



# **LEAN APPLICATION IN HEALTHCARE**

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**DOLE Accredited Practitioner**

# Sound Familiar?

We've made changes, but we are still getting the same results.

It seems like we are off track and trying to solve a different issue than what we came in here to solve.

No one understands why this is such a problem, or how many headaches it causes us.

We don't have the right people in the room.





# Workshop Agenda




- What is Lean?
- What is waste? Types?
- Briefly describe A3s, purpose, and format
- Review concepts of lean thinking
- Create an A3
  - *Learn and Do* format
  - Initiate real-world application

# Lean Enterprise

## ■ Littelfuse Definition

- Lean is the relentless, continuous focus on eliminating waste in our processes and adding value for our customers
- Lean represents the efficiency and effectiveness by which we turn customer interest into customer satisfaction





# Lean Enterprise

- Lean is our approach to continually improving everything we do to improve our customers' experience with us
  - Now, there are many tools we can use to deploy Lean, but it's most important to remember the customer and constantly think "If a customer saw me doing this step, would they be willing to pay me?"
- 
- Our customers can be both the final customers who use our products, or internal customers of processes we perform



# Operating System

- Lean modules
  - 8 Wastes and 6'S
  - A3
  - TPM
  - Standard Work
  - Value Stream Mapping



# **8 WASTE**

# Defining Value

## Value-Added Work

- Activity that transforms or shapes (for the 1st time) material or information to meet customer requirements
- Activities that the customer is willing to pay for

**Value-Added**



**Required Waste**



**Pure Waste**  
Idle!

**Non-Value Added Work**

- Activities that take time or resources, but do not satisfy customer requirements [Eliminate]
- Activities the customer is willing to pay for, even if they are NVA (i.e., testing, inspection) [Reduce; Simplify]
- Legally-required activities [Reduce; Simplify]



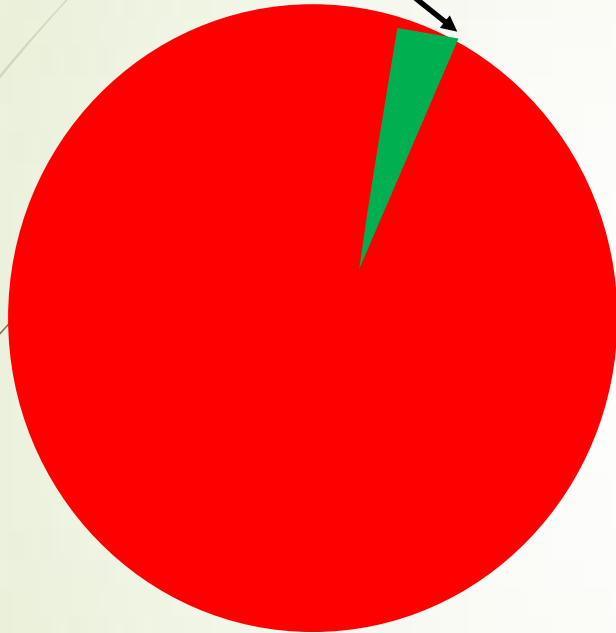


Anything that adds cost or  
time without adding value as defined by the primary customer is WASTE.

Lean = eliminating 8 waste

# Waste: DOWNTIME

Value-added



Typically, 95% of all  
lead time is non-value-  
added

- Defects
- Overproduction
- Waiting
- Not Utilizing  
Employees'  
Knowledge, Skills, and  
Abilities
- Transportation
- Inventory
- Motion
- Excess Processing



# DOWN

## Defects

- Product defects / ( BP app; etc)
- Rework ( double checking of SL)
- Data entry error
  - \_ wrong patient

## Overproduction

- Producing more than what is needed ( clinic forms)
- Creating reports no one reads
  - \_ Unnecessary diagnostic procedures

## Waiting

- Waiting for consultation
- Waiting for information
- Waiting for copy machine
- time spent looking for an item missing
- Waiting for approvals

## Not Utilizing Employees, Knowledge, Skills and Abilities

- Ignoring associate improvement suggestions
- employees are not engaged, heard or supported.
- Bypass procedure due to favorite candidate



# TIME

## Transportation

- Moving material from one work station to another
- Poor layout
- Defects/ rework

## Motion

- Lifting boxes of parts
- Reaching for tools
- Clearing away files on the desk
- Creating non-value added reports

## Inventory

- Stocking extra supplies/ medicines
- E-mails waiting to be read
- letting supplies expire
- Supplies ( discount)

## Excess Processing

- Paperwork
- Creating reports
- Manual encoding
- extra data stamps put onto forms, but that data never being used.



**6'S**



# What is 6S?

- Is fundamental to sustaining Lean Enterprise
- Is the “visual” workplace
- Is the starting point for improvement activities for:
  - Our company’s survival
  - Growth
  - Personal development
- It is NOT the *Setting of Policy*



# 6S

- Purpose – To create a safe working environment and reduce the non-valued added activities associated with the work area(s)
- When to Use:
  - To easily notice when things are out of place
  - To improve the usage of space and equipment
  - Shorten the time to locate necessary items
  - To create a more production and effective work area
  - Establish standards to which the whole organization is measured against

# 6S is Organization



*"What do you mean 6S?  
I know where everything  
is!"*

ANSWER: If a "visitor" to your work area cannot find what he or she is looking for within 20-30 seconds (hardcopy or electronic), 6S is needed!

***Without 6S we cannot establish Standard Work Practices!***



# First Impressions Are Important



# What is Your First Impression?



# 6S is Visual Systems

- Easy to understand
- Fun to setup
- Works better for all

"We spend 25% of  
our time in the  
office searching for  
things."

\*Womack and Jones, LEI, TBM, CMA

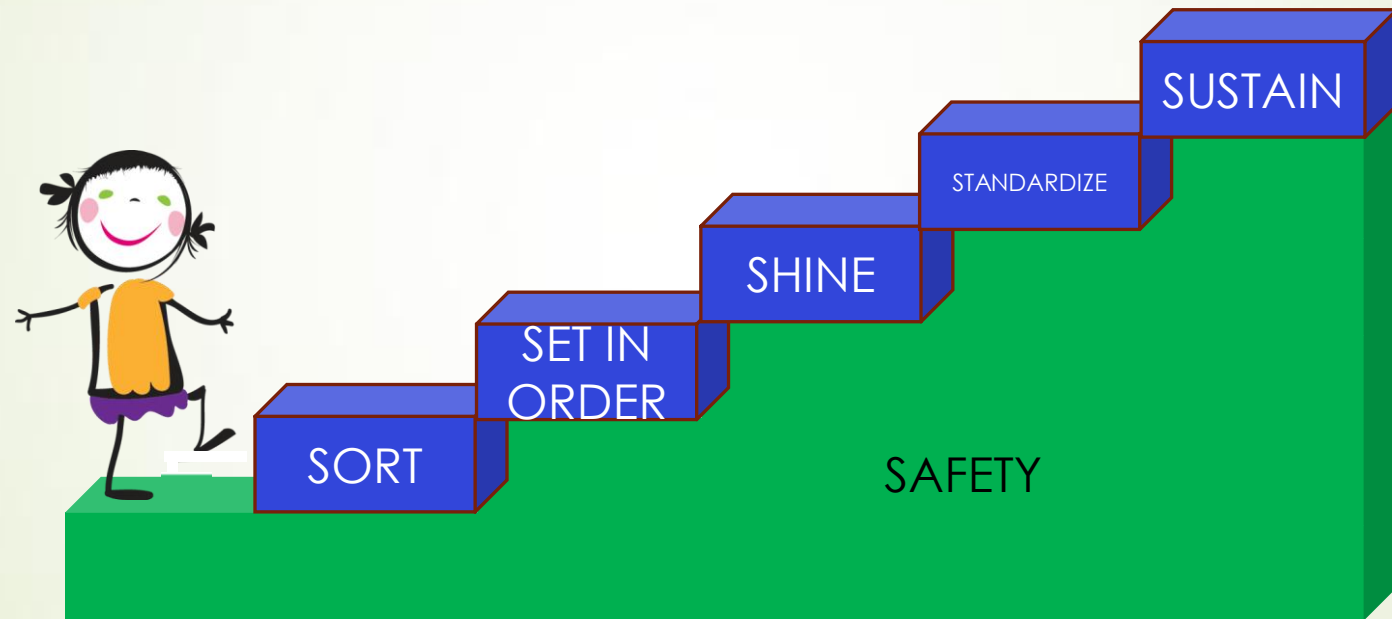




# 6S is Organization



# Safety



# Safety

- The foundation of 6S is Safety
- Our obligation is to provide a safe and efficient work environment
- Safety begins with “S,” but starts with you



