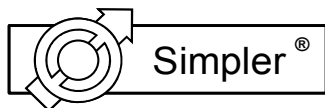


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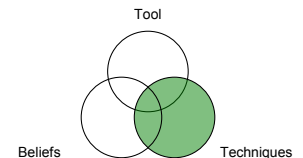
# SBS 6S & Visual Management with Examples

---

...Building Strategic Advantage through  
Enterprise Wide Improvement...



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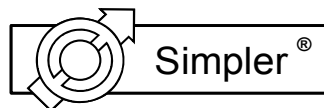
# What is...

# 6-S and Visual Management

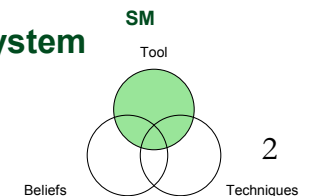
## Objectives:

- 📄 learn what 6-S means
- 📄 learn what a visual work place is
- 📄 Learn what a visual device is
- 📄 Learn what visual management is
- 📄 learn how to establish 6-S (basic level)

... part of the **Simpler Business System**

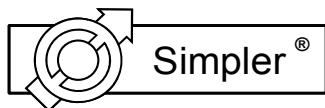


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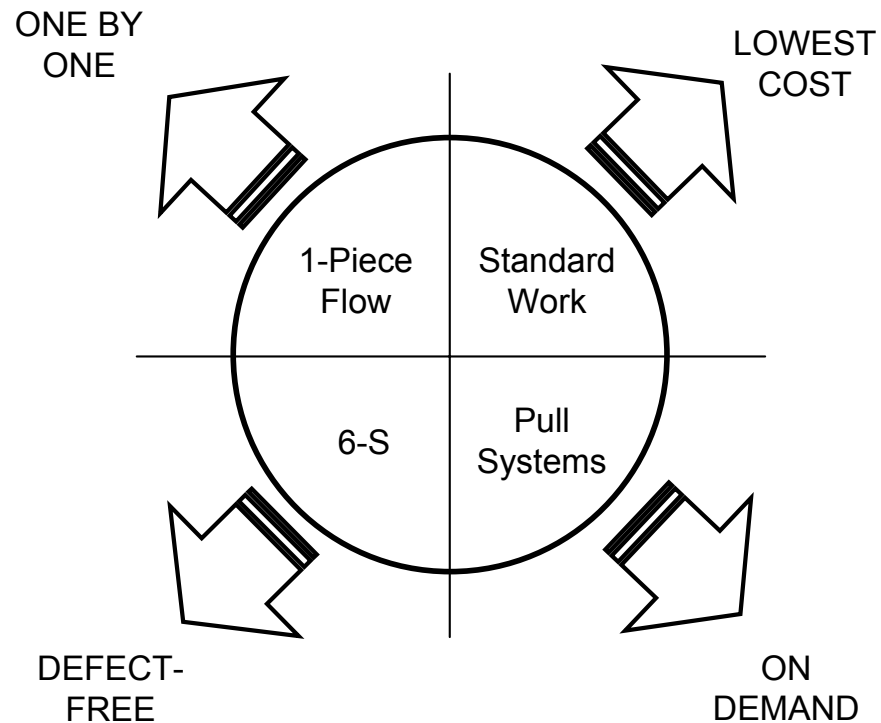
# 5S – 6S Background

- 5-S... in Japanese factories
- focus: orderliness
- 6th S added in some US companies... Safety
- combines orderliness with safety / ergo
  
- overall intention: CLEAN, SAFE, ORDERLY



# Establishing Cells

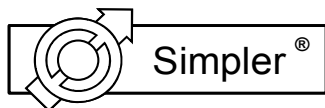
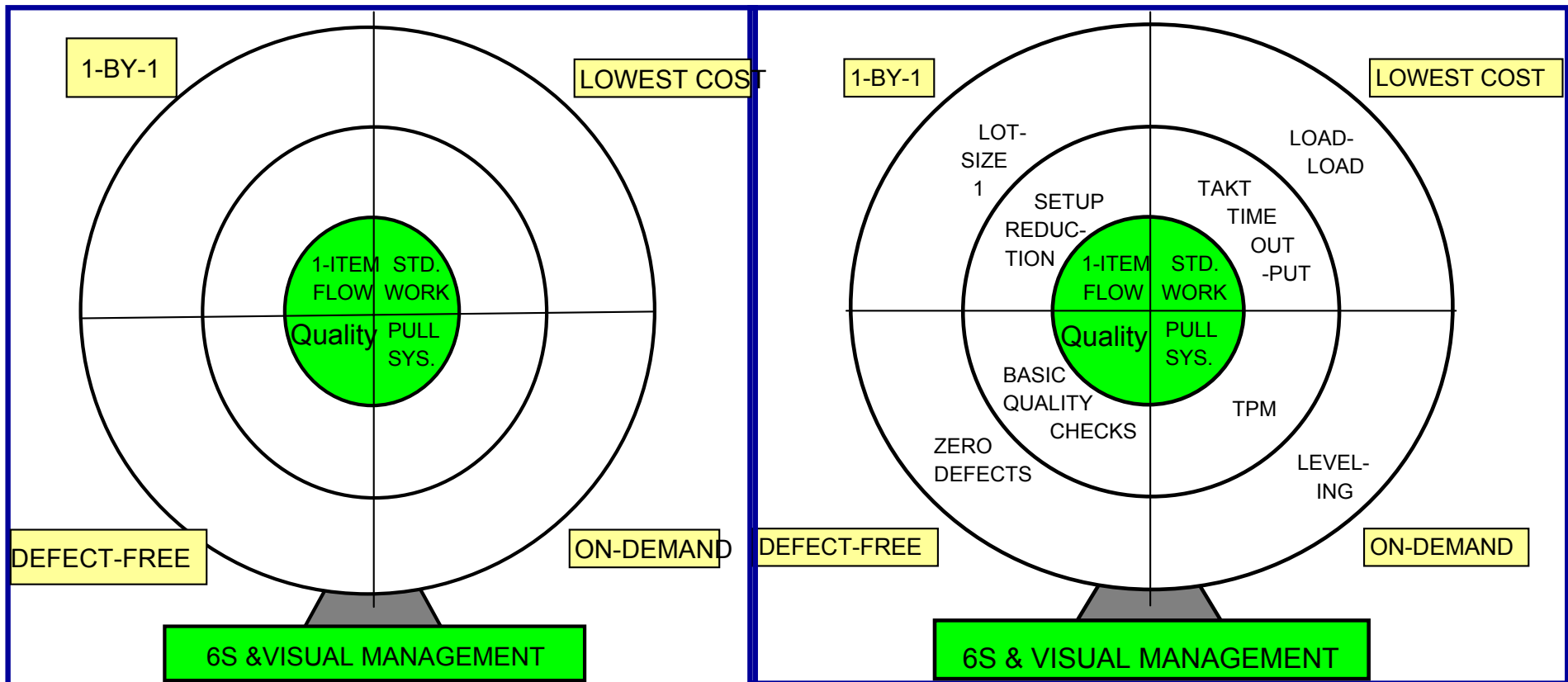
- establish cells first, then improve them



# Target State for Cells

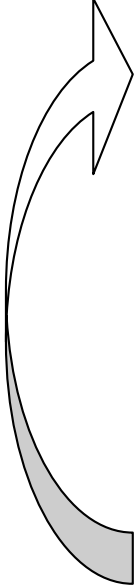
Establish Model Cells first

Improve Cells After They are Established



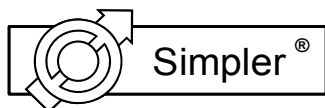
# Overview

- think of 6-S as a repeating action sequence:

- 
- 1: SORT OUT - get rid of what's not needed
  - 2: STRAIGHTEN - organize what belongs
  - 3: SCRUB - clean up, see and solve problems
  - 4: SAFETY - make the work area safe
  - 5: STANDARDIZE - assign tasks, track visually
  - 6: SUSTAIN - keep it up (audit and insist)

- remember...

