# Lean Healthcare SHIP Mini-Project

RE-THINKING HEALTHCARE
IMPROVING PATIENT CARE THROUGH DESIGN

## Lean Healthcare
## SHIP Mini-Project Overview

**Number of Projects:  1 Project**

For each hospital participant in the SHIP Lean Training, we require a mini-project using either the 5S process or the A3 Problem Solving tool. You are required to submit a Project Charter that provides a clear explanation of your actions and a final project report that includes an interpretation of the process and results (i.e., what you did, why you did what you did, and what it means).

The required project must produce meaningful results that "matter" to the organization and must align with one of the three key focus areas of the Small Rural Hospital Improvement Grant Program (SHIP). For more information, see the *Guidance for Selecting a Project* resource on the Moodle course site. Projects can vary greatly in nature and complexity, and participants should seek to use the simplest tools available so as to achieve required improvement for the organization in the shortest possible time.

**Tool - Project Selection Matrix**

*Background:*

A project selection matrix is used to rank and compare potential project areas to determine which should be resourced.

Ranking criteria may include, but are not limited to:

1. Organizational/strategic goals

2. Potential financial impact to the organization

3. Patient and employee satisfaction impacts

4. Likelihood of success

5. Completion within a specified timeframe (in this case, eight weeks to implement the project and an additional four weeks to gather outcome measures and complete the final report)

*Steps to creating a Project Selection Matrix:*

1. List the opportunities for potential Lean projects, making sure they align with one of the three focus areas of SHIP.

2. Determine the ranking criteria. A sample list of ranking criteria is outlined below.

3. Rank each project with respect to the ranking criteria using a scale of 1-10, with 0 = no impact and 10 = high impact.

4. Ranking criteria may be weighted and the project scores added.

*Example Project Selection Matrix:*

| Criteria | Project 1 | Project 2 | Project 3 | Project 4 |
|---|---|---|---|---|
| Likelihood of Success | 5 | 10 | 8 | 10 |
| Financial Impact | 10 | 5 | 6 | 1 |
| Patient Satisfaction | 10 | 4 | 5 | 10 |
| Employee Satisfaction | 10 | 2 | 5 | 10 |
| Completion in 8 Weeks | 1 | 10 | 10 | 10 |

- Which project would you select?

- Which project is the "Big" Project?

- Which project is the "Quick Hit" Project?

Note that additional data may be needed to validate project ranking and assist in project selection. This data collection should be assigned as "project deliverables" and collected by Project Owner.

## Project Owner

The Project Owner is to properly define the project focus and provide an initial draft of a project charter. Following presentations of any additional data collected, the Project Owner selects the project, begins to build the project charter and selects the project team participants.

Project Owner Responsibilities:

- Lean Project development and selection
- Owns project implementation

- Responsible for long-term process control following implementation

**Project Team Selection**

The project team should be composed of frontline staff and area supervisors (e.g., nurses, physicians, clerks, ancillary services staff) directly impacted by the process under investigation.

The ideal team size is 5-8 people, and team size should not increase beyond 12 people unless absolutely necessary. For those stakeholders not represented within the project team, a communication mechanism (team minutes, session report) should be developed and implemented by the project team.

The Process Owner is the team member who will be responsible for and accountable to sustaining improvements during and following implementation. Ideally, the Process Owner should be someone with authority over frontline staff directly involved in the process under investigation.

Remember…chosen team members must be able to commit to attending team meetings and meeting their responsibilities as outlined below.



Team Member Responsibilities:

- Actively participate on the Lean team through project implementation

- Complete project deliverables as required

- Participate in data collection and data analysis

- Regularly inform non-team-member co-workers of the project status and progress

- Lead or participate in future Lean projects

## Project Charter

The Project Charter contains the business case for the project, including background, problem definition, project scope, financial expectations and project deliverables. The Project Charter represents a "binding contract" between the project team and Project Owner with respect to project direction and outcomes and is often used as a reference document by the project team during project execution.