# Office Safety

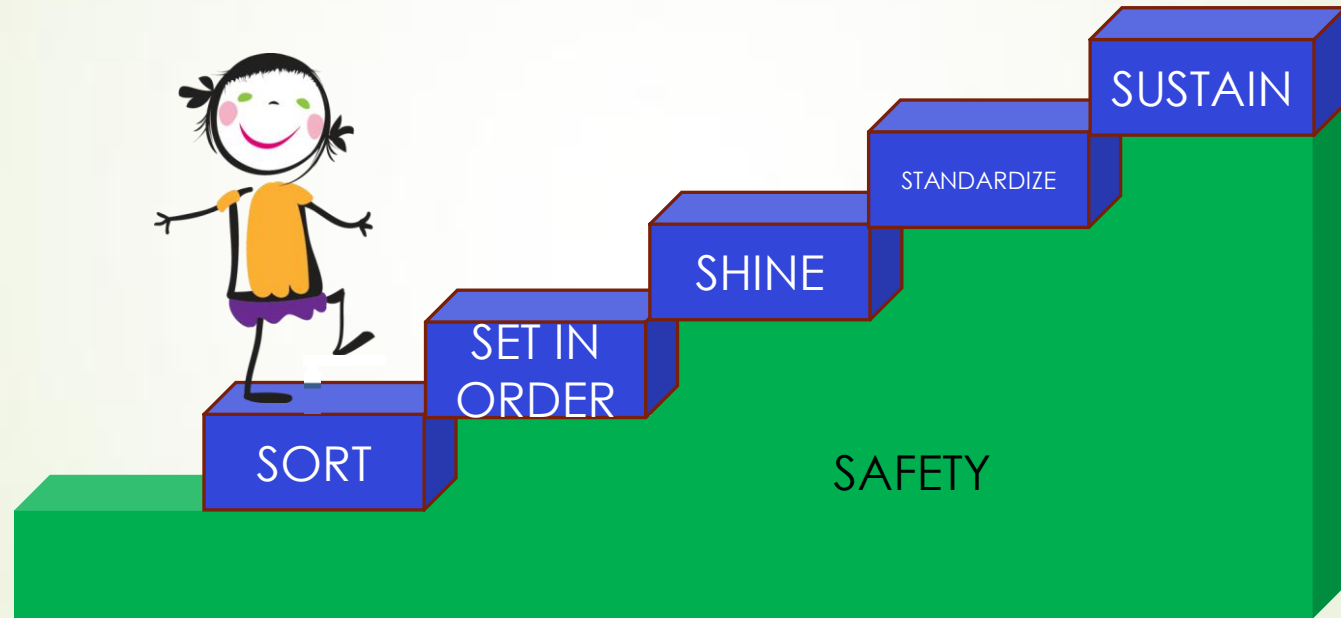


# Office Example



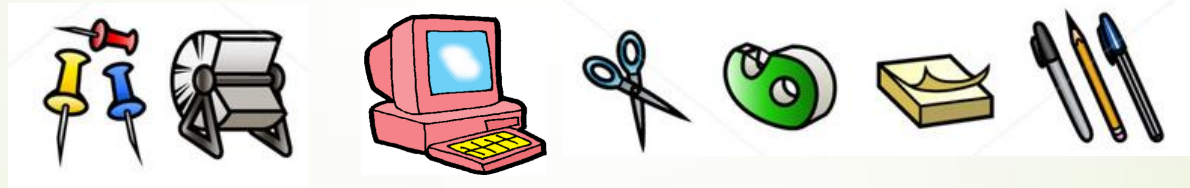


# Sort



# Sort: Definition

- The full meaning of the second S, Sort, is to
  - Sort through everything in the work area
  - Separate the items that are unneeded or in the wrong place
  - Remove those items from the work area



Unneeded equipment, tools,  
and supplies

# Sort: Hints and Benefits

## ➤ Hints

- Gather garbage bins
- If it's not needed, remove it (red tag)
- Use a “community cart” to isolate items that someone else might be able to use
- “When in doubt, throw it out”



## ■ Benefits

- Relieves floor space
- Reduces process times
- Reduces walking distance
- Reveals and removes hazards



# Office Example



# Sort: Office Example

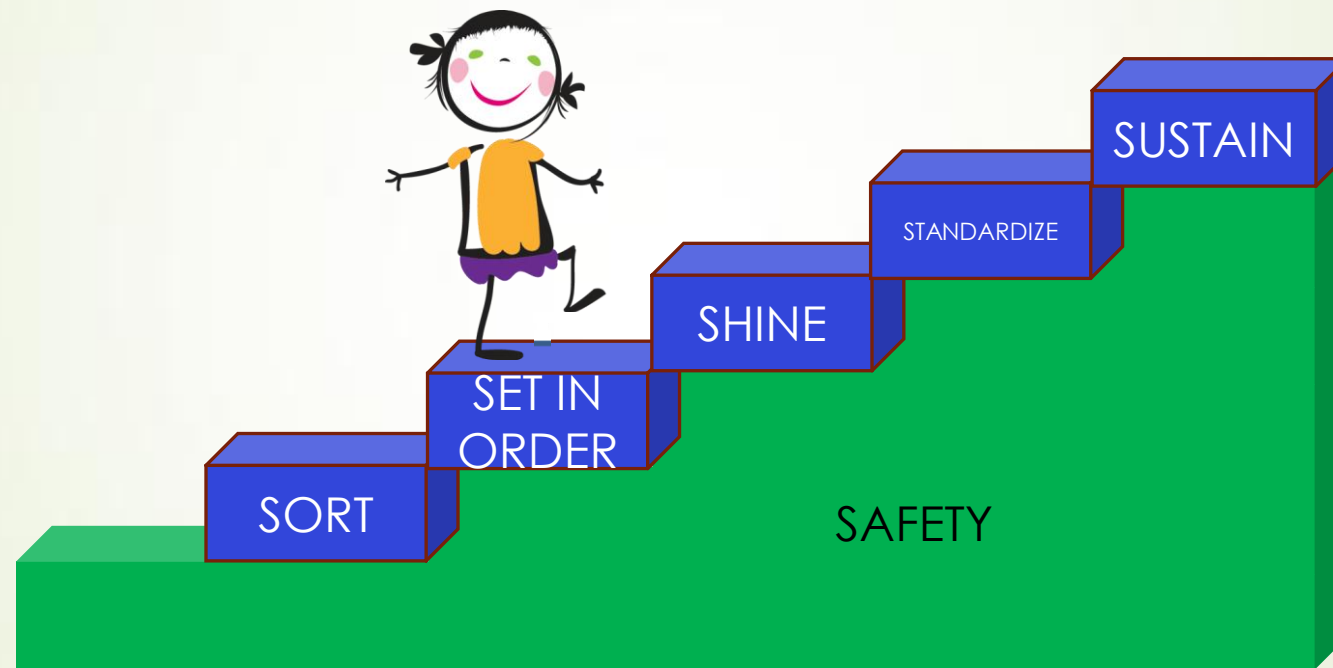




# Sort



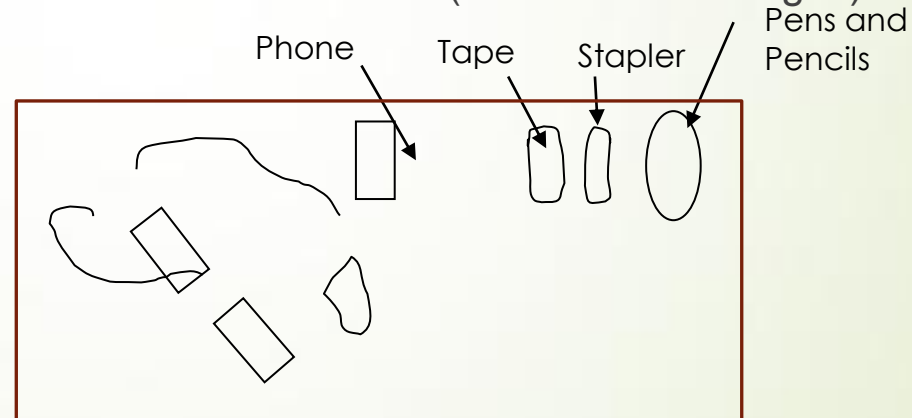
# Set in Order



# Set in Order: Definition

- The full meaning of the third S, Set in Order, is to
  - Decide and organize *where* to keep necessary items
  - Organize *how* they will be kept
  - Make it easy for anyone to find and use them (use colors and signs)

– Make it *obvious* when items are not in their correct place





# Set in Order: Hints and Benefits

## ■ Hints

- Consider the current state as it relates to layout, flow, and ergonomics
- Find a specific place for everything
- Make it obvious where things belong (use labels)
- “A place for everything, and everything in its place”



## ■ Benefits

- Exerts visual control
- Reduces searching time and walking distance
- Creates ergonomically-sound workplace



# Set in Order: How To

- Find a “home” for everything
- Clearly identify the item and where it belongs
  - Labels and “addresses”
  - Boundaries & Visual Organization
  - Color Coding
- Labels and “Addresses”
  - Label the container, or the item itself
  - Label the location where it belongs - its “address”