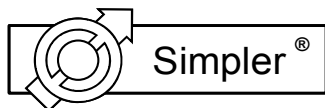
- this applies to all areas (value-adding and administrative)
- basic "6-S" is part of establishing any cell



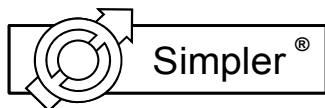
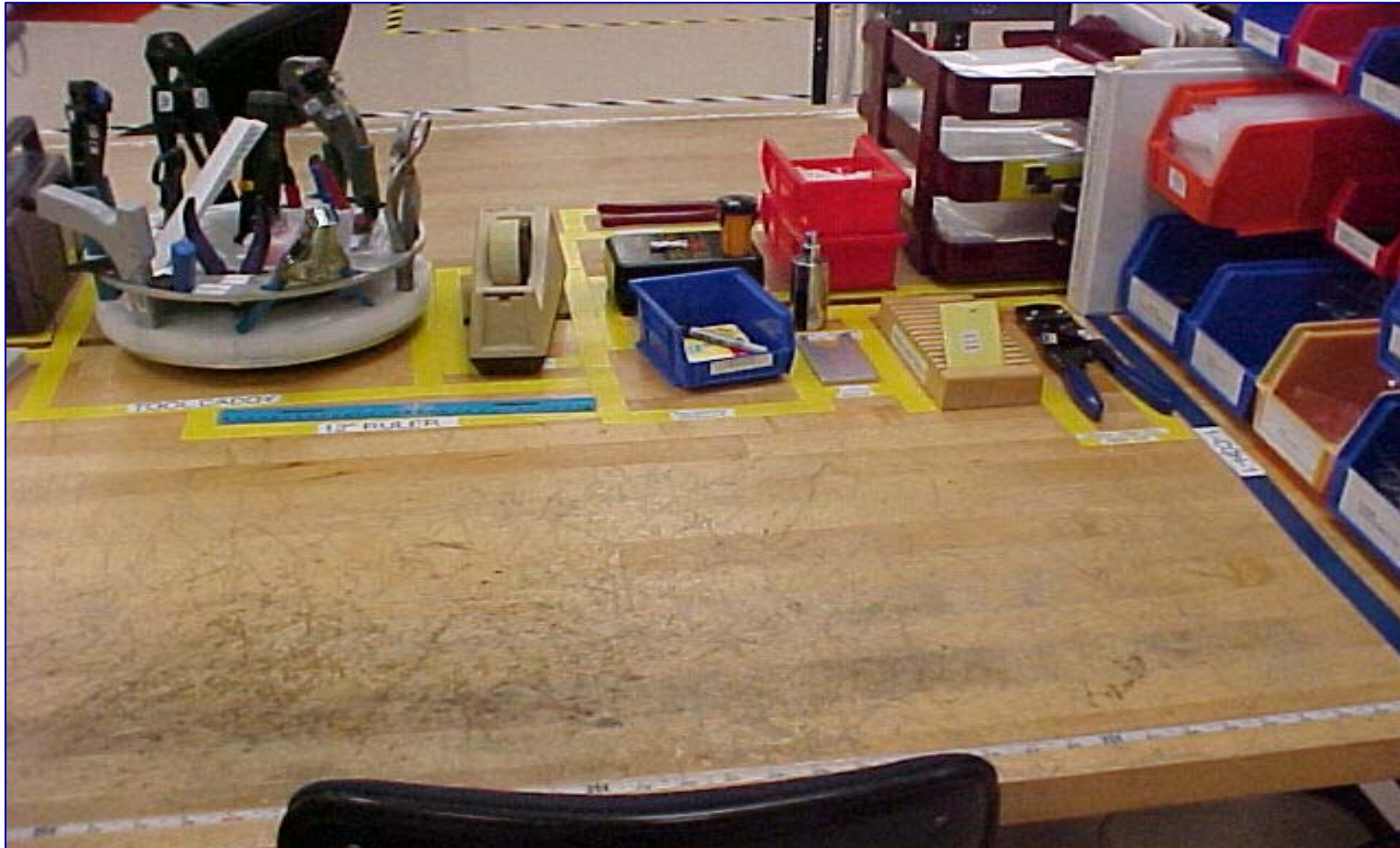
# 1: Sort Out

## ■ GET RID OF WHAT'S NOT NEEDED

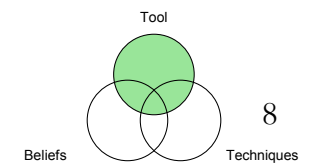
- ❑ start with a red tag campaign
- ❑ tag everything that looks disorderly or unsafe
- ❑ be ruthless (9/10 you'll be OK, you'll get over the 1/10)
- ❑ if in doubt throw it out
- ❑ if still in doubt, send it to a “red tag area” for resolution
- ❑ you should be removing truckloads of items... be tough
- ❑ (Sometimes you'll need to ask for forgiveness later!)



# Sort



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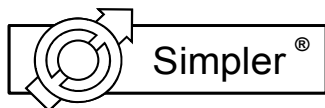




