10 Steps to become a Lean Enterprise

Lean Expert Training Course
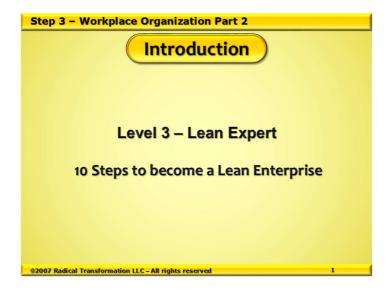
Step 3
Workplace Organization
Part 2

Lean Expert Course Workbook - Step 3 Workplace Organization Part 2

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Please note that some of the screens in the online course have been omitted from this workbook. This is to protect any proprietary information that may be included in the pictures.

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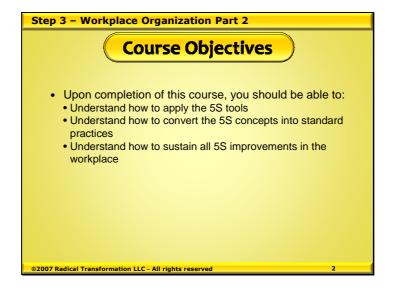
Welcome.

We would like to welcome you back to our next module in this online training course.

This training module is called "Step 3 – Workplace Organization Part 2."

This module is a continuation of our Lean Expert online course series called "10 steps to become a Lean Enterprise."

This program has been specifically designed to demonstrate our step by step methodology that will allow any organization to become a Lean Enterprise.

Let's continue your lean journey!

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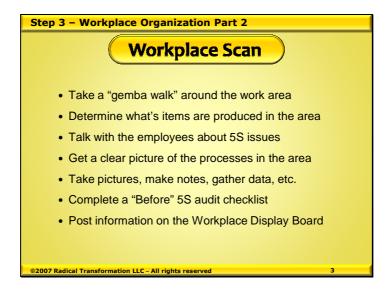
Course Objectives

Here are the course objectives for Workplace Organization Part 2.

We specially designed this course to give the information you need to get a full understanding of each step required to become a Lean Enterprise.

Upon completion of this course, you should be able to:

- Understand how to apply the 5S tools.

- Understand how to convert the 5S concepts into standard practices.

- Understand how to sustain all 5S improvements in the workplace.

Now we are going to work through each course objective.

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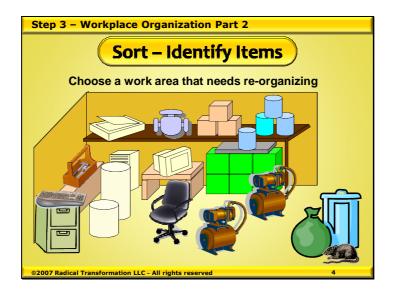# Lean Expert Course Workbook - Step 3 Workplace Organization Part 2

Workplace Scan

A 5S team will need to scan the target area to make an assessment of the area. It is important to do this before starting a 5S event.

Get all the team members together and ensure they do the following actions:

- Take a "Gemba Walk" around the work area. Look to see what is happening!

- Determine what items are produced in the area. How are things working?

- Talk with the employees about 5S issues. Listen and learn, you're there to get a better understanding of their problems!

- Get a clear picture of the processes in the area. Don't jump to conclusions; just understand the process and how it is operating.

- Take pictures, make notes, gather data, etc. There is no such thing as too much information at this point. Gather as many facts as you can find.

- Complete a "Before" 5S audit checklist. It's important to create a baseline.

- Post information on the Workplace Display Board. Share the information with everyone.

If a team follows these simple tips and suggestions 5S will become more acceptable to the majority of employees.

Sort – Identify Items

When a work area has been targeted for 5S, the next step is to scan the area to identify all the items.

On the screen is an animation of a target work area. It looks cluttered because several items have been placed in the area over time.

Now the 5S team must try to decide what to keep and what to remove from the area.

How do they do this?