# OFFICE SUPPLIES

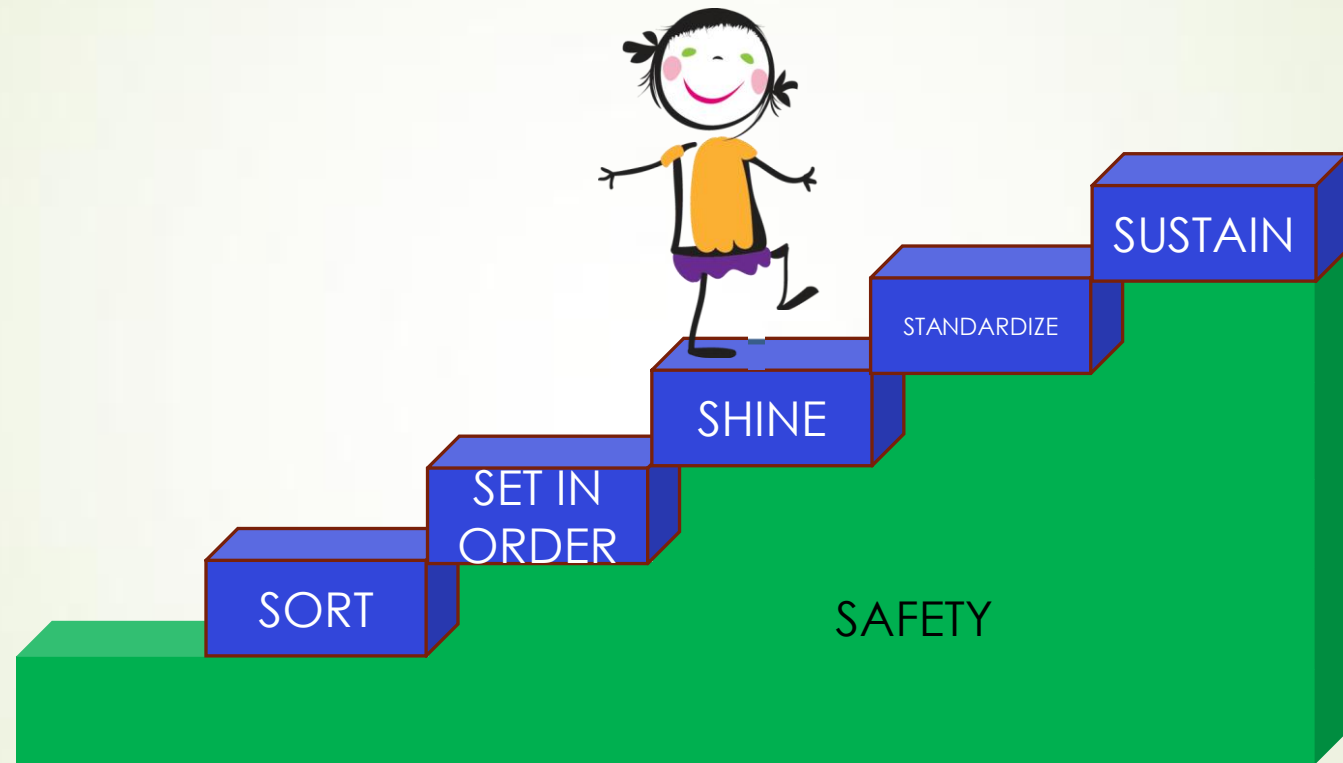




# Sample Clinic 6'S

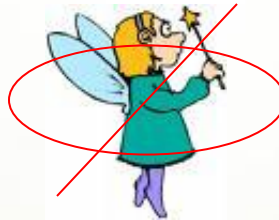


# Shine



# Shine: Definition

- The full meaning of the fourth S, Shine, is to
  - Clean everything, inside and out
  - Inspect as you clean
  - Find root causes, and work to prevent dirt, grime, and contamination from reoccurring



# Shine: Hints and Benefits

## ■ Hints

- Determine targets and assignments
- Determine cleaning methods
- Perform initial cleaning of everything
- “Great minds think alike”



## ■ Benefits

- Better visual organization
- A more effective and satisfying place to work
- A safer workplace; no tripping hazards



# Shine

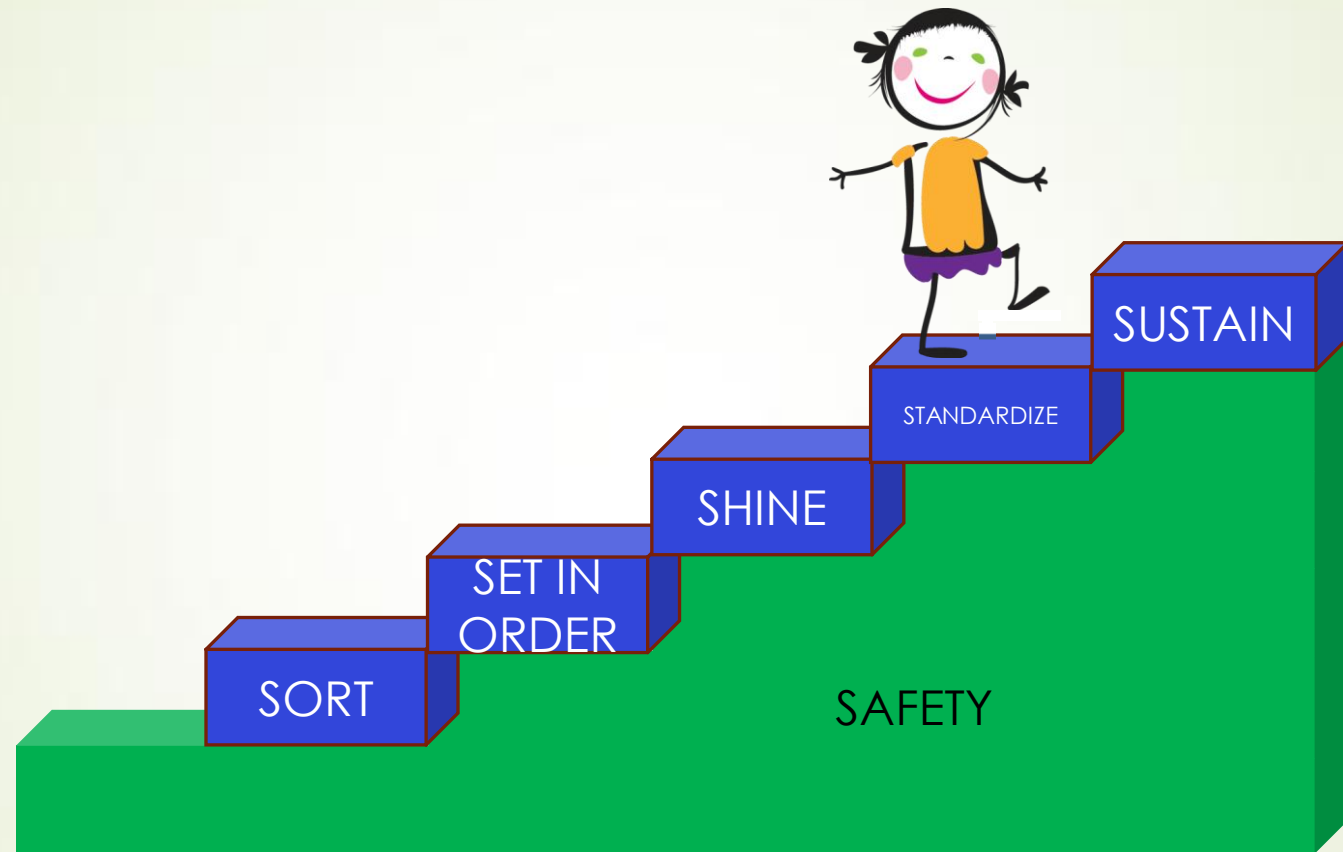




## Shine in the Office ( Littelfuse Clinic)

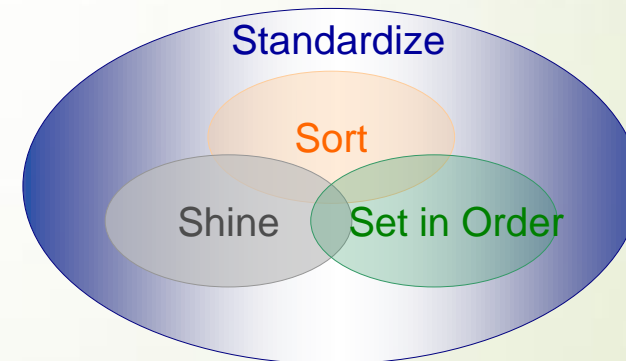


# Standardize



# Standardize: Definition

- The full meaning of the fifth S, Standardize, is to
  - Institute the best practices of Safety, Sort, Set in Order, and Shine as standards
  - Create a consistent and clear approach to maintain these standards
  - Eliminate reverting to old ways
    - Audits



# Standardize: Hints and Benefits

## ■ Hints

- Establish guidelines for Safety, Sort, Set in Order, and Shine
- Assign roles & responsibility to whomever owns (works) in the area
- Integrate 6S duties into regular work duties
- “Great minds think alike”



## ■ Benefits

- Clutter free, organized, clean, visual, & safe workplace
- 6S roles and responsibilities are straightforward
- Share best practices
- Eliminates unsafe work habits



# Standardize

- Standardize – “passing the test”
  - It should be possible to locate any item in a target area within 30 seconds!!
    - Applies to production and office areas
    - Applies to documentation storage (electronic and paper)
    - Use someone less familiar with the area





# Standardize: How To

- Standardize
  - Establish height and quantity limits – implement basic Pull/Kanban Systems
    - Visibly identify re-order points and maximum allowable quantities
    - “Right size” the storage area (e.g. bins, shelves)
    - Establish replenishment procedures
  - Establish documentation (paper and electronic) storage and retention standards
    - Filing systems