# 2: Straighten

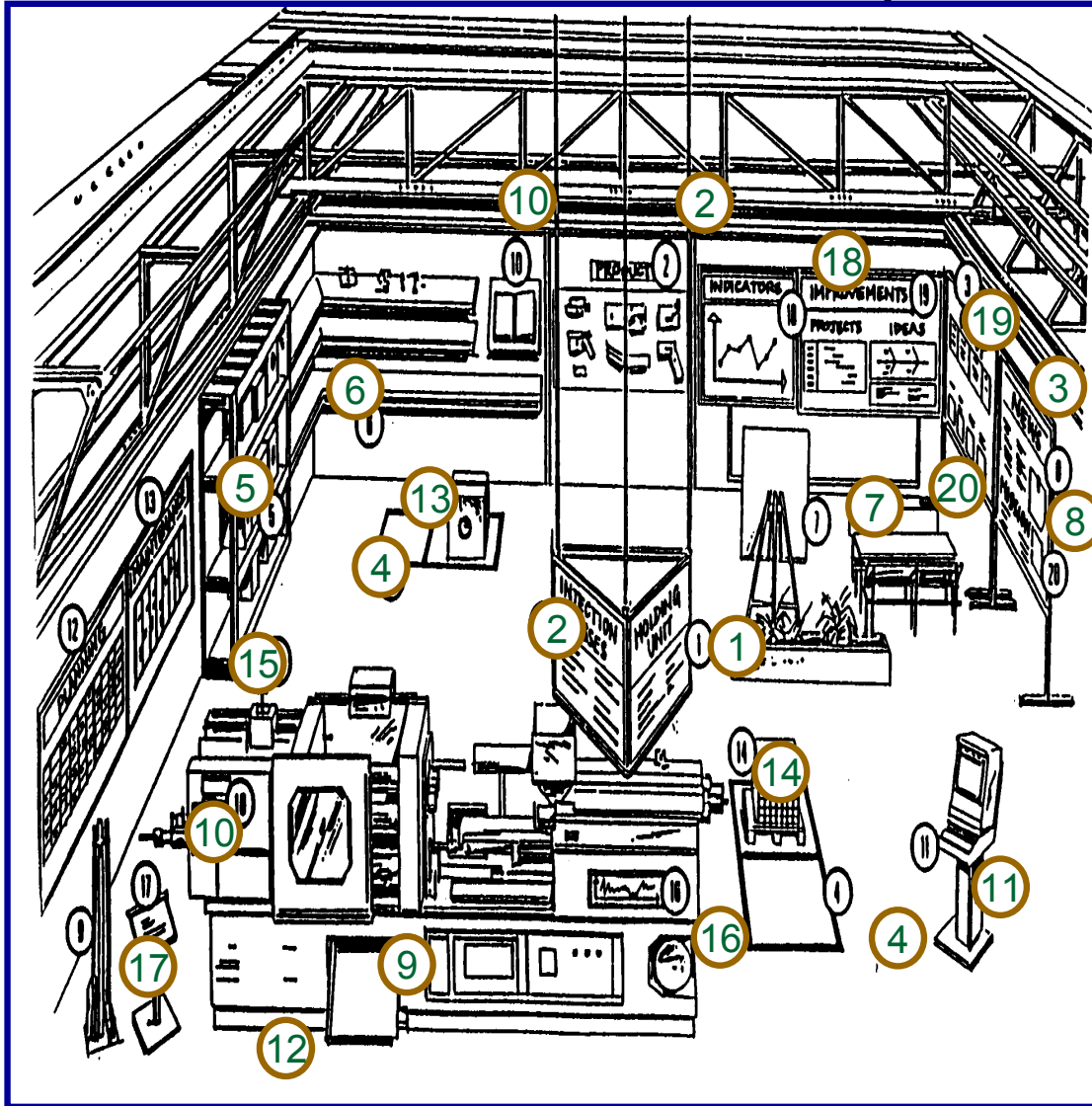
## ■ ORGANIZE WHAT BELONGS

- create a place for everything
- deal with the open red tags from the "Sort Out" step:
  - RESOLE UNSAFE CONDITIONS
  - ORGANIZE PARTS OR MATERIALS
  - RESOLVE THE THINGS YOU WERE AFRAID TO THROW OUT
  - WRITE OFF OR SELL OFF OBSOLETE MATERIALS



# 6. Visual Management in Practice

## Best Practice Examples



### The Team's Work cell – Target State

1. Identification of area
2. Identification of process, resources, and products
3. Identification of the team
4. Footprints on the floor
5. Footprints of tools and racks
6. Technical area
7. Communication and break areas
8. Information and instructions
9. Tool Board

### Visual Documentation

10. TWI - Std Work Documents

### Visual Production Control

11. Computer terminal
12. Production schedule
13. Maintenance schedule
14. Identification of RM and WIP

### Visual Quality Control

15. Monitoring signals for machines
16. Statistical process control (SPC)
17. Record of problems/defects

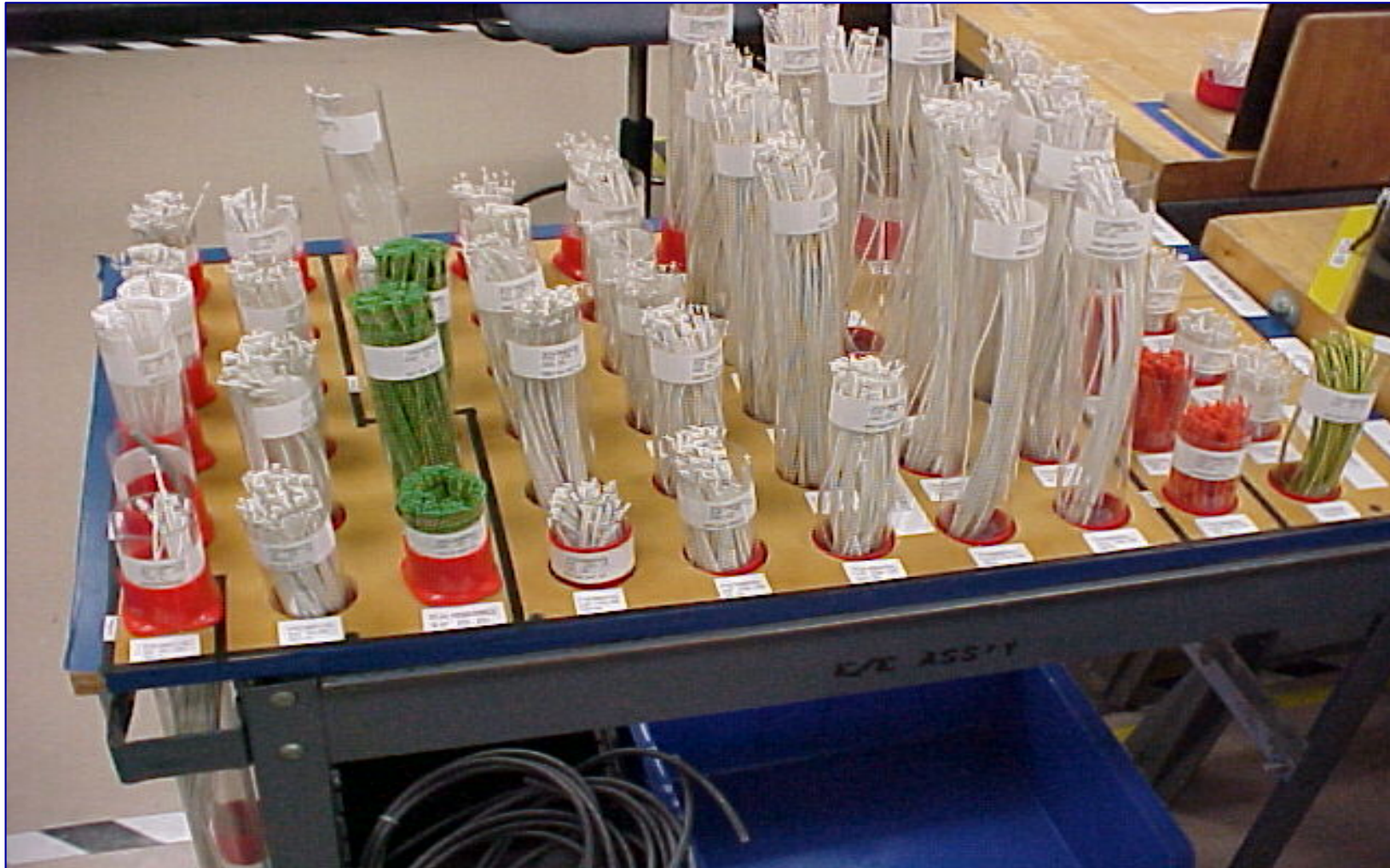
### Metrics/Key Measures

18. Goals, Objectives and Results-Product/Process Control Boards

### Visual Process

19. CI activities
20. Project List and mission statement

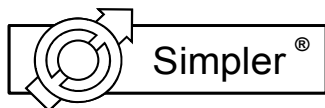
# Straighten



# 3: Scrub

## ■ CLEAN UP, SEE AND SOLVE PROBLEMS

- ❑ make the work area absolutely clean
- ❑ clean everything (equipment, floors, walls...)
- ❑ paint everything (equipment, floors, walls...)
- ❑ look for problems...
  - LEAKS?
  - LOOSE OR MISSING ITEMS
  - UNSAFE CONDITIONS
  - CAUSES OF MESSSES OR PROBLEMS...
  - QUALITY ISSUES
- ❑ solve problems (root cause), take corrective action (prevent)

