

# Lean Process Improvement Quick Reference Guide

## The R-DMAIC-S and PDSA Cycles



## Understanding Lean Terms

Term	Definition
Blitz	A fast, structured, focused process for improving something (a process, a particular machine, etc.)
Flow	The way production moves from the beginning (raw material) to the end (customer). This is a key principle of Lean – Lean envisions the flow being one smooth process.
Gemba	A Japanese term meaning, "Where the action is."
Genchi Genbutsu	A Japanese term meaning, "Go and see for yourself."
Heijunka	The process of levelling the workload between resources.
Kaizen	Constant, gradual improvement to a process in order to create less waste but more value.
Muda	An activity that creates no value but consumes resources and is therefore waste.
Pokayoke	A mistake-proofing device such as quality testing or checklists.
Push	A production philosophy where products are created regardless of demand.
Takt Time	The rate at which customers are demanding a product. This is the heartbeat of any Lean enterprise.
Value	Desired characteristics provided to the customer at the right time, place, and cost.
Value Stream	The process of designing, producing, and delivering a product.

## Performing a 5-S

### Preparing for 5-S

- ✓ Gather the team.
- ✓ Make sure everyone is trained in the process and any necessary safety regulations.
- ✓ Appoint a team leader.
- ✓ Let others in your organization know about the effort and what help you may need.
- ✓ Set up a supply area.
- ✓ Set up a red tag area for items to potentially be removed from the area.

### Sort (Seiri)

- ✓ Sort through the items in the work area. Please place them in groups, considering how often you use each item, what situation might require it, how urgently you might need it, and the item's size and weight.
- ✓ Place objects that you use every day in a convenient location in the workspace.
- ✓ Place items that are required but not used daily in convenient storage space.
- ✓ Place a red tag on all other items.
- ✓ Place the item in the red tag area. You will review this area after five and 30 days and retrieve or discard items as needed.
- ✓ Create a plan for keeping the work area tidy.

### Shine (Seiso)

- ✓ Clean the workplace.
- ✓ Inspect equipment.
- ✓ Create a plan for keeping the work area clean.

### Straighten (Seiton)

- ✓ Create a workflow map of the workspace. Show equipment, tools, people, and work areas. Draw lines to show the various paths that employees must take throughout the workday.
- ✓ Now, create a more efficient map.
- ✓ Make sure to include the team that works in the area in both processes.
- ✓ Next, create a plan to rearrange the workspace. Make sure that you adhere to company policies, industry regulations, safety rules, etc.
- ✓ Get the plan approved.
- ✓ Gather resources and make it happen!
- ✓ Post the new workspace map.

### Standardize (Seiketsu)

- ✓ Make the sort, shine, and straighten steps part of the work routine.
- ✓ Encourage workspace members to record ideas for further improvement.
- ✓ Share the standards with everyone.

### Sustain (Shitsuke)

- ✓ Ensure that information is communicated correctly, and all employees are trained.
- ✓ Obtain support from all levels of the work area.
- ✓ Evaluate the program regularly.

## The 20 Keys of a Lean Organization

1. The customer is the starting and ending point.
2. Think simplicity.
3. Reduce or remove waste.
4. Think in terms of process.
5. Increase visibility and transparency wherever possible.
6. Encourage routine and standardization.
7. Make flow as constant and smooth as possible.
8. Pull at the customer's rate, rather than pushing product through.
9. Get the timing right. Starting work at the optimal time will increase flexibility and reduce waste and risk.
10. Be proactive and preventative rather than reactive.
11. Keep production and process timelines as short as possible.
12. Make continuous improvement a priority on everyone's plate.
13. Encourage internal and external players to be partners rather than competitors.
14. Create a supply chain that creates value.
15. Remember Gemba: go to where the action is and seek the facts.
16. Reduce variation where possible.
17. Encourage participation and accountability from all employees.
18. When making changes, start with the smallest component and build up.
19. Build trust internally and externally by sharing information and acting as a partner.
20. Build and distribute knowledge throughout the organization.

## The TPS House

The concepts of Lean and the Toyota precepts are often translated into a house to help us understand how all the elements come together.

