Sustaining Change – Are You Asking the Wrong Questions?

Shawn Perkins – The Clorox Company

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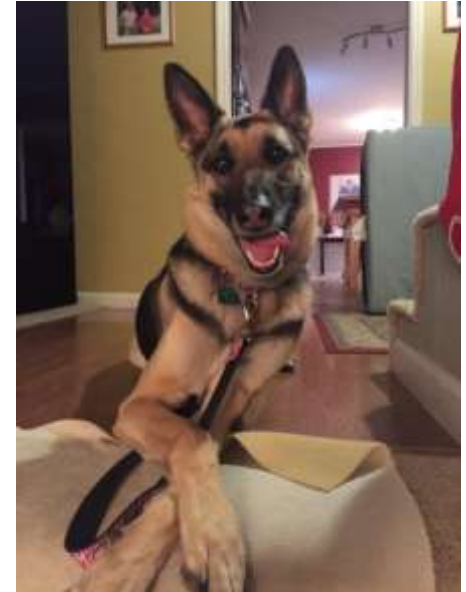
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The Global Voice of Quality®

Learning Objectives

- In this session you will:
    - Learn to prioritize sustaining actions to ensure sustainment and avoid unnecessary work
    - Learn to choose the best sustaining steps for the type of change made
    - Learn to critique your sustainment plan using a process-input-output diagram
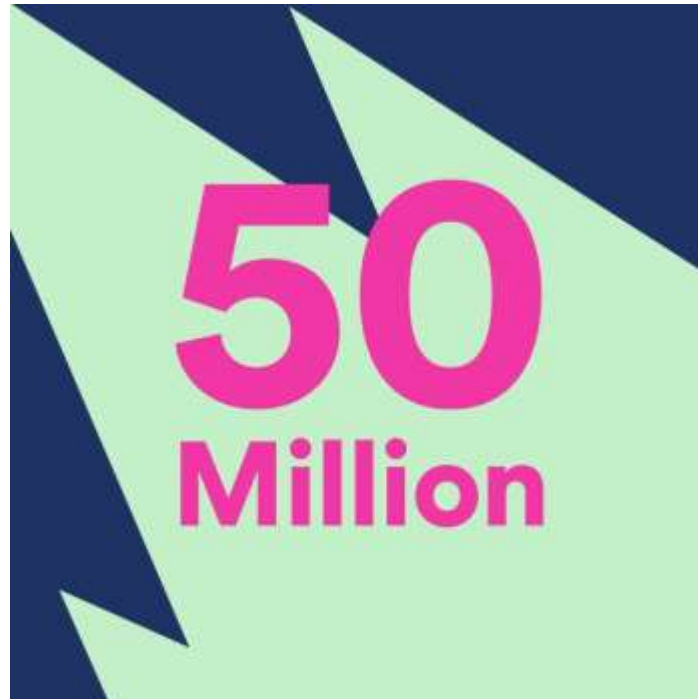
About Me…Shawn Perkins