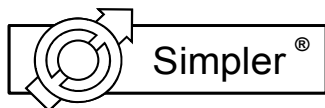




# Scrub



**Break Room - organized and clean**



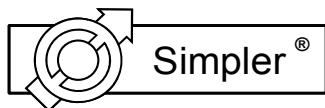
# Scrub

Cabinet under sink in  
Training Room

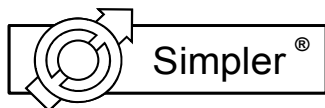


# 4: Safety

- MAKE THE WORKPLACE SAFER
  - look for unsafe conditions
  - look for potential for unsafe acts
  - look for difficult tasks (are they ergonomic?)
  - try the jobs yourself... where could you get hurt?
  - list the opportunities
  - resolve them
  
- put creativity before capital and put safety first!!!



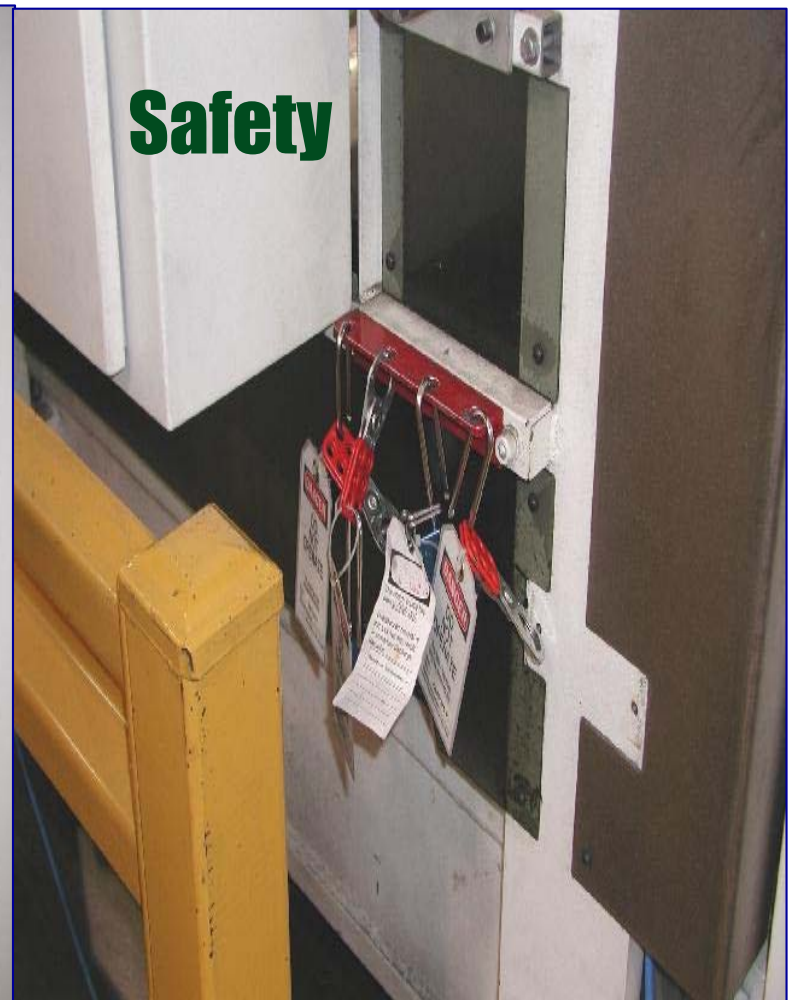
# Safety





# Safety



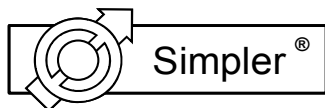


Lock Out / Tag Out program includes a storage area at the entrance to the plant floor for all locks and tags (locks are color coded for operators, mechanics, and contractors). Also, there is a place at each machine to store locks and tags when not in use.

# 5: Standardize

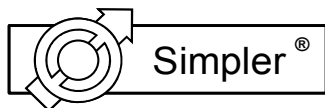
## ■ ASSIGN TASKS AND MANAGE VISUALLY

- Who will do what to keep the area clean, safe and orderly?
  - agree on daily and weekly tasks
  - establish a visual management system for these tasks
- can you tell at a glance if the tasks have been done?

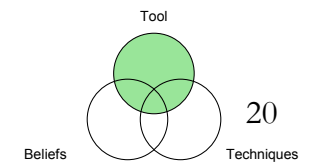




# Standardize

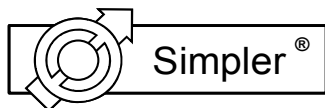


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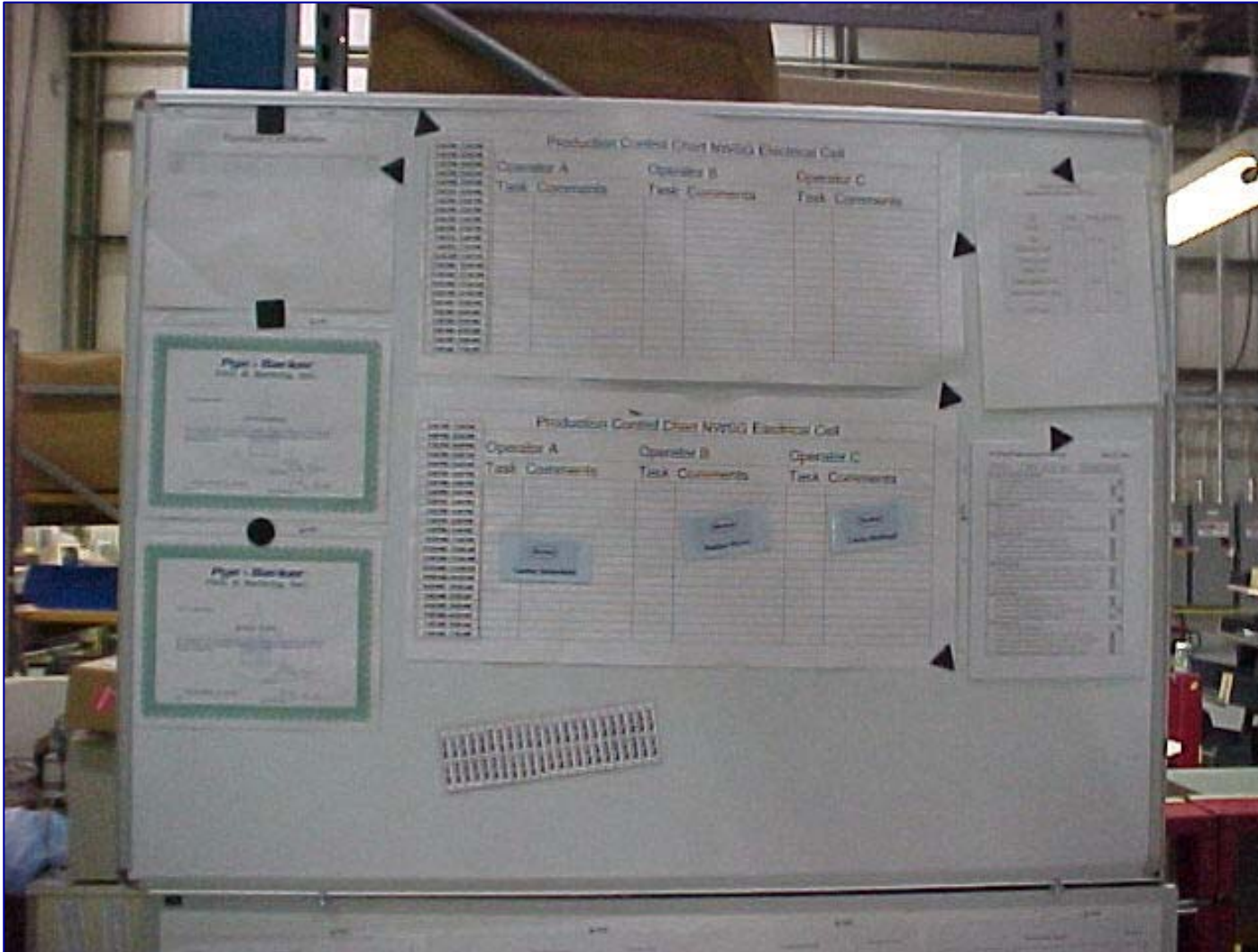