What criteria are they going to use to decide which items stay in the work area?

The 5S team must first separate the items into two categories: 'Necessary' and 'Unnecessary' items.

Necessary items will stay in the work area. These are items that are used daily. Some necessary items that are not used as frequently, such as those used weekly or monthly, can be located outside of the work area.

Any unnecessary items will be removed from the work area.

In the following screen, we will demonstrate how this is done.

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Sort – Red Tag Criteria

The 5S team will have to decide which items will stay in the work area and which ones will go. To help them decide they need to ask questions.

The answers to these questions will come from the people who work in the target area.

Some typical questions a team might ask are:

Does it have a function in this area? The team is trying to determine if the function of an item is a good reason for keeping an item in the work area.

Is it needed? The team will try to determine if the item is needed in the work area and who is using it.

How often is it used? The team will try to determine the frequency that the item is used. If the item is used daily it probably needs to stay inside the work area. However, if an item is used on an irregular basis such as monthly, it should be stored in a location outside of the work area.

If we remove it, will it really matter? Sometimes it's justified to remove an item out of the work area and then wait to see who complains about it. It could be that an item has been there for a long period of time and people just accept it, but it has no purpose.
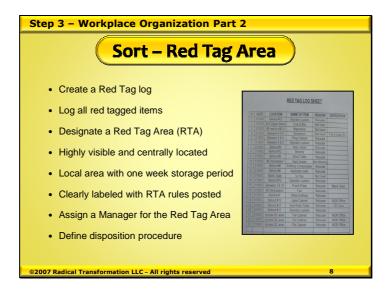
Is it in the way? Does it take up too much space? The 5S team will need to determine if an item is too big for the work area. Some items may need to be relocated to allow more space to open up in the work area.

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Sort – Red Tag Targets

On this screen is a list of red tag targets. They represent places where unnecessary items are often found:

- Inventory – there is often excessive inventory, but there could be obsolete parts, materials, or finished goods lying around the work area.

- WIP – usually there is too much of it hanging around the work area.

- Equipment and tools – there has probably been equipment and tools in the work area for as long as it has been in existence. Workers only need the equipment and tools they use on a daily basis inside the work area.

- Furniture and cupboards – Furniture must be there to support the process. If it's not, it should be removed. Cupboards are great hiding places for junk.

- Drawers and shelves – these are the same as cupboards. Open them up and you may find things that have been unused for a long period of time.

- Storage bins and lockers – another hiding place for lots of unnecessary items.

- Fixtures and fittings – check to see if they are all needed for the current process.

- Cluttered areas – remove these as soon as possible; they are a magnet for junk.

- Doors and aisles – keep them clear of obstructions; remove anything that is a potential safety hazard.

- Notice boards and signs – check for outdated or obsolete notices, memos, etc.

Sort – Red Tag Area

It is necessary to document all the items being removed from a work area. The way to do this is to create a red tag log. You can see an example on the screen.

They are very easy to create, and they don't have to be done on a computer. They are as effective when drawn by hand, plus it will not take a team member away from the 5S activities.

Read all the information on the red tag on each item.

Log all red tagged items by entering the information onto the sheet.

Before removing items from a work area, locate and designate a Red Tag Area (RTA).

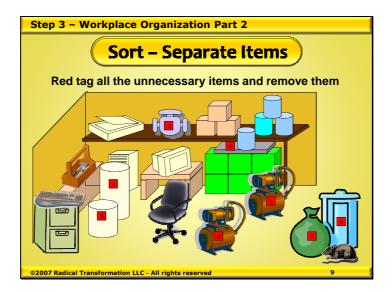Make sure the area is highly visible and preferably centrally located.

Keep the items in the red tag area for a minimum of one week. Some companies will allow items to stay in the RTA for up to four weeks.

The reason for this time period is to allow anyone who was absent (i.e. on vacation or sick leave) during the 5S event to be able to retrieve any personal items that may have been removed by mistake.