My First Site Visit

- Plant tour in Rogers, Arkansas
- Showcasing CI work
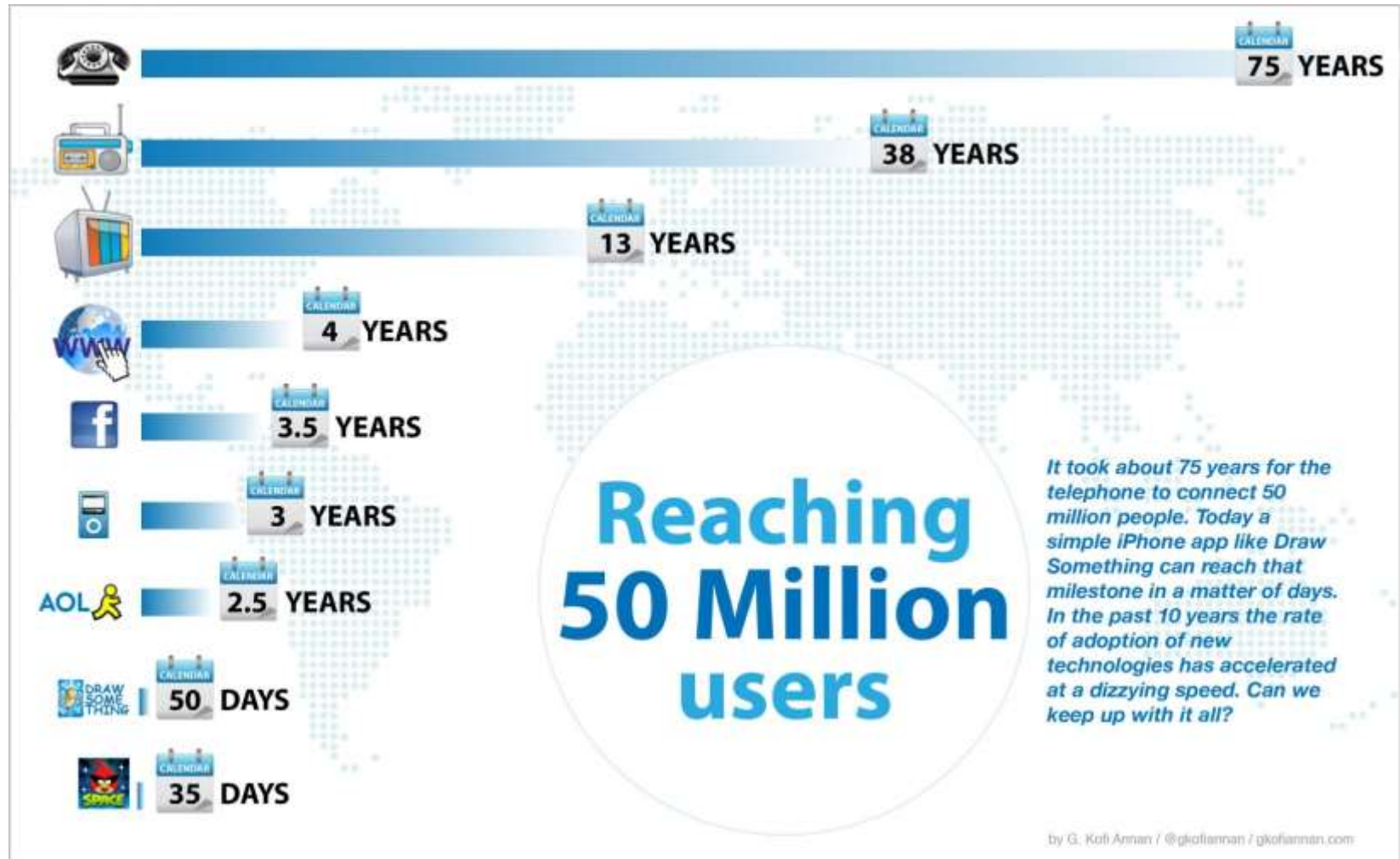 - Equipment change
  - People process change

How Long for 50 Million Users?