# 6: Sustain

- KEEP IT UP (AUDIT AND INSIST)
  - develop audit checklists for office and for shop floor
  - assign the audit role to someone outside the area
  - track the audit results (a bit of friendly competition?)
  - hold yourselves accountable for sustaining

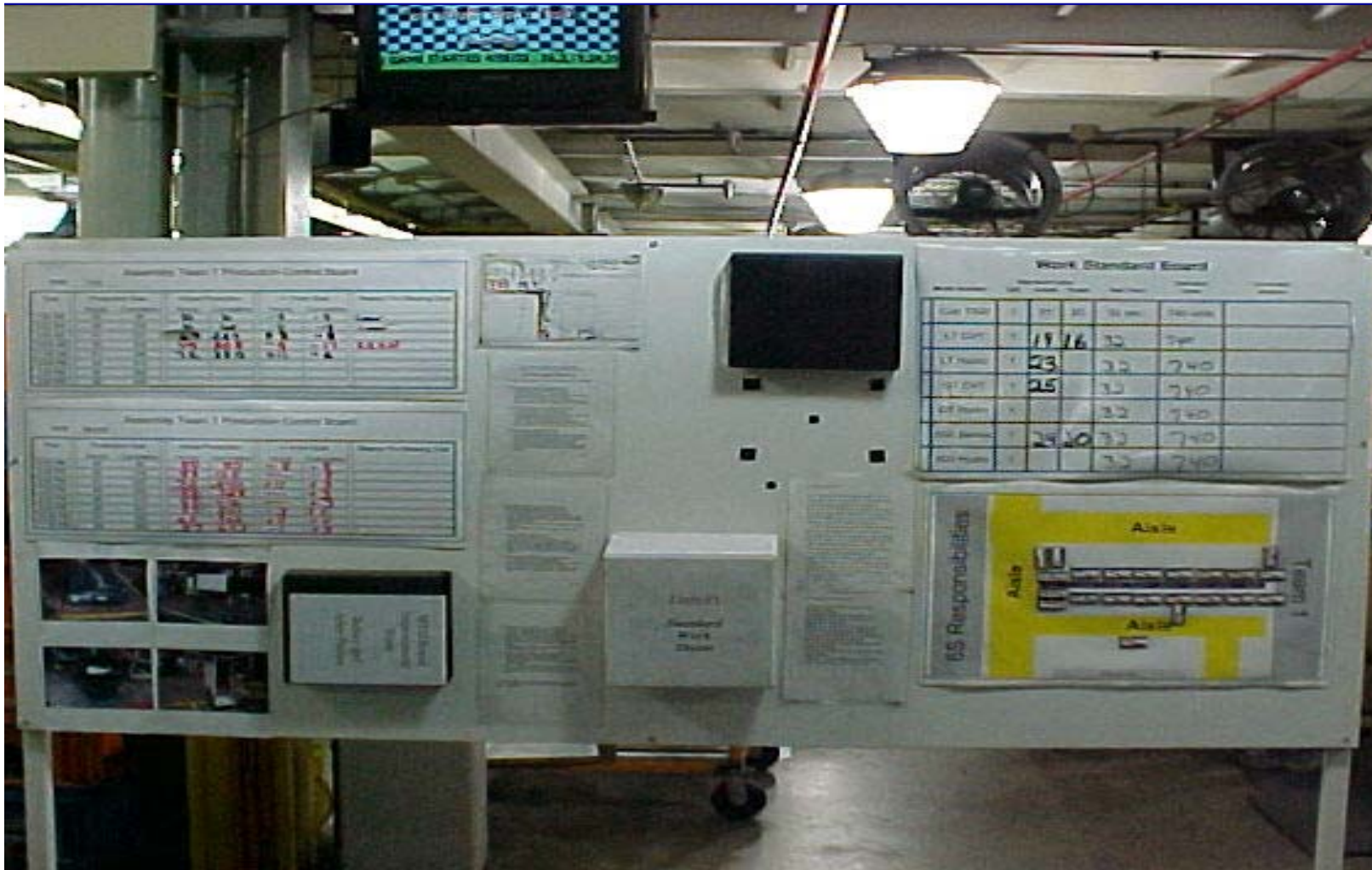


# Sustain



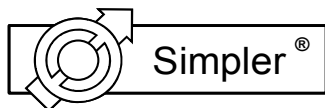


# Cell Tracking Center – Production Control Board



# Insights

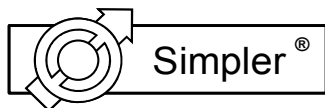
- areas with great 6-S usually also have great numbers
- basic 6-S is the first step in building a new culture
- if you expect 6-S, lead by example (your office!)
- be persistent (it's OK to nag)





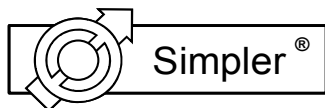
# Definition of a Visual Workplace

- A Clear and precise outcome
- A Visual Workplace is:
  - A work environment that is self-ordering, self-explaining, self regulating, and self-improving
  - Where what is supposed to happen does happen, on time, every time, day or night...
  - Visual Management is managing a visual workplace



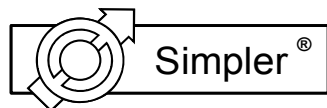
# Definition of a Visual Device

- A Visual Device is a mechanism or thing:
  - intentionally designed
  - To influence, direct, or limit **behavior**
  - By making vital information available **without speaking a word** (Think of a supermarket; Where do you find the breakfast cereal?)
  - Should transmit a non-verbal message in 5 Seconds
  - Should tell us what we need to do (action)
  - Should be at the point-of-use
  - Translates data into information, information into meaning, and meaning into behavior