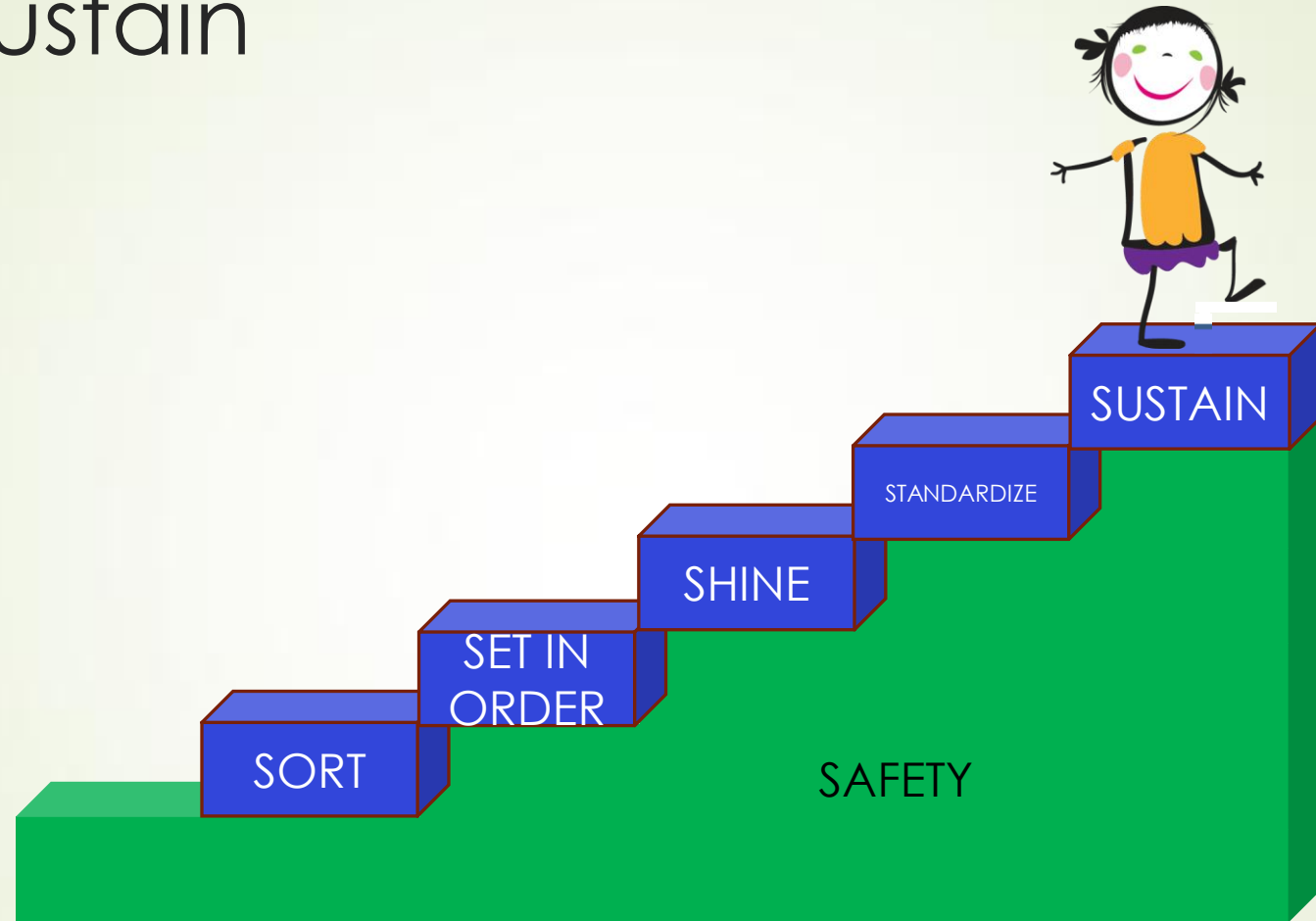
# Standardize

- Standardize
  - Daily, Weekly, Monthly Procedures
    - Visual Checklists
    - Visual Confirmations
    - Visual Aids –  
“One Point Lessons”

Daily Checklist		
<input checked="" type="checkbox"/>	1) .....	<input type="checkbox"/>
<input checked="" type="checkbox"/>	2) .....	<input type="checkbox"/>
<input checked="" type="checkbox"/>	3) .....	<input type="checkbox"/>
<input checked="" type="checkbox"/>	4) .....	<input type="checkbox"/>



# Sustain



# Sustain: Definition

- The full meaning of the sixth S, Sustain, is to
  - Make a habit of properly maintaining the area
  - Regularly review gains made
  - Commit to continuous improvement



# Sustain: Hints and Benefits

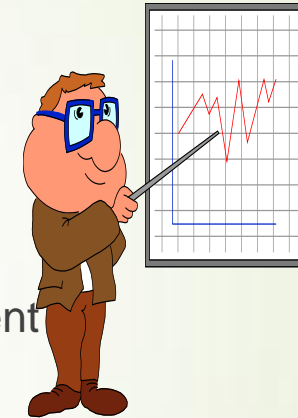
## Hints

- Support from management
- Making 6S standards part of daily work
- Total employee involvement and ongoing commitment
- Keep on getting better



## Benefits

- Building a shared vision
- Creating a learning organization
- Development of teamwork
- Efficient processes and better quality
- A consistently safer workplace



# Sustain: How To

- Sustain
  - Implement an ongoing recognition program
    - Establish an appropriate frequency (e.g. monthly, quarterly)
    - Establish criteria for recognition (e.g. best cumulative score, most improved)
    - Identify the form(s) of recognition (e.g. “trophies,” luncheon)



# Sustain: 9 Lessons for Making 6S a Habit

1. 6S makes our job easier, safer, and faster, and saves the company money. Without 6S, waste will build up and get in our way.
2. When in doubt, throw it out.
3. A place for everything, and everything in its place.
4. Always look for the source of the problem.
5. If you do it NOW, there's less to do later.
6. Inspect before work, do the 5-Minute 6S.
7. Immediately ask WHY when conditions are wrong – and keep asking “why” until you know how to solve the issue.
8. One picture is worth a thousand words.
9. Always remember: NO BLAME.



# Sample Clinic 6'S



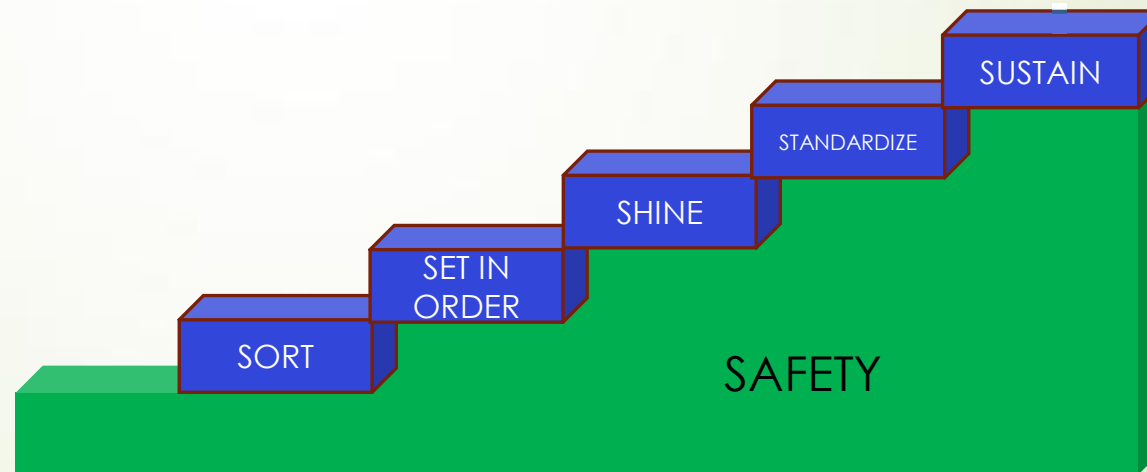



# Littelfuse Clinic



# 6S System

- Safety: serves as the foundation for all others
- Sort: discard everything that is not needed (Seiri)
- Set-in-Order: organize everything that is left (Seiton)
- Shine: clean everything that is left (Seiso)
- Standardize: the first three S's (Seiketsu)
- Sustain: make it a habit (Shitsuke)





## 6S Purpose

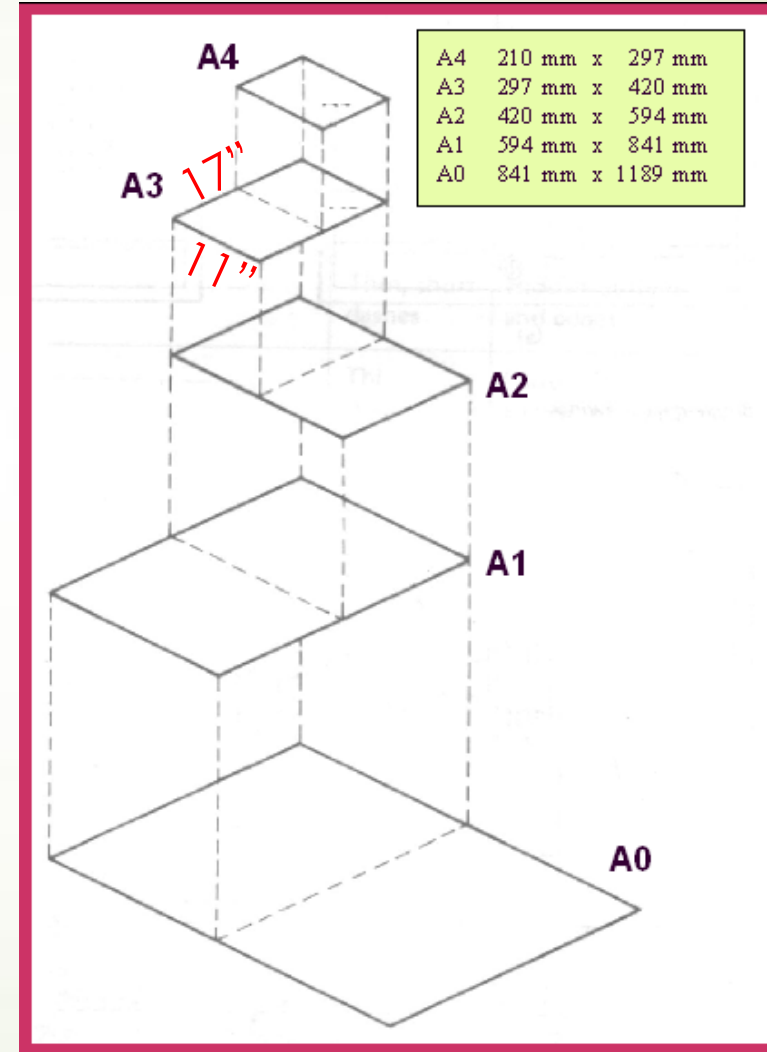
- Safer, less frustrating work area
- Less non-value-added activity and waste
- Ability to easily notice when things are out of place
- More productive and effective work area
- Shortened time to locate necessary items
- Improved usage of space and equipment
- Reduces the potential for quality problems
- Improve employee engagement and interaction
- Creates a visual factory or work area



**A3**

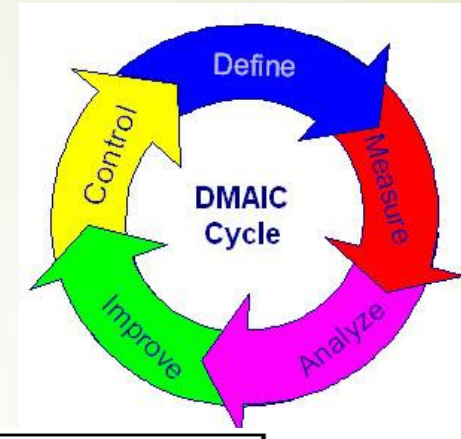
# A3 General Information

- A3 refers to the size of the paper used
- Purpose : To tell the full Story of an opportunity and how it addressed.
- The benefit to crafting an A3 is not in the single-page document, but in the process of creating it



# A3 General Information

- A3s are also called “Story Boards”
- The Littelfuse A3 Process is based on DMAIC
  - Others are based on Deming’s “Plan-Do-Check-Act/Adjust” improvement cycle



<b>Title / Heading</b> A3 Title: Project Leader: Executive Sponsor: Date:	<b>Target / Future State</b>
<b>Define &amp; State Problem or CI Opportunity (Define)</b> Problem Statement:	
Scope: Goal:	<b>Countermeasures (Improve)</b>
<b>Background / Initial Condition (Measure)</b>	
<b>Problem Analysis (Analyze)</b>	<b>Implementation Plan</b>
	<b>Demonstrate Improvement / Next Steps (Control)</b>





# The A3 Culture

- A culture of continuous improvement
  - Is one where everyone continuously looks for opportunities to improve performance of the processes in which they are involved
- In order to achieve this, people need...
  - A methodology for continuous improvement (CI)
  - CI efforts aligned with overall business objectives
  - A “helping hand” (mentoring)
  - “Tools” to help them achieve success

# The A3 Dialogue

The problem must be well defined. It should answer the following questions: ( 3W's; 2H's)

- **What** is the problem? or defect?
- **Where** is the problem detected?
- **When** does the problem occurred? Is there a pattern?
- **How much**? What extent?
- **How do you know**? Basis?