- Telephone in late 1800s?
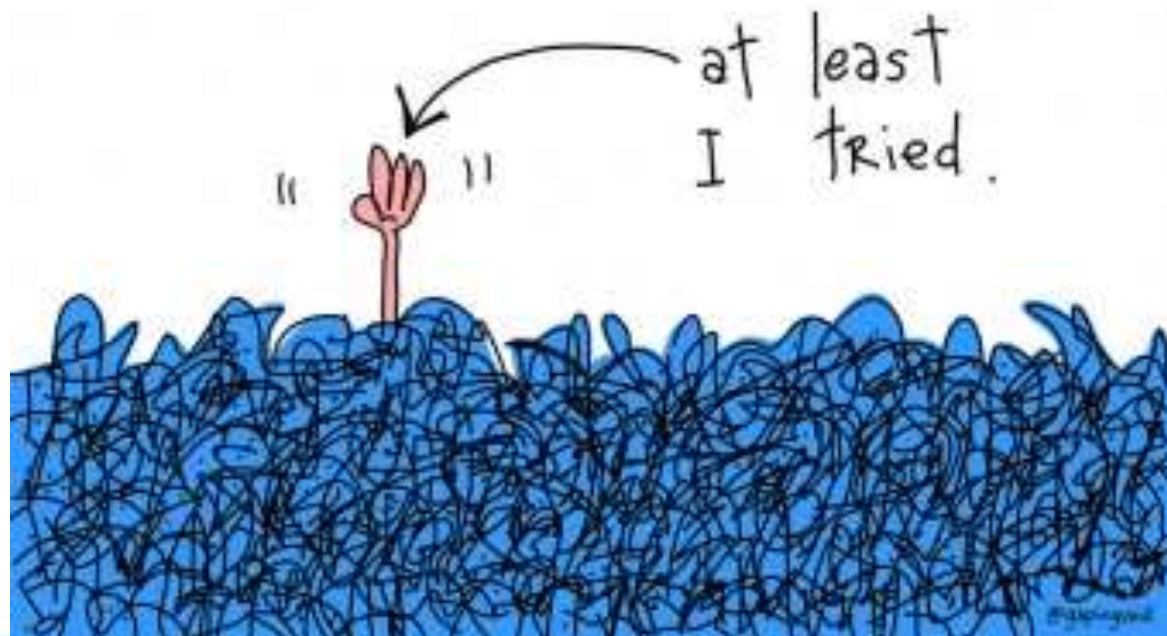- Angry Birds in 2009?

Change is Happening Faster

If Change Is Not Sustained

- Problem comes back
- Wasted resources solving first time
- Re-solve same problem again

Why Change Is Not Sustained

- Other problems
- Communication lapses
- Training lapses
- Equipment / process changes undone

"DO OR DO NOT. THERE IS NO TRY."

Fill In the Blank

How do we sustain the _____ ?

Words Mean Things

Where is the Focus?

INPUT ➡ PROCESS ➡ OUTPUT

Change the Question

FROM:

- How do we sustain the <u>result</u>?

TO:

- How do we sustain the <u>countermeasures</u>?

Problem Solving Flow

Problem → Root Cause → Corrective Actions → Sustaining Steps

Problem Solving Flow

Sustaining Flow

Problem Examples

- Equipment – Bottle jams
- Process – Time creating report
- Personal – Overweight

Equipment Example

- Problem
  - Bottles jamming at point X
- Root Cause
  - Right side rail set in too far
- Countermeasure
  - Set rail in correct position
- Sustaining Steps
  - Weld rail in place

Process Example

- Problem
  - Takes 5 days to create a report
- Root Cause
  - Waiting 3 days for information from dept. X
- Countermeasure
  - Inform dept. X of need 3 days earlier
- Sustaining Steps
  - Reminders to put out communications

Personal Example

- Problem
  - Weigh 25 pounds too much
- Root Cause
  - Unknown calorie consumption
- Countermeasure
  - Track food consumed in MyFitnessPal ap
- Sustaining Steps
  - Set reminders in Todo and on calendar

Where is the Focus?

MOVE FOCUS FROM

INPUT ➡ **PROCESS** ➡ **OUTPUT**

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Where is the Focus?

MOVE FOCUS TO

INPUT ➡ **PROCESS** ➡ **OUTPUT**

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Effectiveness Hierarchy

Sustaining Actions Categorized

- Bad
  - Root cause will come back
  - Little to no impact on problem

Bad > Good > Better > Best

BAD Sustaining Actions

- Do nothing
- Informal word of mouth communications

Horatio, The Half-a-Boy

Horatio, The Half-a-Boy

ANDY: I was reading just the other day that there are 400 underprivileged children in this county alone or 1 and a half boys per square mile.