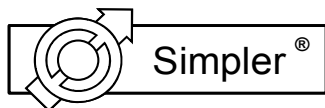


# Visual Systems, Cells, or Communications Centers

- A Visual System is a cluster or group of visual devices, aimed at a single performance outcome
- Because these systems are self-explaining, we can be self-regulating
- Example: A standard car has on the average of 144 visual devices on or inside the car. Intentionally designed to help us drive, maintain, and repair the car
- A Visual Cell is a cluster of visual devices within a confined space
- A Communication Center is a cluster of visual information located near people collection areas or meeting locations

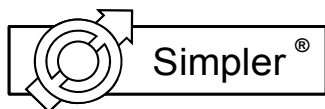


# Sustain: TPOC – Enterprise Level Tracking Center

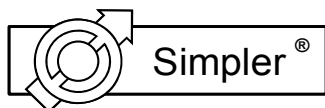
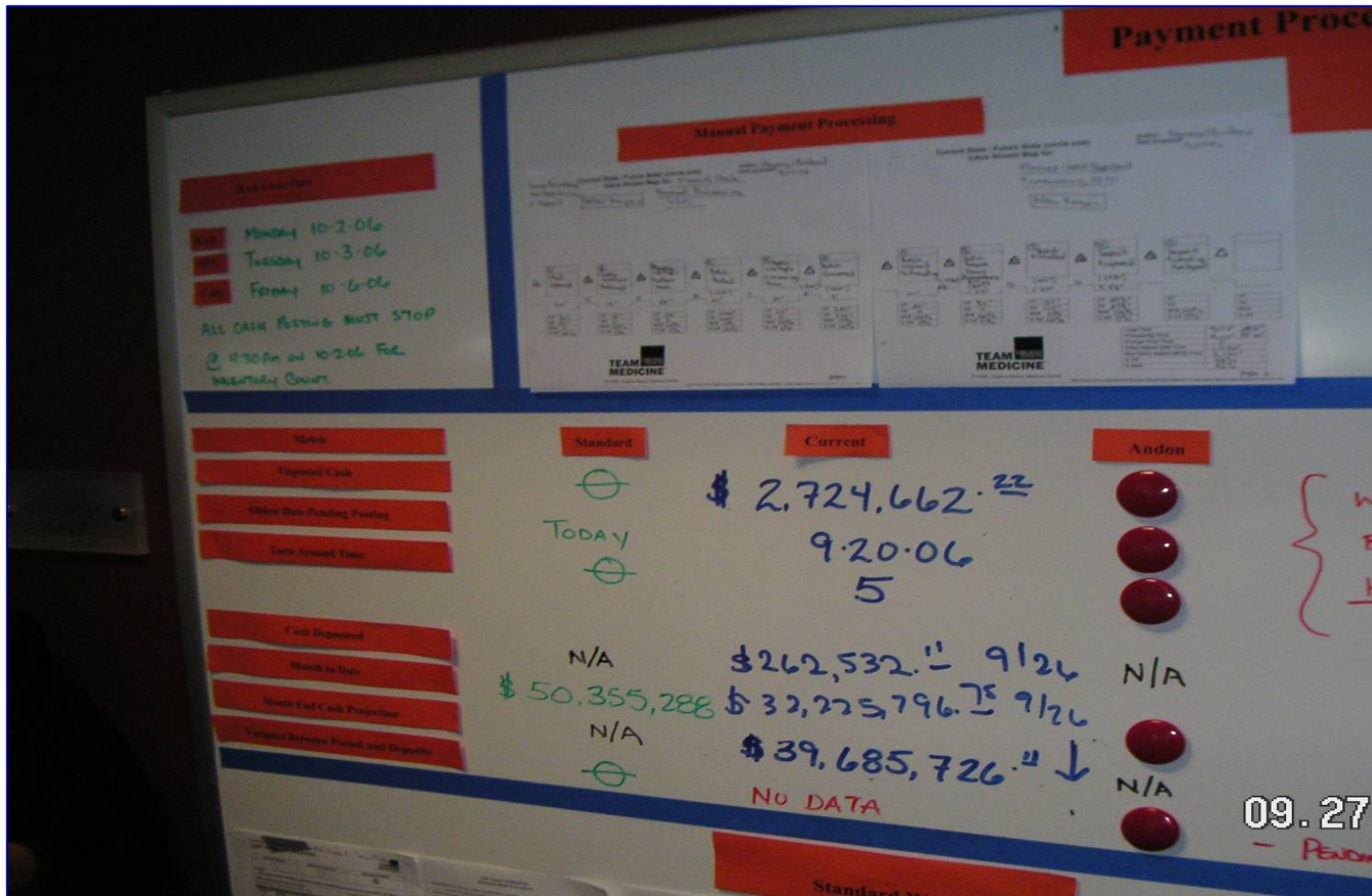




# Sustain: TPOC – Enterprise Wide Tracking Center Example

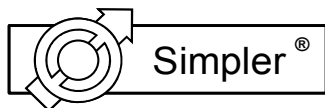
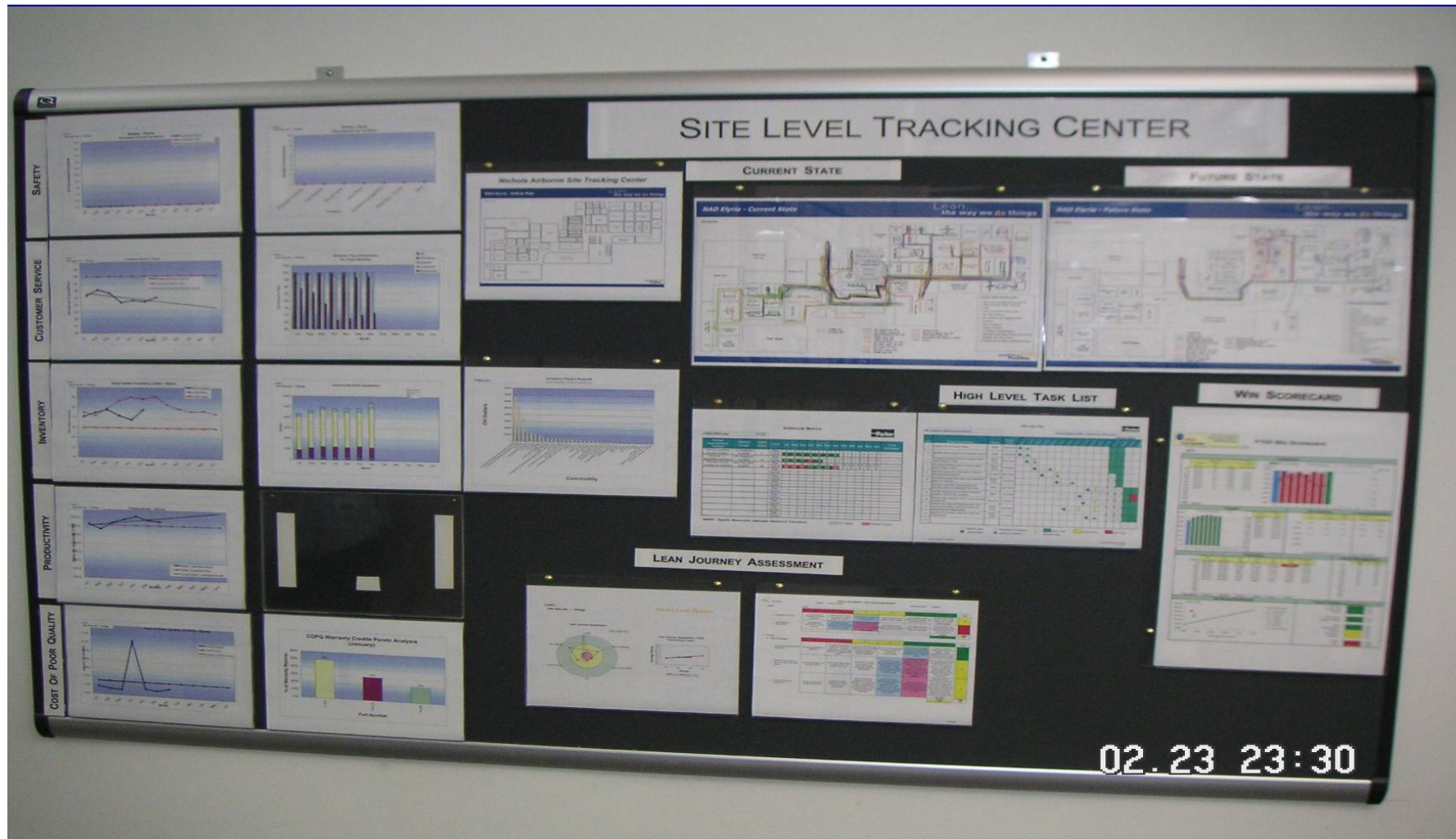