The collection of necessary facts to understand the problem or issue

Going to the gemba – the “actual place”

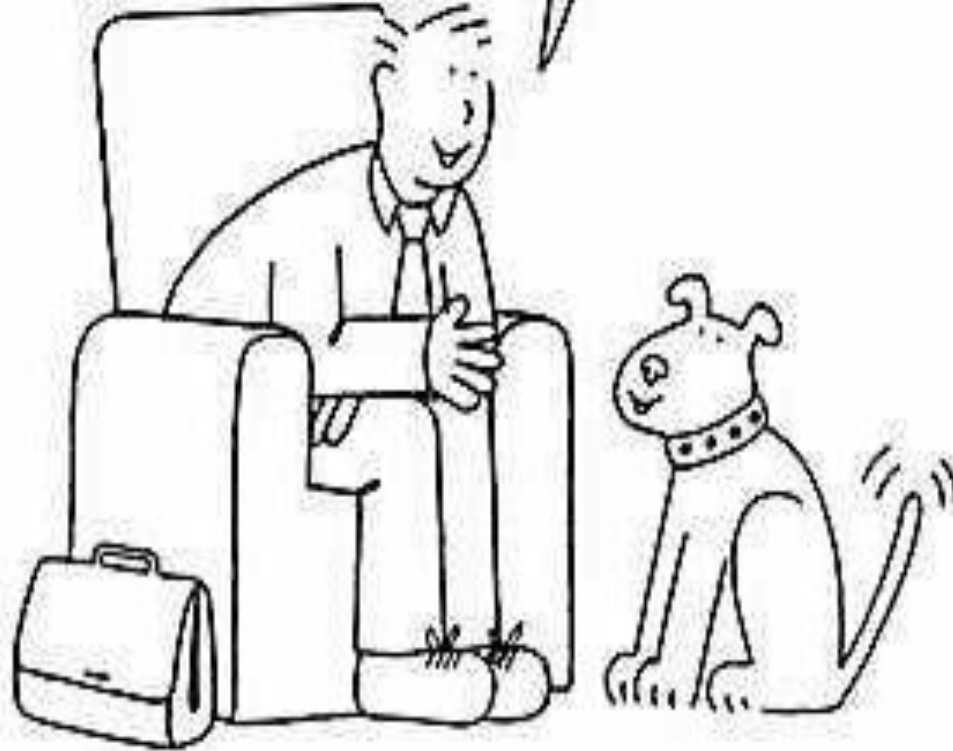
Interact with team members (all must suggest)



# Why Have a Dialogue?

- Coach
- Learn together
- Gain support
- Bring out the best ideas and countermeasures


So....that was my day....how about yours?




Great coaching is about sharing not telling.....

# A3 – Step by Step

<b>Title / Heading</b>		<b>Target / Future State</b>
A3 Title:		
Project Leader:	Team:	
Executive Sponsor:		
Date:		
<b>Define &amp; State Problem or CI Opportunity (Define)</b>		<b>Countermeasures (Improve)</b>
Problem Statement:		
Scope:		
Goal:		<b>Implementation Plan</b>
<b>Background / Initial Condition (Measure)</b>		
<b>Problem Analysis (Analyze)</b>		<b>Demonstrate Improvement / Next Steps (Control)</b>

 **Littelfuse**  
Expertise Applied | Answers Delivered

 **Think LEAN**

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# A3 – Step 1: Title / Heading

- Title / Heading
  - A3 Title: A single phrase describing the story
  - Project Leader: Who is the team leader? Who is taking responsibility for the problem or proposal?
  - Team: Who are the team members, what are their roles and responsibilities?
  - Executive Sponsor: Who is the executive sponsor?
  - Date: Date of last revision

Title / Heading	
A3 Title:	
Project Leader:	Team:
Executive Sponsor:	
Date:	

# Teams

- Why might having a cross-functional team help to solve the problem more effectively?





# A3 – Step 2: Define

- Define & State Problem or CI Opportunity (Define)
  - Problem Statement: Creates a sense of ownership, focuses the team, and describes the symptoms in measurable terms
    - Customer focused, data driven, concise
  - Scope: Puts boundaries on the project; it is recommended to note items not included in order to avoid scope creep
  - Goal: Specify desired end state of the project in clear/concise terms

Define & State Problem or CI Opportunity (Define)
Problem Statement:
Scope:
Goal:



## A3 – Step 2: Define

- SMART Goals

**Specific:** Do you know exactly what you want to accomplish with all the details?

**Measurable:** Can you quantify your progress so you can track it? How will you know when you reach your goal?

**Attainable:** The best goals require you to stretch a bit to achieve them but they are not impossible to achieve.

**Relevant:** Is your goal relevant to your purpose?

**Time Bound:** If you don't have a time limit then there is no urgency to start taking action towards achieving your goals.

## A3 – Step 2: Define

### ■ SMART Goal

Instead of...

- “I want to write a cookbook.”

Use

- “I want to write a cookbook called “What’s for Dinner?” It will be at least 150 pages in length, and will be completed by July 30<sup>th</sup>, 2014. I will write at least 1 chapter every month until I complete the book.”



# Title / Define ( EXAMPLE)

## Title / Heading

### A3 Title:

APE Leadtime Improvement

**Project Leader:** Bernadette Calosa

**Date:** Sep 4-7, 2012

### Team:

Lito Tenorio (Prod. Engineer-PICO), Alvin Salvador(Lean Leader-PICO), Ferdinand Pedrozo(Prod. Engineer-PICO), Kriscela Panganiban(Nurse-ADMIN), Imelda Gagui(Prod. Engineer-TFF), Jaymee Solomon (EHS Engr.-FAC), Julius Virtucio(Prod. Engineer-TR/TE), Medel Salazar(Prod. Engineer-TR/TE), Howel Mugot(Prod. Engineer-TFF), Josephine Tablada(Prod. Manager)

## Define & State Problem or CI Opportunity (Define)

### Problem Statement:

An average of 4.3 hours was spent by associate before the completion of APE resulting to production lost(See Table 1). This is way above the ideal processing time of 45 minutes per associate.

Product line	Plan	Actual	Adherence
PICO	900000	535400	59%
BARRIER	30000	16500	55%
SMF	25000	17000	68%

Table 1. Adherence rate of Pico, Barrier, and SMF affected by APE (Sept 03, 2012)

### Scope:

This improvement will cover APE of Pico associates.

### Goal:

To achieve the ideal APE processing time of 45 minutes per associate

## Title / Define ( EXAMPLE 2 )

Title / Heading	
A3 Title: LF Employee Wellness Program	
Project Leader: B. Calosa	Team: Maritess Angeles; Ma. Kriscela Panganiban; Aaron Kelvin Rianzares; Rafael Casacop Jr.; Celeste Tacla; Cherry Malabanan
Executive Sponsor: Z. Salialam	
Date: 30-Apr-14	

Define & State Problem or CI Opportunity (Define)
<b>Problem Statement:</b> Last annual physical examination 2013 shows that 42% ( 533/1424 ) of the population are overweight/obese which could lead to some illnesses like hypertension, heart disease, increase cholesterol level.
<b>Scope:</b> The project will cover overweight and obese associates
<b>Goal:</b> To establish a program for obese and overweight and to involve at least 2% ( 30pax ) of the plant population by the end of May 2014.



# Breakout Exercise 1

## ➤ Practice Creating an A3 – Steps 1 and 2

### ➤ Individually:

#### ➤ Identify a problem

- It does not have to be work related
- Can be a past problem that has been resolved

#### ➤ Fill out

- Title / Heading
- Define & State the Problem (includes Scope and Goal)

### ➤ Time:

- Individually create: 5 minutes
- Share with class (volunteer basis): 10 minutes

# A3 – Step 3: Measure

- Background / Initial Condition (Measure)
  - List the current conditions and a clear definition of the problem using available data
    - Go to the “gemba” (actual place) to observe and to collect data
  - Use graphical techniques, charts (Pareto, Run, Histograms), drawings, photographs
  - Take pictures and video as needed
    - It is completely acceptable to create graphs by hand



Background / Initial Condition (Measure)



# A3 – Step 3: Measure

## ➤ “Background / Initial Condition” Dos and Don'ts

- Always go to the gemba (“actual place”)
  - Take the time to gather necessary information
  - Must observe current conditions
  - The problem or issue is at the gemba; perhaps the solution is, too!
- Take pictures and video as needed
- Always tie in with business objectives
- Understand and communicate the scale of the problem