They would talk with the red tag area manager to determine if they could take their items and place them back into the work area. This procedure is to ensure that people don't remove red tagged items and put them back into the original work area.

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It is important to make sure the red tag area is clearly labeled with RTA rules posted for everyone to read. These will define the procedure for placing items into the red tag area and removing them.

The leadership team should assign a manager to be responsible for the red tag area. They should also define a disposition procedure for each of the unnecessary items. This procedure defines what will happen to these items. Will they be scrapped, sold, or used in another work area.

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Sort – Separate Items

On this screen is an animation demonstrating the process of red tagging all the unnecessary items.

Each item with a red tag has been identified as ready for removal from the work area and placed into the red tag area.

Remember to inform the maintenance department if items need disconnecting from power, water, gas, etc. before they can be removed.

Before anything is removed from the work area its red tag details must be recorded in the red tag log.

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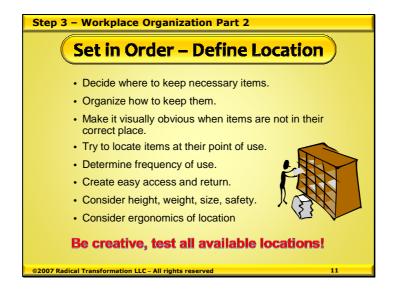

Sort – Remove Items

On this screen, you can see the work area after all the red tagged items have been removed.

It still looks very untidy but the 5S team and workers know that the items that are left in the area can now be organized and cleaned.

It would not have been efficient for them to clean the work area before all the unnecessary items were removed. It would have created additional waste. Why is this?

It is non-value added or waste to clean items that are going to be removed from the work area.

The team member's time and energy are better spent cleaning items that are going to remain in the work area after the 5S event has been completed.

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Set in Order – Define Location

The 5S team will now start to organize the items in the work area. They will try to determine where to keep the remaining items.

It must be easy for everyone in the work area to find and use these items. One way to do this is to create a visual location for each item.

This will make it obvious when an item is not in its defined location. If an item is not there it is because of one of two reasons:
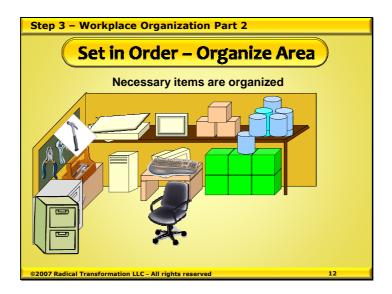
1. Someone is using it.

2. Someone forgot to put it back in the correct place where it belongs.

Try to locate items at their point of use so workers don't have to walk too far to get them.

Determine the location of an item based on its frequency of use. Create an easy access and return point for each item.

Always consider the height, weight, size, and safety needs of an item. If an item is heavy or awkward to handle, will it need two people to move it?

Try to make the work area a user friendly environment. Consider the ergonomic and safety implications of each location in the work area. Don't have people stooping, bending, lifting items from high shelving, etc.
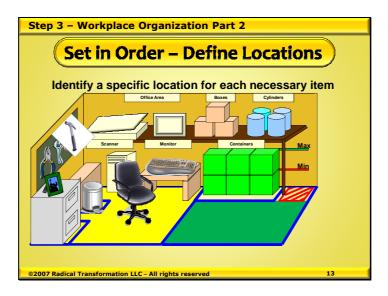
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Set in Order – Organize the Work Area

In this screen the 5S team will start to tidy and organize the items inside the target work area.

Follow the animation and see how they do this.

The first step is to determine where the items are going to be located.

The next step is to put them into their designated locations and organize them.