# Admin Cell Tracking Center

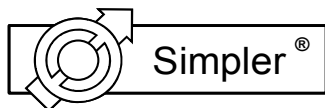




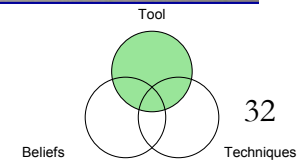
# Sustain: Mission – Site Level Tracking Center



# Sustain: Value Stream/Site Level Tracking Center (Mission)

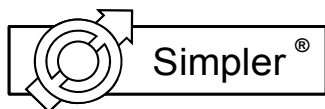


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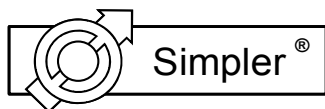




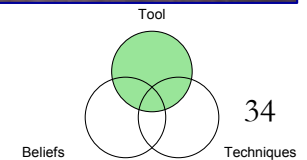
# Sustain: Value Stream – Mission Level Tracking Center/Board



# Kaizen/Continuous Improvement Board – CI Events Tracking Center

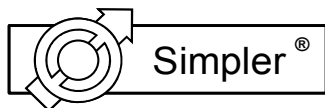


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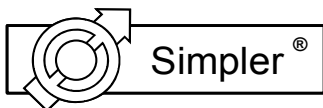




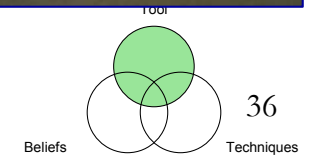
# Kaizen/Continuous Improvement Board – 6S Tracking Center



# Sustain: Cell Tracking Centers - Kiosks



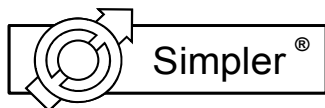
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# 6S & Visual Management Examples

## Updated Hour-by-hour boards





# Cell Tracking Centers – Production Control Board Examples

PRODUCTION REPORTS

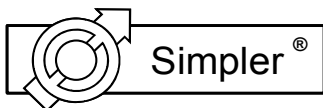
NAME	TIME	QUANTITY
ERNESTO VIBE	NOUAM LELLIE	2
AUTOMOLD	FRANK	3
TACOMA	RICARDON THAVANH	3
D-CAB	FRANK	2
CUT/BOND	FRANK	1
ST.LAWRENCE	FRANK	1
CFL	FRANK	1
LAMINATOR	FRANK	1
TUNNEL SILENCER	FRANK	1
SAMCO	FRANK	1
SERVICE HOLE	FRANK	1
DASH CAR	GEORGE FRANK	4
GROUP LEADER	RICARDON	1
REAR FLOOR	MARY J.	1
MATERIAL HANDLER	FRANK	3
REWORK	ABEL	AS NEEDED
KAIZEN/7-5	NIY	1
SERVICE PARTS	ODDOR	2 DAYS PER WEEK
RECEIVING	SILVER	1
PROJECTS		1 TOTAL 31
PROCESS	2ND SHIFT	OTHER PROD.
VIBE		

7 11:26 AM

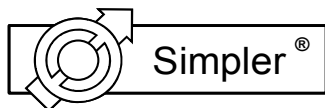
DATE: 8-7-06 TAKT TIME: 77 SEC CYCLE TIME: 77 SEC

TIME SCHEDULE	AVAIL MIN	TARGET @ 92%	ACTUAL PIECES	REWORK / SCRAP	EXPLANATION
6:00-8:00	110	78	80	0	
8:00-10:00	110	78	70	0	FIRE DRILL
10:30-12:30	120	86			
12:30-2:30	100	71			
AVAIL: PROD: QUAL: AVAIL * PROD * QUAL = OEE:					
1ST SHIFT:					
2:30-4:30	110	78	78	1	Great Job / Tool Change
4:30-6:30	110	78	78	0	GOOD JOB GUS!
7:00-9:00	120	86	86	0	STOP ON OVERTIME (5) 2nd Shift.
9:00-11:00	100	71	73	0	Plant was here
AVAIL: .71 PROD: .89 QUAL: .99 AVAIL * PROD * QUAL = OEE: 92%					
2ND SHIFT:					
11:00-12:30	90	64			
12:30-2:00	110	78			
3:00-4:30	90	64	65	5	
4:30-6:00	70	50	70	4	
AVAIL: .88 PROD: .91 QUAL: .93 AVAIL * PROD * QUAL = OEE: 74					
3RD SHIFT:					