# Background / Initial Condition

## Background / Initial Condition (Measure)

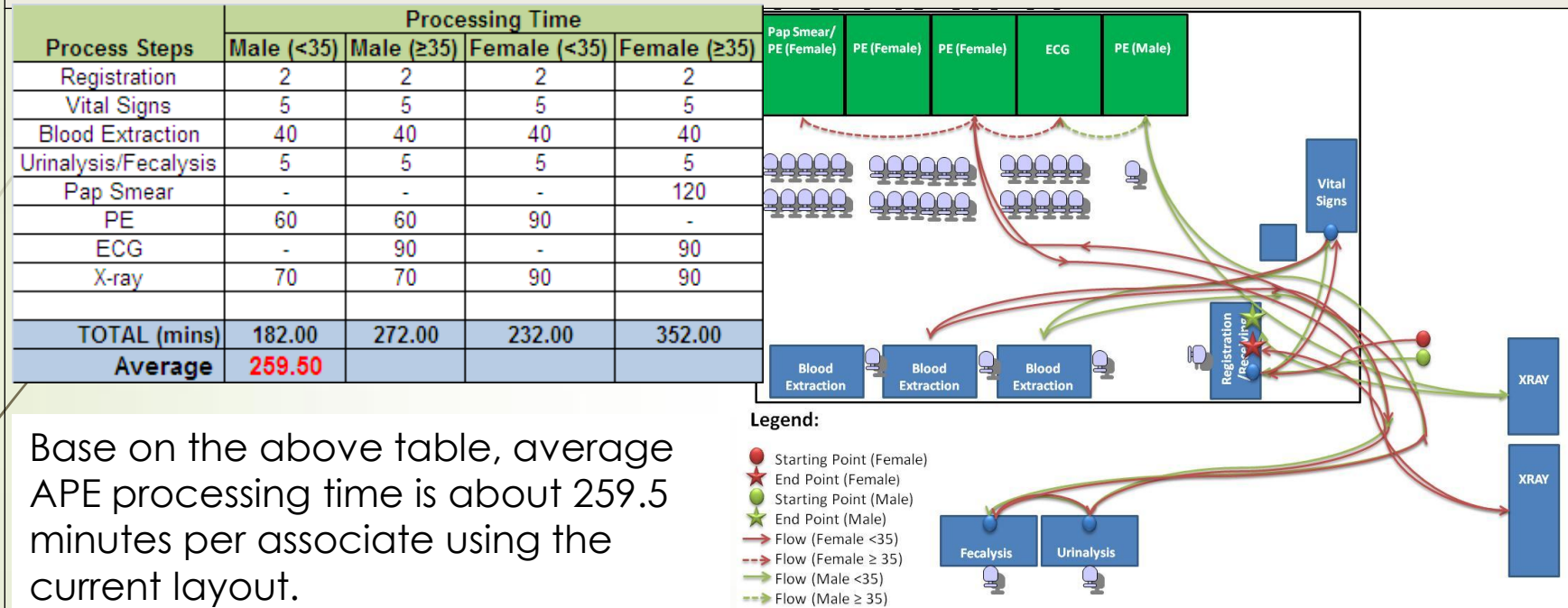
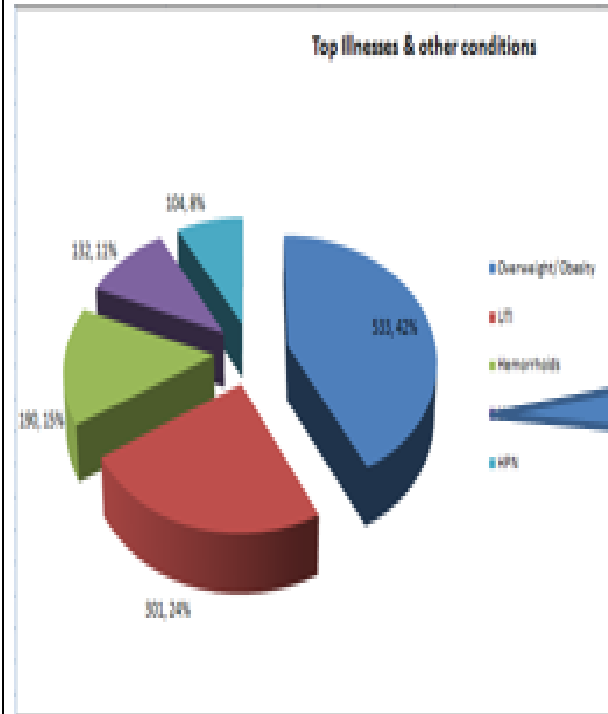


Figure 1. **Current APE Layout & Spaghetti Diagram**

## Background / Initial Condition (Measure) (example 2)

### Background / Initial Condition (Measure)



Out of 100%, 42% ( 533) are  
obese and overweight



# Breakout Exercise 2

- Practice Creating an A3 – Steps 3
  - Individually:
    - Fill out
      - Background / Initial Condition
    - Use charts and graphs as needed (hand drawn is fine)
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes

# A3 – Step 4: Analyze

- Problem Analysis (Analyze)
  - Analyze the current situation
  - Identify “root cause(s)” of the problem or issue
    - Utilize the “5 Whys”
    - Generate Cause & Effect diagram(s) as necessary
    - Provide results of any experiments to prove or disprove theory



Problem Analysis (Analyze)

## A3 – Step 4: Analyze

- Why ask why?



Weed:  
Symptom, Obvious

Roots:  
Underlying cause, not  
so obvious

## A3 – Step 4: Analyze

Do not look where you fell, look where you slipped.

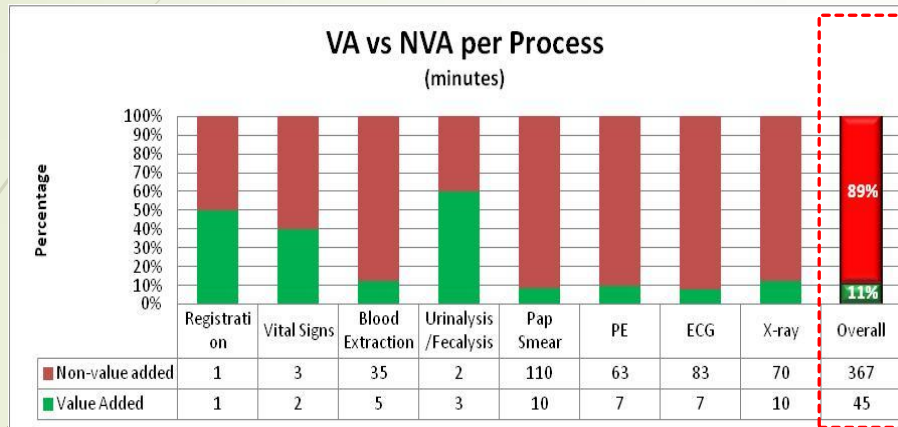
➤ African Proverb





# Problem Analysis (Analyze) ( example)

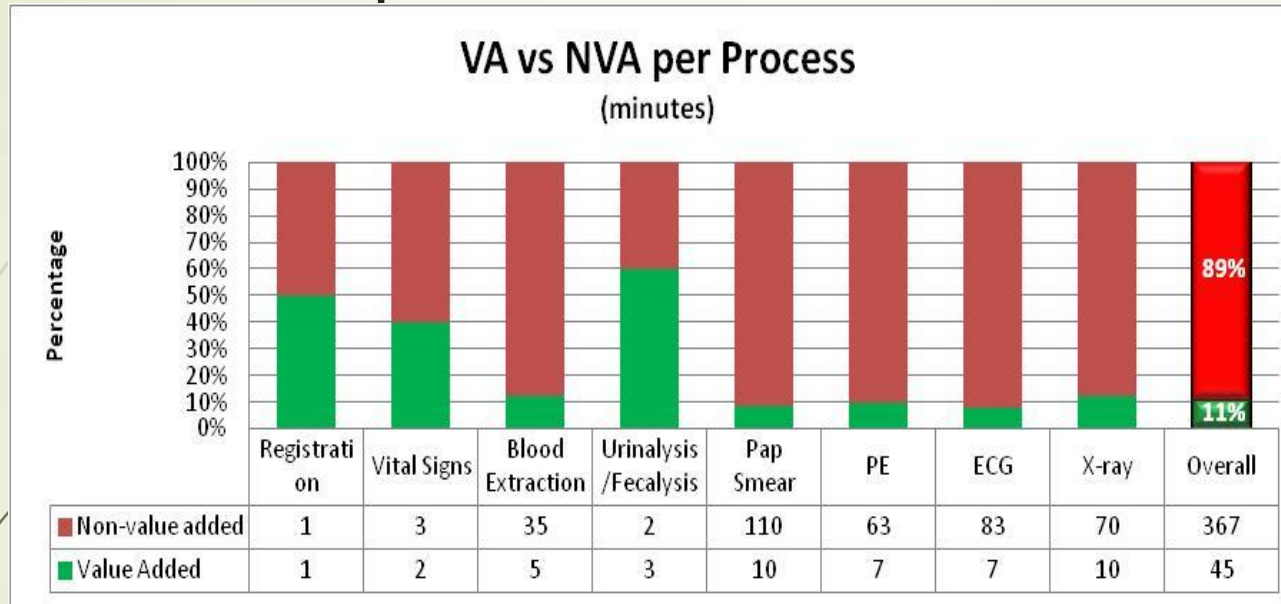
## Problem Analysis (Analyze)



Each process had been analyzed to determine the time spent for value added activities. Analysis result shows that only 11% of the time was spent for the value added activities while 89% of the time for the non-value added activities which are mostly contributed by WAITING.

PROBLEM	WHY 1	WHY 2	WHY 3	WHY 4
WAITING	long queue of associate per process	Long queue was due to large number of associates that take APE at the same time	Aside from other associates did not follow their schedule of APE, there is no such specific instruction to associate regarding the limits of person that could be accommodated	No clear coordination between nurses and production engineers regarding the strategy to have smooth flow of APE that would be relayed to associates
		Step by step processes was not being followed religiously	Layout is not error-proof. Every process is open to accommodate any associate whenever they wanted	The actual layout was not aligned with the sequence of process added with poor visual management

# computation



i.e.  $367 + 45 = 412$  ( total time)

➤ for non-value added:  $(367/412) \times 100 = 89\%$

➤ for value added:  $(45/412) \times 100 = 11\%$

## Problem Analysis (Analyze) ( example 2)

Problem Analysis (Analyze)				
Why 1	Why 2	Why 3	Why 4	Why 5
Due to food choices/ eating habits	personal preferences			
	personal budget constraints	limited allocation of the budget		
	depends on the available/ serve food	no define meal plan	lack of awareness on proper nutrition	no establish program for nutrition
Inactive lifestyle of associates	personal preferences			



# Breakout Exercise 3

- Practice Creating an A3 – Step 4
  - Individually:
    - Fill out
      - Problem Analysis (Analyze)
    - Use 5 why's
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes

# A3 – Step 5: Target / Future State

- Target / Future State
  - What are the desired outcomes?
    - Be specific
  - Note the “gaps” with the current conditions
  - SMART goals
    - **S**pecific, **M**easurable, **A**ttainable, **R**elevant, **T**ime-bound
  - Consider layout, flow, etc.