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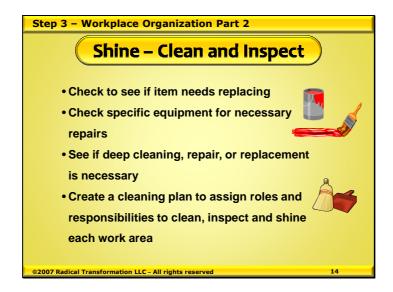# Lean Expert Course Workbook - Step 3 Workplace Organization Part 2

Set in Order – Define Locations in the Work Area

In this screen the 5S team will visually define the location for all the necessary items in the target work area.

Notice how each item has been given a sign to identify and designate its specific location. This is an example of how a process moves from being an optional to a required behavior. The employees have clear visual instructions about what to do in this area.

- The green containers have been organized with a configuration of three containers wide, one deep, and two high.

- There are visual green and red lines to identify the minimum and maximum quantities for the containers.

- All the other items in the work area have been organized.

- The cylinders are organized into a group of four.

- The boxes have been organized into a pile of three.

- The tools have been removed from the toolbox and located onto a shadow board that is fixed onto the wall. This will allow employees to recognize if any of the tools are missing or being used.

Notice how the floor has been painted and taped to define the different areas of activity; i.e. administration (yellow) and receiving (green). Items can now be placed in the green receiving area before they are logged into the computer. Once the items have been logged into the computer they are placed into their defined locations.

Shine – Clean and Inspect

Shine is for cleaning and inspecting all the necessary items. Most people ask, Why isn't shine the first element of 5S?

The reason is that it would be creating waste to clean items that may be red tagged and removed from the area. A team should only clean the necessary item that will be used in the work area.
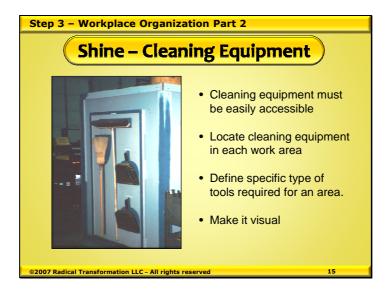
As the items are cleaned, they are also inspected for obvious faults. It is necessary to determine which items are to be targeted for cleaning and inspection. Stored items, equipment, and floor space should be included in the shine process.

During the initial 5S event the team will conduct the first level of cleaning and inspection of the work area to bring it up to the required standard.

The team will determine if deep cleaning, repair, or replacement is necessary for any items in the work area. They will inspect equipment and identify any worn wires, hoses, tubes, etc. and inform the maintenance department.

They will check to see if everything has a designated place, and if not, they will create one.

The team will work alongside the workers to create a plan to assign roles and responsibilities to clean, inspect, and shine their work area.

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Shine – Cleaning Equipment

In order to keep an area clean and tidy it's important to have the correct tools available. If the tools are not easily accessible the cleaning schedule will not be followed.

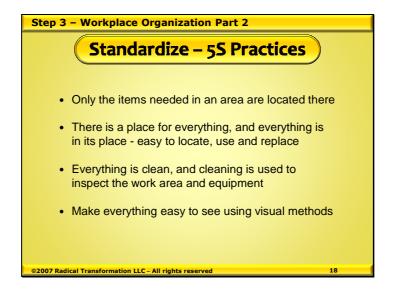Employees should not have to go searching for cleaning equipment or materials.

Try to locate the cleaning equipment inside the work area. There is an example of a board for locating cleaning tools on the screen.

Each tool location is painted with a shadow of the shape of the item to easily identify if equipment has been removed from the board.

Some companies create mobile cleaning carts to hold all the cleaning tools and materials.

They may have a binder with instructions about the cleaning requirements for each item in the work area.

It is important to make sure that the right cleaning solutions are being used without causing any damage to the equipment or danger to the employees.
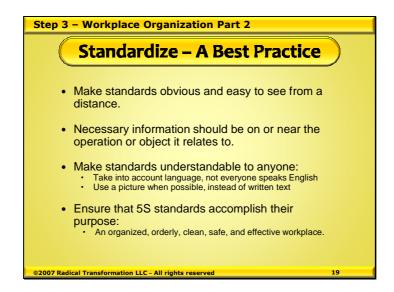
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Standardize - 5S Practices

The 5S process up to this point has been Sort, Set in Order, and Shine. The employees in the work area have control in implementing and following these three S's.

