situation as it is ("AS IS") versus the preferred or ideal ("FUTURE STATE") of the process or situation.

AS-IS example of a situation:
"IF we can solve the customer's complaint about our service with one email instead of three.

FUTURE STATE example of the situation following PDSA:
…THEN we can increase customer satisfaction with our service, retain the customer, and reduce our handling of complaints."

When looking at IF-THEN statements, consider whether or not the "AS IS" process (the way we do things around here now) is actually being followed. If it is not, find out why. A process may be flawed, which is why it is not used. Another reason may be people are not fully trained on the process. Consider what others have already tried to "fix" the process, as well as why the fix may have failed.

TIP C - What is your PDSA Objective?

To answer this question about your PDSA objective, you might ask, "Why is this PDSA getting our attention?"

Do we want to:
· develop a change that we want to try?
· test a change we think will help?
· implement a change that we've tested?
· other?

TIP D - Who will participate in the PDSA?

Make sure all involved in the process improvement are trained to follow the proposed changes carefully. All should understand the AIM of the PDSA. Caution against adjusting the steps in the PDSA to get better results. Emphasize the importance of knowing if the proposed changes are effective, thus avoiding workarounds and/or hiding bad results.

TIP E - List steps needed to execute the PDSA.

Keep in mind that the results, the outputs, are produced because of the inputs and throughputs (including processes and methods, not just people). That is why it is so important to list the steps that people can follow in the PDSA. That will put the focus on improving the processes and methods that everyone will use in the PDSA.

TIP F - What did we learn?

Simple questions might help during the STUDY phase, "What did we discover?" and "Did the IF part of our statement result in some or all of the THEN part of our statement?"

TIP G - What was concluded from this PDSA Cycle?

Determine whether to Adopt the change, Abandon it, or to Run the cycle again:

Should we ADOPT the change?
Did the STUDY prove the benefit of the change?
If yes, consider running the PDSA a couple more times to be sure the results were not merely luck or coincidence. After a couple repeat cycles, if the FUTURE STATE process delivers repeatable, stable, and reliable improvements, then you can propose that the FUTURE STATE process become the standard process.

Before you standardize the process, document it.
Make it visible and clear, including What, by When, by What Method, Who and Why.
Document and share any negative, unintended effects of this process change on other processes or other parts of the organization.

Consider whether every similar process should be standardized the same as this one.
Sometimes it is appropriate to have slightly different processes.

Should we ABANDON the change?
Did the STUDY indicate the change was not an improvement?
If so, you may want to abandon that theory and idea, and try a different one.

Should we RUN THE CYCLE AGAIN?
Did the STUDY reveal that your suggested change came close to creating an improvement?
If so, then, you might want to revise the PLAN, and then DO the experiment again.

TIP H - If running another cycle, what changes, if any, should be made?

Consider running the PDSA cycle more times to make sure the improved results were not just luck or coincidence, but rather caused by the changes that were tested in your PDSA.

As a part of running another cycle you may want to make a small change to the PDSA to determine if any small change can achieve even better results.

An easy way to do this is to revise the theory slightly in the IF-THEN statement in the PLAN stage to document the adjustment you are making when you run the cycle again. Or you might want to change one of the steps in the DO stage.

Example:
"IF we can solve the customer's complaint with one shorter email or telephone conversation, THEN we will also enjoy a greater reputation for valuing customers' time while we work on improving our service and thus eliminating the need for customers to complain."

The W. EDWARDS Deming Institute