Target / Future State

# Key Questions

- Have you identified the real problem?
- Can you show the gap between the target and the current condition?
- Did you go to the gemba, observe, and talk to the people who do the work and fully grasp the whole situation?
- Did you clarify business objectives?

What is the gap?

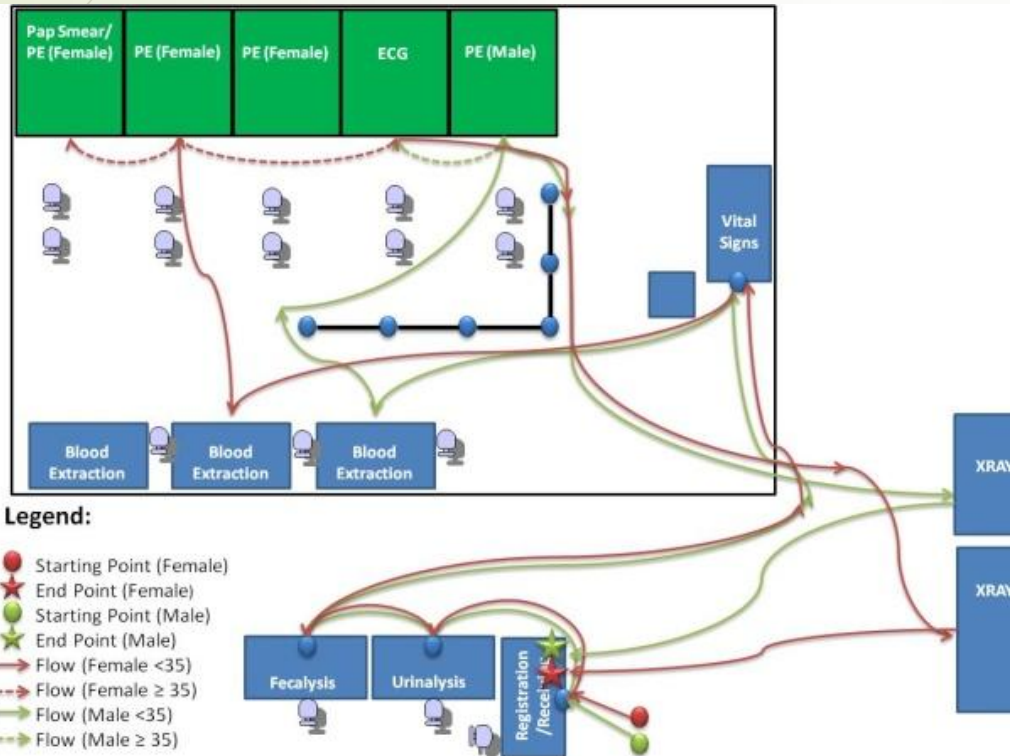


From Managing to Learn, John Shook

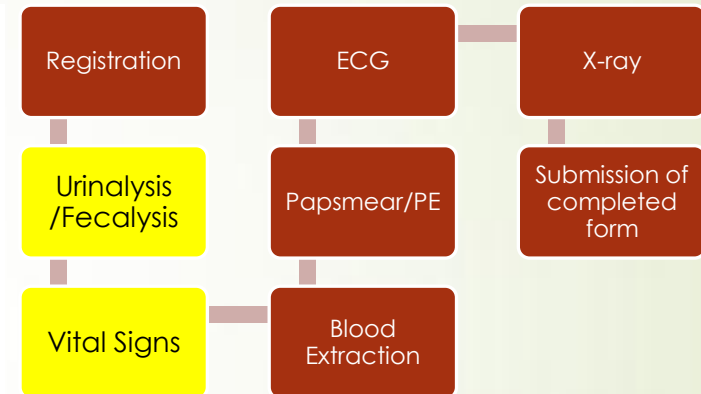
# Target / Future State

## Target / Future State

### FUTURE LAYOUT based on the IMPROVED PROCESS FLOW



### IMPROVED PROCESS FLOW





# Target / Future State ( example 2)

## Target / Future State

To establish a program for obese and overweight by the end of May 2014

To provide awareness on food choices; proper nutrition.

To reduce / lessen lifestyle related illnessess ( hypertension;diabetes, etc)

To encourage involvement of associates of at least 2% by the end of May 2014



# Breakout Exercise 4

- Practice Creating an A3 – Step 5
  - Individually:
    - Fill out
      - Target / Future State
    - Use charts and graphs as needed (hand drawn is fine)
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes

# A3 – Step 6: Improve

- Countermeasures (Improve)
  - Identify proposed countermeasures that address root cause(s)
    - Determine short-term actions to verify effectiveness of proposed countermeasures
    - Determine long-term actions to address root cause(s) or to reach a “future state”
    - Anticipate barriers; consider contingency plans

Countermeasures (Improve)



# Countermeasures (Improve) (

## Countermeasures (Improve)

Identified Root Causes	Countermeasure
No clear coordination between nurses and production engineers regarding the strategy to have smooth flow of APE that would be relayed to associates	<ol style="list-style-type: none"><li>1. Conducted meeting of Production Engineers, Nurses, EHS, Lean Team and Manager to strategize the APE process flow.</li><li>2. Implemented and communicated properly to associates the improved process flow by production engineers. (10 associates will take the APE at a time. Nurses will give notice to production engineers for the succeeding associates through 2-way radio)</li></ol>
The actual layout was not aligned with the sequence of process added with poor visual management	<ol style="list-style-type: none"><li>1. Studied the current layout against the process flow.</li><li>2. Conducted relayout base on the improved process flow</li><li>3. Provided barriers and labels to have guide in following the process steps.</li></ol>



Figure 3. Actual APE after implementing improved process flow and layout



Figure 2. Actual layout after moving out the table for registration from CI room to Urinalysis/Fecalalysis area

# Countermeasures (Improve) ( example 2)

Countermeasures (Improve)	
Issue/Problem	Action Item
No define program on Nutrition	Establish a program for the proper nutrition
	1. OPL release relate to:
	More fruit juices on Monday
	No Junk foods on Wednesday
	No red meat on Friday
	2.Roadshow activity had been held
	prior to Nutrition Club Program
	3. Establish a Nutrition Club

# Breakout Exercise 5

- Practice Creating an A3 – Step 6
  - Individually:
  - Fill out:
    - Countermeasures (Improve)
      - What needs to be done in order to fill in the identified gaps?
    - Use charts and graphs as needed (hand drawn is fine)
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes



# A3 – Step 7: Implementation Plan

## Implementation Plan

- Identify **all actions necessary** to implement the countermeasures

- Short and long term

- Develop an **Action Plan** (What? Who? When?)

- Provide a means for indicating progress towards goal

Action Items	Person in Charge	Start Date	Due Date	Status
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- Experiment

- It's acceptable and encouraged!



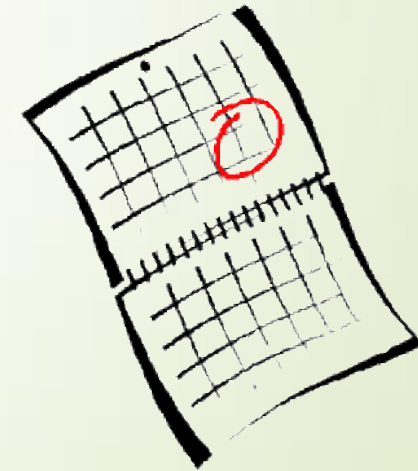
Implementation Plan



# A3 – Step 7: Implementation Plan

## ➤ “Implementation Plan” Dos and Don'ts

- Identify all actions necessary, even when it is “early” in the story
  - Think ahead instead of jumping ahead
- Involve others in the implementation
  - Greater rate of success
  - Promotes a commitment to succeed
- Determine a review schedule and stick to it



# Implementation Plan

## Countermeasures (Improve)

Item No.	Action Items	Person In-charge	Target Date	Actual Date	Remarks
1	Conduct Meeting	B. Calosa	4-Sep	4-Sep	Done
2	Process Simulation(Current Process Flow)	Team	4-Sep	4-Sep	Done
3	Relayout	Team	4-Sep	4-Sep	Done
4	Process Simulation(Improved Process Flow)	Team	4-Sep	4-Sep	Done
5	Information Dessimation	Production Engineers	4-Sep	4-Sep	Done
6	Pilot Run	Team	4-Sep	4-Sep	Done
7	Validation of Improved process flow	Team	7-Sep	7-Sep	Done





# Breakout Exercise 6

- Practice Creating an A3 – Step 7
  - Individually:
    - Fill out
      - Implementation Plan
    - Use charts and graphs as needed (hand drawn is fine)
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes

# A3 – Step 8: Control

- ▶ Demonstrate Improvement / Next Steps (Control)
- ▶ Sometimes a problem cannot be permanently resolved
  - ▶ Countermeasures put in place to reduce the likelihood that the problem reoccurs may be the best that can be achieved
- ▶ Some countermeasures may create new problems
- ▶ Countermeasures are subject to change as new circumstances arise