OPIE: I never seen one paw.

ANDY: Seen what?

Horatio, The Half-a-Boy

ANDY: I was reading just the other day that there are 400 underprivileged children in this county alone or 1 and a half boys per square mile.

OPIE: I never seen one paw.

ANDY: Seen what?

OPIE: A half a boy.

Horatio, The Half-a-Boy

ANDY: Well it's not really a half a boy. It's a ratio.

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Horatio, The Half-a-Boy

ANDY: Well it's not really a half a boy. It's a ratio.

OPIE: Horatio who?

Horatio, The Half-a-Boy

ANDY: Well it's not really a half a boy. It's a ratio.

OPIE: Horatio who?

ANDY: Not HOratio, A ratio. Mathematics. Arithmetic. Forget that part of it. Forget the part about the half a boy.

Horatio, The Half-a-Boy

OPIE: It's pretty hard to forget a thing like that, paw.

ANDY: Well try!

Horatio, The Half-a-Boy

OPIE: It's pretty hard to forget a thing like that, paw.

ANDY: Well try!

OPIE: Poor Horatio…

Horatio, The Half-a-Boy

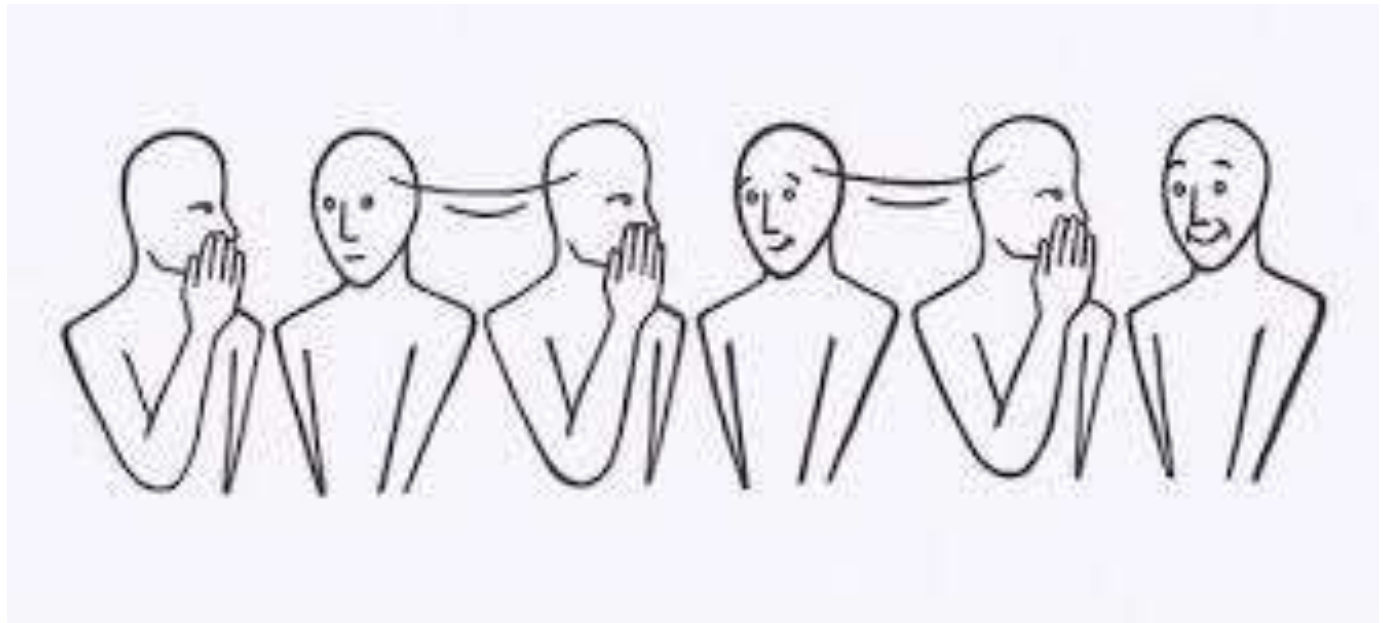OPIE: It's pretty hard to forget a thing like that, paw.