Standardize on the other hand, must have the support of the executive leadership and management teams. The employees cannot create the necessary documentation and apply them into the work areas without leadership's consent.

It will require someone to be assigned the task of implementing and standardizing 5S into the daily practices of the organization. This person will report back to the executive leadership about the status of the 5S process.

Here is a list of some basic requirements to standardize a 5S process:

- Only the items needed in an area are located there.

- There is a place for everything, and everything is in its place - easy to locate, use, and replace

- Everything is clean, and cleaning is used to inspect the equipment in the work area.

- Make everything easy to see using visual methods.

Standardize – A Best Practice

To develop a 5S process into a best practice will require the direct involvement of a management team. They will need to define the criteria and requirements for standardizing 5S throughout the organization.

How will they define 5S as a best practice?

They can refer to the document in Workplace Organization Part 1 called the "Five Levels of Achievement".
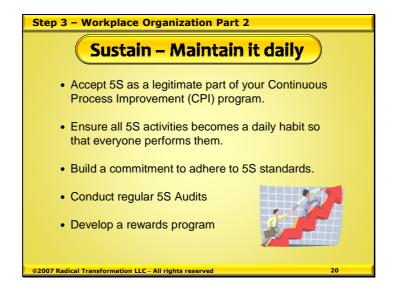
Here are the five levels:

Level 1 - There is no awareness of 5S throughout the organization.

Level 2 – The focus is on implementing the basic 5S principles.

Level 3 – The focus is to create orderliness by making everything visual.

Level 4 – The focus is to standardize to achieve consistency.

Level 5 – The main focus is to develop prevention awareness.

Some other pointers for standardizing 5S are:

• Make standards obvious and easy to see from a distance.

• Necessary information should be on or near the operation or object it relates to.

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- Make standards understandable to anyone:
  - Take into account language; not everyone speaks English
  - Use a picture when possible, instead of written text
- Ensure that 5S standards accomplish their purpose:
  - An organized, orderly, clean, safe, and effective workplace.

Sustain – Maintain It Daily

As explained in the standardize section of this training module, sustaining requires the support of executive leadership and management teams.

The employees cannot implement the sustain element without the consent of management.
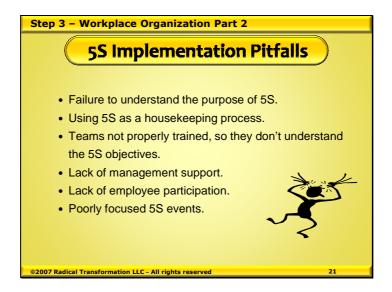
Everyone in the organization must accept that 5S is a legitimate part of your Continuous Process Improvement (CPI) program. It is not a fad or flavor of the month.

Ensure all 5S activities become a daily habit so that everyone performs them.

Leadership needs to build a commitment to adhere to 5S standards. They must conduct regular work area audits to qualify and quantify the 5S process.

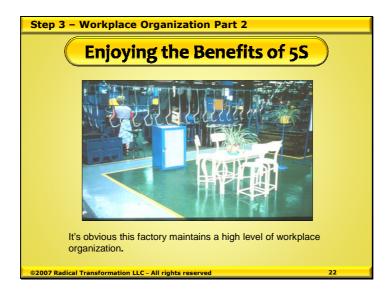Auditors must be trained in how to conduct audits and record the results for each work area.

Many organizations develop a reward program for their employees who have maintained the highest 5S audit score over a given period (month, quarter, etc.).

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5S Implementation Pitfalls

Here are a few examples of 5S implementation pitfalls:

- The failure to understand the purpose of 5S. The purpose of 5S is to identify and eliminate waste.