The Project Charter is a useful tool for:

- Ensuring that project expectations, including scope and deliverables, are clearly identified prior to project initiation

- Ensuring continuity of the project throughout the project cycle

The Project Charter contains information about:

- The project background, including problem and goal statements

- The project scope, including process start and stop, and identification of items not within consideration for the project

- The project deliverables, including specific end results expected from the project, and a definition of how change will be validated following improvements

Steps to creating the Project Charter:

1. The Project Charter is first developed by the Project Owner.

2. The Project Team reviews and finalizes the project charter.

3. The revised Project Charter may be presented to Senior Leadership as the tollgate for final approval, if needed.

# Tool - 5S - Worksite Organization

*Background:*

5S is an approach to waste and variability identification utilizing techniques to organize a workplace or workspace. 5S is a simple and practical approach to improvement that can achieve a great number of results in a very short period of time. In some organizations, there is a 6th S added: Safety.

This 5-step process focuses on cleaning, organizing and arranging a workplace to eliminate the waste associated with looking for items required to complete a process. (Example: It is estimated that nurses spend greater than 40% of their time locating information, equipment or materials required for patient treatment.)

*5S steps are:*

- Seiri (Sort)

- Seiton (Set in order/straighten)

- Seiso (Shine/scrub)

- Seiketsu (Systemize)

- Shitsuke (Sustain/Standardize)

5S is a structured program that results in dramatic changes and results – not just a housekeeping program.

*Recommendations for long-term sustainability:*

- Frontline staff members who use the workspace should be heavily involved in applying 5S
- Regular (daily) appraisal of the workplace must be conducted

*Steps to utilizing the 5S Tool:*

1. Sort – Obsolete, unused and/or broken equipment and supplies are removed from the workspace area.

2. Set-In-Order – Locate frequently used and necessary items and place in logical, predetermined locations. Frequently used items are

placed at or near the workplace, while infrequently used items are placed farther away or stored in specified locations.

3. Shine/Scrub – Clean all items to minimize downtime. Daily cleaning reduces breakdowns, maintenance issues and time lost.

4. Systemize – Develop policies, procedures and workplace rules to maintain the best practices set in place. This is achieved by providing visual warnings as well as standardized, documented and communicated workflow methods.

5. Sustain/Standardize – This last step involves developing habits to implement the 5S philosophy on an ongoing basis.

**Visual Workplace Rules**

Visual Controls and Visual Workplace rules are visual cues to provide immediate indication of the process state. Often visual controls are combined with other Lean techniques, such as 5S and Error-Proofing, to allow staff to immediately assess operational states.

*Visual Controls/Visual Workplace rules:*

Tools, Supplies & Equipment must be:

- Easy to See
- Easy to Use
- Easy to Return

Apply the 30-Second Rule: Items accessed at least once a month should be located within 30 seconds.

The key principle is to make all components of the process visible. Everyone, including outsiders, should be able to see and understand the status of a process at all times. Visual Control allows you to see the flow, performance, problems and opportunities for improvement within a process.

## Tool - A3 Problem Solving

The A3 Thinking approach offers organizations a systematic method for realizing opportunities for improvement in the workplace. This simple process has underpinned many organizations' continual improvement programs, delivering accelerated efficiency and other quality-related benefits.

The A3 reporting process itself only reflects half of the story. The development of an improvement- and change-focused company culture is at the core of A3 Thinking. The deployment of an A3 reporting process in an organization enables a company-wide improvement culture to flourish.

*A3 Thinking offers many advantages*

- Provides a logical thinking process
- Clearly presents known information objectively
- Focuses on and shares critical information
- Aligns effort with strategy/objectives
- Provides a consistent approach throughout the organization
- Provides a powerful problem-solving process

*A3 paper reports*

Traditionally, A3 reports are so named because they fit onto one side of an A3-sized sheet of paper (about 11×17 inches). The purpose was to document and show on one page the results from the PDCA (Plan-Do-Check-Act) cycle.

The A3 report process aligns with and supports Deming's "Plan-Do-Check-Act" management philosophy. PDCA is often used in business for the control and continuous improvement of processes and products.

**Plan:**

Establish the objectives and processes necessary to deliver results in accordance with the expected output (the target or goals).