ANDY: Well try!

OPIE: Poor Horatio…

ANDY: Now look, Horatio is not the only needy boy…

The Moral of the Story

One time, word of mouth communications are often ineffective!

Sustaining Actions Categorized

- Good
  - Problem will come back
  - Minimize impact of problem when it does

GOOD Sustaining Actions

- Monitor Output Metrics/Quality
- Redundancy
- Troubleshooting Guides
- Training & Qualification

GOOD Sustaining Actions

- Monitor Output Metrics/Quality
- Redundancy
- Troubleshooting Guides
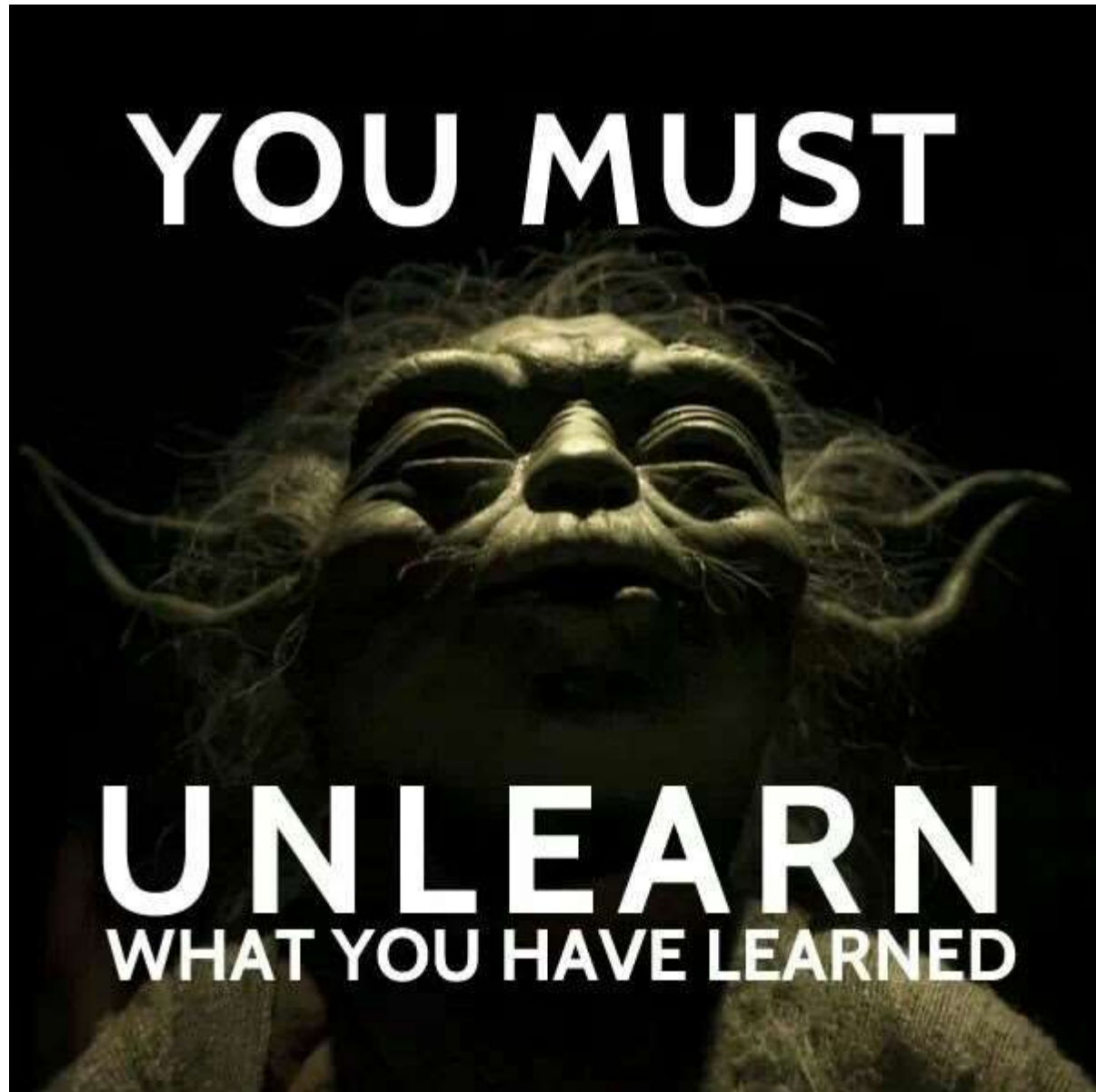
GOOD Sustaining Actions