***The key is to put methods in place to identify when circumstances have changed***

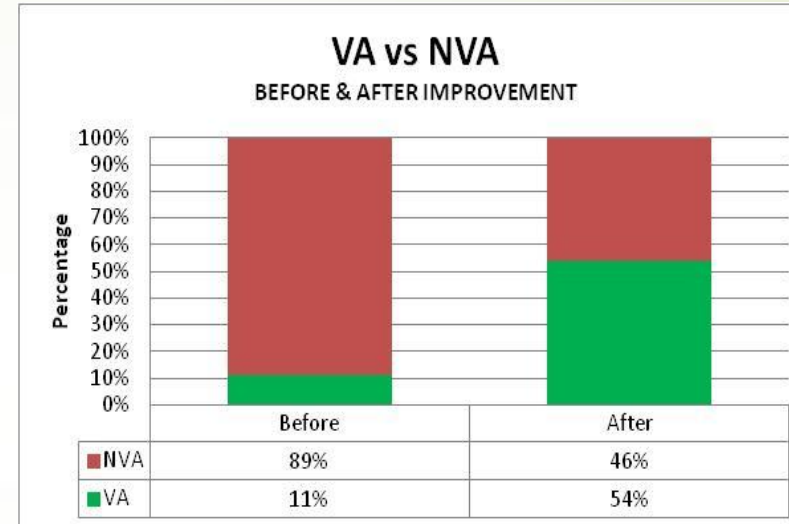
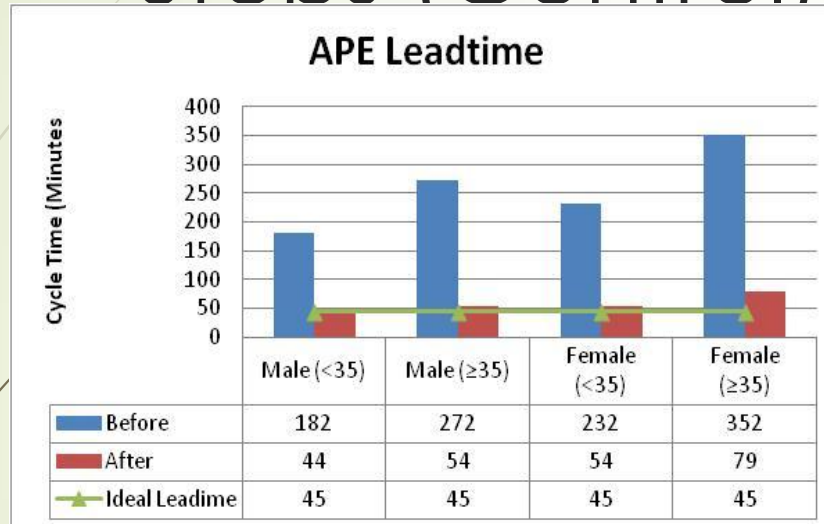
# A3 – Step 8: Control

- ▶ Demonstrate Improvement / Next Steps (Control) Dos and Don'ts
  - ▶ Don't shortcut the process (i.e., do not overlook this step)
  - ▶ Do identify systematic ways to prevent setback
    - ▶ Bad: "We'll train everyone"
    - ▶ Good: "This is now part of our standard work"
  - ▶ Don't cave in to resistance
    - ▶ Show your success



# Demonstrate Improvement / Next

## Countermeasures (Improve)



### Improvements:

1. Average Leadtime of APE was reduced from 259.5 minutes to 57.75 minutes per associate.
2. Non-value added activity which is mostly contributed by WAITING was decreased from 89% to 46% of the total leadtime.

### Next Step:

Implement defined improvements on the next APE.



# Demonstrate Improvement / Next Steps (Control)

## Demonstrate Improvement / Next Steps (Control)

The team achieved the goal by having a total number of 48 persons or 3.28% versus the target of 2% who had actively participated on the Nutrition club



Next Step:

1. Hypertensive cases controlled
2. Annual Physical Examination compliance Improvement





# Breakout Exercise 7

- Practice Creating an A3 – Step 8
  - Individually:
    - Fill out
      - Demonstrate Improvement / Next Steps (Control)
    - Use charts and graphs as needed (hand drawn is fine)
  - Time:
    - Create: 5 minutes
    - Share with class (volunteer basis): 5 minutes

# The A3 Improvement Process

## ➤ Final Dos and Don'ts of A3 Writing

- Storytelling in succinct ways takes practice
  - Use brief statements, not sentences
  - Use visual techniques to convey messages



***“A picture is worth a thousand words”***

- Use the document and the process. It works!
  - To solve complex problems
  - To achieve agreement and commitment
  - To effectively and efficiently communicate
  - To capture knowledge for future reference

### A3 Title LF Employee Wellness Program

**Team:** Marileen Angelen; Ma. Erinnela Panquihon; Aaron Erluin

**Riannarru; Rafael Cananny Jr.; Celeste Taula; Cherry Malahanan**

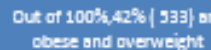
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### Problem Statement-

The project will cover overweight and obese associates

To establish a program for abuse and oversight and to involve at least 2X (300+X) of the plant population by the end of May 2014.

Top Wines & other products



\_\_\_\_\_

---

To establish a program for obese and overweight by the end of May 2014

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1. A percentage investment of approximately 25% by the end of May 2015

Issue/Problem	Action Item
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No define program on Nutrition

Area	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710
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1. *Phragmites australis* (Common Reed)

ASBESTOS FIBROGENESIS

# A3 Example – A Healthier Lifestyle

## Title / Heading

### A3 Title Journey to a Healthier Lifestyle

**Project Lead:** Pat Johnson

**Team:** Blair Johnson, Mary Johnson, Fred Johnson

**Executive Sponsor:** Taylor Miller

**Date:** November 1

## Define & State Problem or CI Opportunity (Define)

### Problem Statement:

Over the last 3 years, my lifestyle has become more inactive. In the last 2 years, I have gained 20 pounds. I get easily winded (experience shortness of breath) and often feel tired, leaving me unable to keep up with my family. I am concerned I might have premature health problems if this trend continues.

### Scope:

Myself; all my other family members have better overall health than I do.

### Goal:

Improve my overall health and energy level. Ensure I am around to watch my grandchildren grow up. Weigh 180 pounds within 14 months.

## Background / Initial Condition (Measure)

Currently 198 lbs, 5'8" tall  
Gained 20 pounds in the last 23 months  
Clothing are a bit tight; Have had to spend money on a new closet  
Feel hungry all the time  
I have 2 young grandchildren



## Problem Analysis (Analyze)

Problem	Why 1	Why 2	Why 3	Why 4	Why 5	Why 6	Why 7	Why 8
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine
Gain weight	Calories consumed > calories burned	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine	Don't have a structured exercise routine



## Target / Future State

Weigh 180 pounds within 14 months

Be able to participate in recreational activities with family members

Exercise daily for a minimum of 20 minutes

## Countermeasures (Improve)

Root Cause	Countermeasures
1. Have not been strong fitness training	Create work training plan Create work training plan
2. Only exercise on my 'family' and not on my own	Join health club Join health club
3. No regular place to go for fitness	Work out at health club at least twice per week Walk 20 minutes 3 times per week Move TV out of living room Buy exercise equipment Keep a daily food log Track calories Find healthy but filling & delicious ingredients
4. No room in diet	
5. No room in diet	

## Implementation Plan

Countermeasure	Owner	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Create work training plan	Pat												
2. Create work training plan	Pat												
3. Join health club	Pat												
4. Work out at health club at least twice per week	Pat												
5. Walk 20 minutes 3 times per week	Pat												
6. Move TV out of living room	Pat												
7. Buy exercise equipment	Pat												
8. Keep a daily food log	Pat												
9. Track calories	Pat												
10. Find healthy but filling & delicious ingredients	Pat												


## Demonstrate Improvement / Next Steps (Control)

Currently weigh 182 lbs  
Have lost 16 pounds (to date)



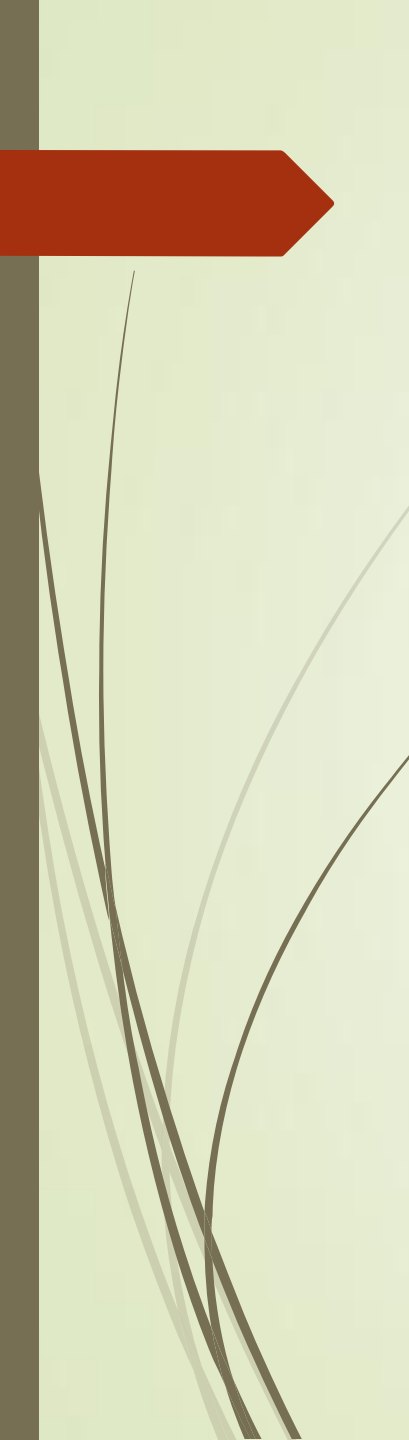
# Questions





WHATEVER you do,  
WORK <sup>at it</sup> with all  
*your* HEART,  
<sup>as working</sup> for the *Lord,*  
NOT for men, since you know  
THAT YOU WILL RECEIVE  
an INHERITANCE  
*from the* LORD  
<sup>It</sup> is the <sup>as a reward.</sup>  
*Lord Christ*  
YOU ARE SERVING.

COLOSSIANS 3:23-24



*The happiest people may not have the best, but  
they make the best of everything.  
Let us live simply, love generously, forgive  
without condition, care deeply, speak kindly  
& live uprightly.*