**Do:**

Implement the plan, execute the process and make the product or service. Collect data for charting and analysis in the **Check** and **Act** steps.
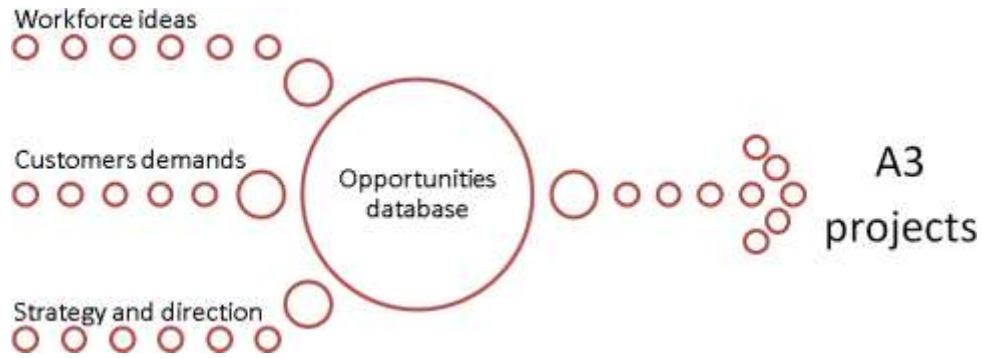
**Check:**

Study the actual results (measured and collected in the **Do** stage above) and compare against the expected results (targets or goals from the **Plan**) to ascertain any differences.

**Act:**

Request *corrective actions* on significant differences between actual and planned results. Analyze the differences to determine their root causes.

*A3 Thinking provides a logical improvement workflow*

1. **Plan:** Project title
2. **Plan:** Form the team
3. **Plan:** Define current condition
4. **Plan:** Define the goal
5. **Plan:** Root cause analysis
6. **Do:** Deploy countermeasures
7. **Check:** Effective confirmation
8. **Act:** Follow-up actions
9. **Act:** Document changes and report

As you can see, the A3 process is weighted towards planning. It is important to understand what we are doing before attempting to solve the problem. All effort invested into the planning phase will reduce mistakes and improve the final results.

*1. Plan: Select an A3 project title*

It is important to select a descriptive and useful project title or theme. For example, it might be "Reduce medication errors" or "Improving on-time delivery." The theme should focus on the problem observed, describing this particular A3 project's purpose.

*2. Plan: Form the team*

Select a team that includes process stakeholders. Process owners and operators are often the people most equipped to improve it, so the bulk of the team should comprise these people. Include improvement coaches and technical experts as required. Teams can range from 1-20 depending on the project's requirements.

*3. Plan: Define current condition*

Outline the current situation in a simple way for the target audience. Be objective and state all the relevant known facts. Think about including charts, tables, graphs or other techniques to illustrate the current condition. Think "communication."

### 4. Plan: Define the goal

Define the desired condition. How will we know that the project is successful at the end of the implementation? For example: "Our goal is to reduce patient falls by 15% as compared to 2013 results."

### 5. Plan: Root cause analysis

Describe the Root Cause Analysis investigation. How was the root cause of the problem identified? Use basic quality tools (e.g., 5 Whys) as required; list what was used and the results.

### 6. Do: Deploy countermeasures

The Countermeasures section is focused on improvement planning. List the actions and tasks for tackling the problem. This section also serves as an action plan that outlines who will do what, by when.

### 7. Check: Effective confirmation

Define a method for assessing if the countermeasures have been successful. What is the difference between the desired condition and the improvements made through our current countermeasures? Did the countermeasures have an effect, or not?

### 8. Act: Follow-up actions

Here we reflect what further changes should be made to the system to sustain the improvement and what remains to be done. This could be further process changes or requesting entirely new A3 projects.

### 9. Act: Document changes and report

It is always important to correctly document all improvement work, as this helps future improvement activity. For significant projects, think about creating a project case study slide. Always ensure projects are properly closed down following completion. Also, list all updated documents, processes and procedures in this section.

A3 Thinking supports an improvement-focused culture. The A3 process empowers all employees to realize improvements and solve problems themselves. It is very important to install a workforce-wide Opportunities Database to provide an ongoing supply of improvement opportunities. If the workforce is able to realize improvements quickly, then a continuous supply of new ideas needs to be maintained.