- Companies using 5S as a housekeeping process. 5S is not housekeeping, it is to organize and visually manage the workplace.

- The team is not properly trained, so they don't understand the 5S objectives. This is one of the worst elements of waste; getting a team to conduct an event without having a clear understanding of the 5S objectives.

- A lack of management support. This is the fastest way to kill a 5S process. If there is no support from management, there will be no 5S process.

- A lack of employee participation. This is the second fastest way to kill a 5S process.

- Poorly focused 5S events. This is another form of waste. Choose work areas that will give small noticeable improvements and use them as a model to demonstrate the power of 5S as a way to work smarter, not harder.
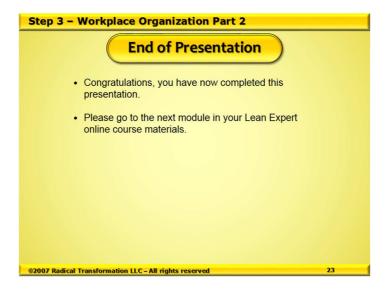
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Enjoy the Benefits of 5S

It is obvious that this facility has achieved a high level of workplace organization.

This picture demonstrates an acceptable level of cleanliness and tidiness.

This picture would give customers a feeling of confidence that this company has their best interests at heart.

It cares about its processes, its people, and its products.

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End of Presentation.

Congratulations, you have now completed this presentation.

Please go to the next training module in your Lean Expert online course materials.

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Reference Materials

1. **5S for Operators – 5 Pillars of the Visual Workplace.**

   By: Hiroyuki Hirano. Published by Productivity Press 1996.

2. **5S for the Office.**

   By Tom Fabrizio and Don Tapping. Published by Productivity Press 2006.

3. **5S Pocket Guide.**

   By Jim Peterson and Roland Smith. Published by Productivity Press 1998.

4. **Identifying Waste on the Shop floor.**

   By Productivity Development Team. Published by Taylor & Francis Inc. 2003.

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Documents List

1. **5S - 5 Levels of Achievement.**

	SORT	SET IN ORDER	SHINE	STANDARDIZE	SUSTAIN
LEVEL 5 Focus on Prevention	Employees are continually seeking improvement opportunities	A dependable documented method has been developed to provide continual evaluation, and a process is in place to implement improvement.	Area employees have devised a dependable documented method of preventative cleaning and maintenance	Everyone is continually seeking the elimination of waste with changes documented and information shared.	There is a general appearance of a confident understanding of, and adherence to, the 5S principles.
LEVEL 4 Focus on Consistency	A dependable documented method has been established to keep the work area free of unnecessary items.	A dependable documented method has been established to recognize in a visual sweep if items are out of place or exceed quantity limits	5S agreements (such as cleaning and preventative maintenance schedules) are understood and practiced continually.	Substantial process documentation is available and followed.	Follow-through with 5S agreements and safety practices is evident.
LEVEL 3 Focus on Visual Control	Unnecessary items have been removed from the workplace.	Designated locations are marked to make organization more visible.	Work/break areas and machinery are cleaned on a daily basis. Visual controls have been established and marked.	Working environment changes are being documented. Visual control agreements for labeling and quantity levels established.	5S agreements and safety practices have been developed and are utilized.
LEVEL 2 Focus on Basics 5S	Necessary and unnecessary items are separated.	A designated location has been established for items.	Work/break areas are cleaned on a regular scheduled basis. Key items to check have been identified.	Methods are being improved but changes have not been documented.	A recognizable effort has been made to improve the condition of the workplace.
LEVEL 1 No 5S	Needed and not needed items are mixed throughout the workplace.	Items are randomly located throughout the workplace.	Workplace areas are dirty, disorganized and key items not marked or identified.	Workplace methods are not consistently followed and are undocumented.	Workplace checks are randomly performed and there are no visual measurements of 5S performed.