- Monitor Output Metrics/Quality

- Redundancy

- Troubleshooting Guides

FOR THESE TO BE EFFECTIVE THE PROBLEM HAS TO COME BACK!

Training

- Relies on people
- Do people always remember?
- Resource drain

Sustaining Actions Categorized

- Better
  - Problem might come back
  - Limit the probability that it will

BETTER Sustaining Actions

- In Process Metrics
- Input Audits/Inspections
- Task Reminders on Set Frequency
- Check Sheets/List
- Visual Controls

Bad Good Better Best

Task Reminders

Autonomous Maintenance - CLEAN Standard

Status: Provisional
Revision Date: 5/11/05

LOCATION: Rogers Extrusion
EQUIPMENT: T6 Floor Level

EQUIPMENT OWNER (S): Alvin Taylor

Equipment Sub-section		Activity	Standard	Method	Tools Needed	Frequency				Target By Time [Min]	Target Done Time [Min]	Owner	Action To Take If Abnormal	Reference Documents
Floor		Clean	No foreign objects or materials on the floor	Sweep	Push Broom, Dust pan, Whisk broom	√				20	0	Operator	Contact Eric Sucha	
Primary Screwchanger Cylinders		Clean	No plastic on the cylinders	Brushing	Wire Brush, Terry Cloth Gloves, Safety Glasses	√				5	0	Operator	Contact Eric Sucha	
Secondary Screwchanger Slideplate		Clean	No plastic on slideplate, brass nut or screwchanger body	Scrape and Brush	Wire Brush, Brass Putty Knife, Terry Cloth Gloves, Safety Glasses	√				5	0	Operator	Contact Eric Sucha	
All floor level idler bearings		Clean	No leakage of grease. No dust or dirt.	Wipe	Rags, Safety Solvent			√		15	0	Operator	Contact Eric Sucha	
Edge Trim Drop Chute		Clean	No dust	Vacuum	Shop Vac, Brush Allan keys			√		8	0	Operator	Contact Eric Sucha	
Primary Extruder Gearbox		Clean	No oil outside of gearbox	Wipe, Replace oil pads	Rags, Safety Solvent, Oil Pads, Oil Socks			√		26	0	Operator	Contact Eric Sucha	
Secondary Extruder Gearbox		Clean	No oil outside of gearbox	Wipe, Replace oil pads	Rags, Safety Solvent, Oil Pads, Oil Socks		√			26	0	Operator	Contact Eric Sucha	
All floor level equipment surfaces		Clean	No dust or foreign materials	Blow off with air	Air hose, wood nozzle, Safety Glasses		√			45	0	Operator	Contact Eric Sucha	
						Total Time Required [Min] 150	150	0		Total By Time Require	Total Done Time Require			

.ıtl AT&T 7:57 PM 56%

< Set Healthy Exampl... 26

○ Eat <2200 calories/record
Mon Mar 26

○ Sleep >7 hours
Tue Mar 27

○ Exercise 30 cardio/12 stretches
Tue Mar 27

○ Drink 8 glasses of water
Tue Mar 27

✓ Sleep >7 hours
Mon Mar 26, 6:29 PM

✓ Exercise 30 cardio/12 stretches
Mon Mar 26, 6:29 PM

✓ Drink 8 glasses of water
Mon Mar 26, 6:29 PM

✓ Eat <2200 calories/record
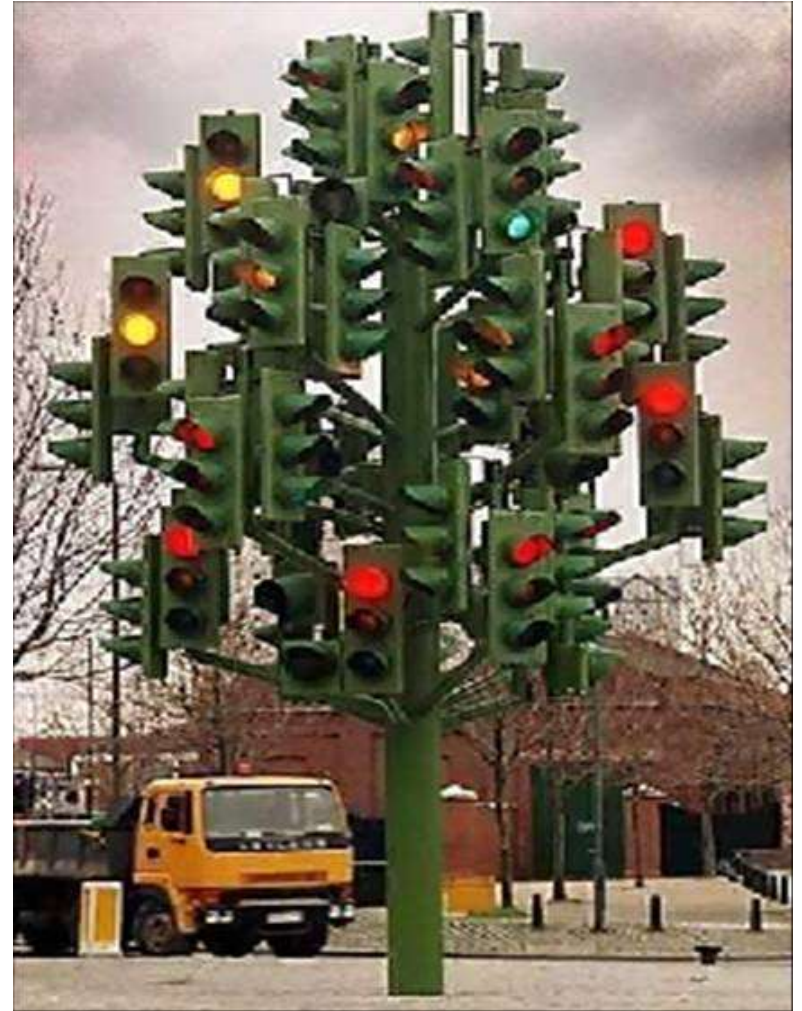Mon Mar 26, 12:04 AM

Show more completed tasks

Add a subtask... +

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Visual Controls

- Labels
- Colors
- Lights
- Outlines

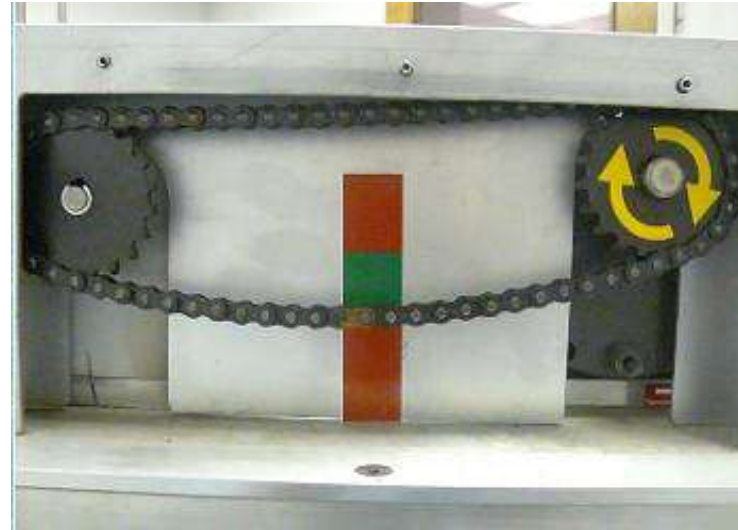**Make right/wrong obvious at a glance!**

Bad Visual Control

8 Small Labels!

Bad Visual Control

~~8 Small Labels!~~

10 Small Labels!

Good Visual Control

Sustaining Actions Categorized

- Best
  - Problem can't come back
  - Maximum benefit
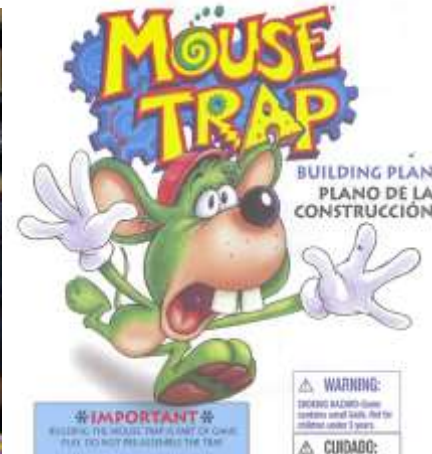
BEST Sustaining Actions

- True Error Proofing
- Make Problems Impossible

POKA YOKE

Physical Error Proofing

Procedural Error Proofing

- Computer / Electronic Systems
  - Entry checks
  - Autocorrect / autofill
- Cameras
- Motion detectors

INCORRECT

Selection Example

- BAD – Tell a couple of people on the line

Selection Example

- GOOD – Add this jam to the trouble shooting guide and train on that adjustment point

Selection Example

- BETTER – Add visual indicators that show where rail should be set

Selection Example

- BEST – Weld the rail in place so it cannot move

Select the Best Sustaining Steps

RANKING	CATEGORY	SUSTAINING STEP	PROCEDURE Was the change… ...to an input?	...to a complex procedure?	...to a simple process step?	...related to data entry?	PHYSICAL ...to an input?	...related to a changeover?	...to a movable part?	...able to be uninstalled?
BEST	Error Proofing	Make Immovable						x	x	x
BEST	Error Proofing	One Way Positioning						x	x	
BEST	Error Proofing	Entry Check				x				
Better	Visual Controls	Conditional Formatting				x				
Better	Visual Controls	Color Coding						x		
Better	Audits/Inspections	Incoming QC	x				x			
Good	T&Q	Troubleshooting Guide	x	x		x	x		x	x
Good	T&Q	One Point Lesson (OPL)			x	x			x	
Good	T&Q	Job Instruction Breakdown (JIB)		x				x		

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Analyze the Sustainment Plan

BETTER & BEST   GOOD

INPUT ➡ PROCESS ➡ OUTPUT

PEOPLE

Analyze the Sustainment Plan

BETTER & BEST   **GOOD**

INPUT ➡ **PROCESS** ➡ **OUTPUT**

PEOPLE

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Analyze the Sustainment Plan

Analyze the Sustainment Plan

BETTER & BEST   GOOD

INPUT ➡ PRO✖ESS ➡ OUTPU✖

PE✖OPLE

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Prior to Countermeasure

- Consider unintended consequences
- Obtain feedback from users
- Obtain leadership buy in

Summary

No sadder waste than "re-solving" a problem

- Choose sustaining actions based on the type of change
- Prioritize the most impactful
- Gauge the health of the plan

Take-aways

- Through this session, you should have:
  - Learned to prioritize sustaining actions to ensure sustainment and avoid unnecessary work
  - Learned to choose the best sustaining steps for the type of change made
  - Learned to critique your sustainment plan using a process-input-output diagram

Questions?

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