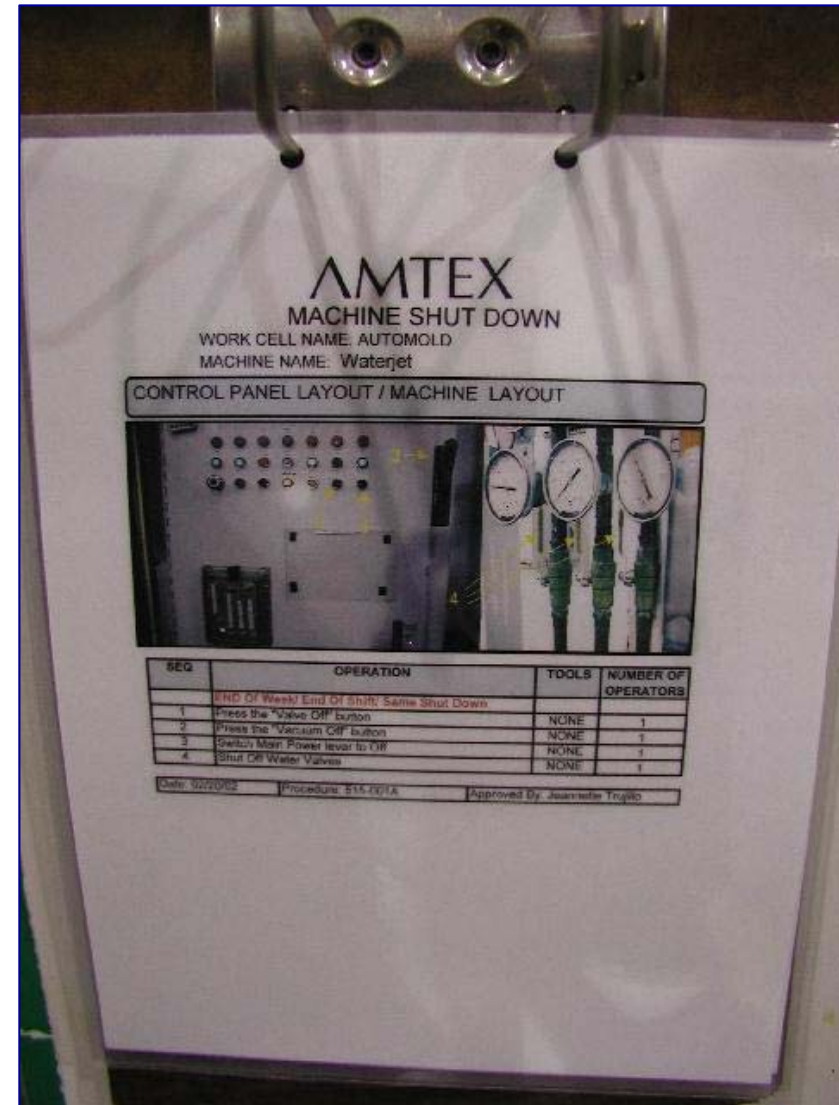
7 11:30 AM



# Key Points Sheet Example





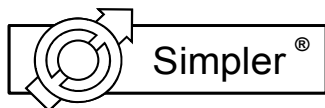


Each machine has a posted start-up and shut-down procedure.

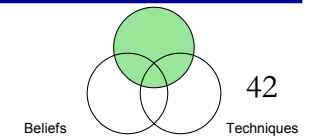


# Cells – Small parts feeding systems

Point of use Tools Boards

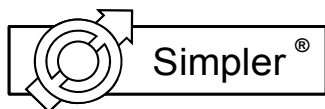


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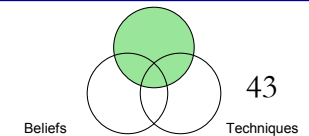




# Low Volume, High Mix – Mix Model Cell

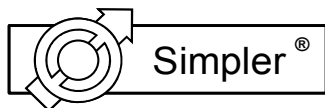
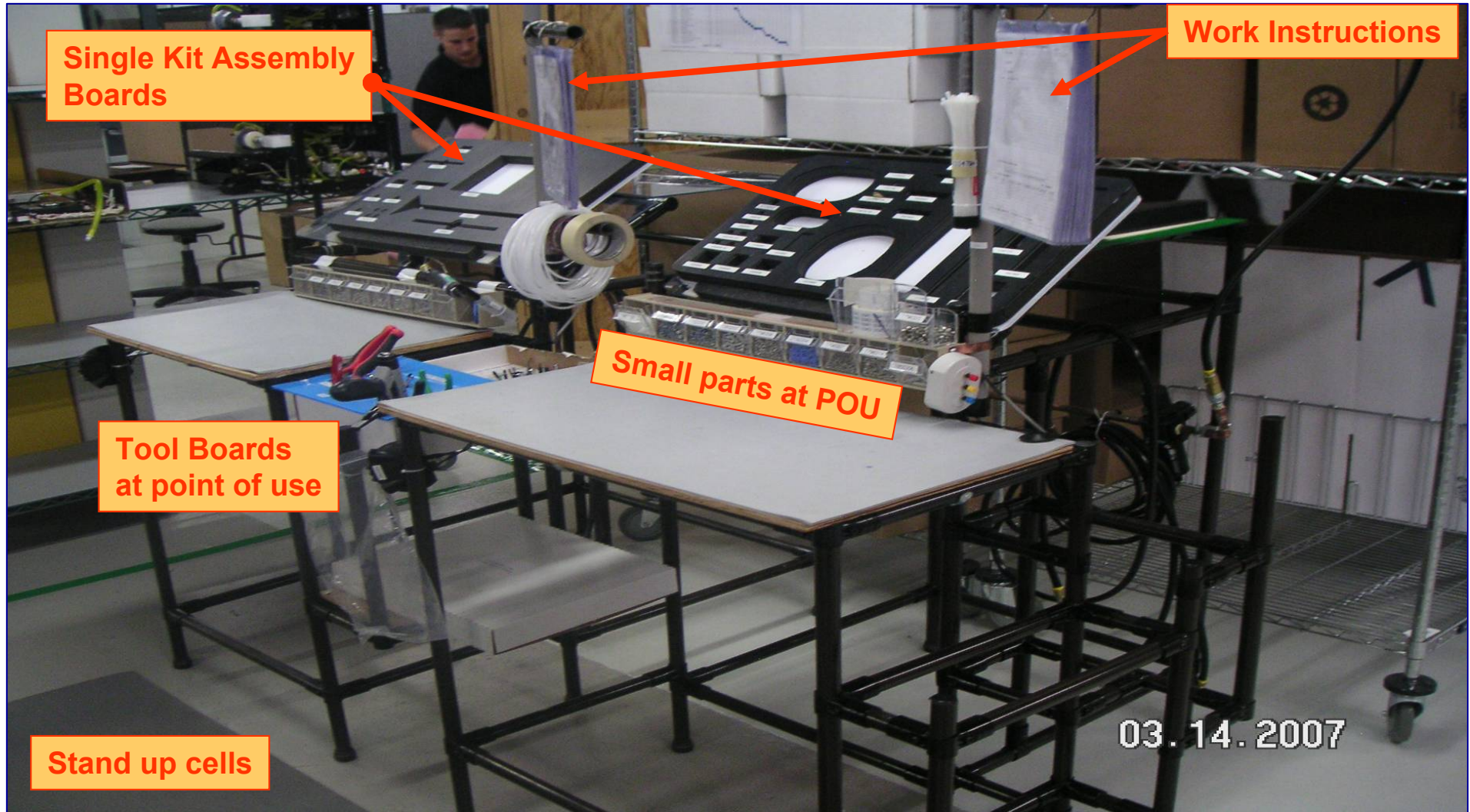


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# Work Cell Example





# One Piece Flow Cell Example



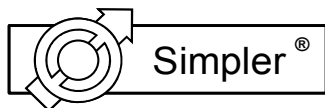


# Visual Controls – TPM Standard Work Example

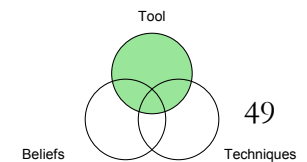




# Point of Use Tools – Work Cell



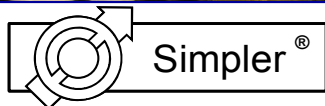
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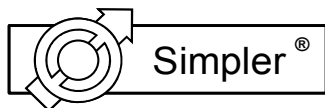
# Tool Board Example

(Tools at point of use)

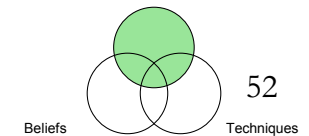




# Assembly Cell Example with Automation

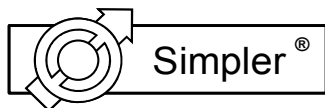


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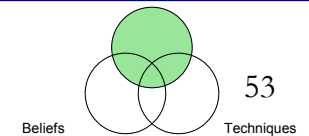




# Cell Example

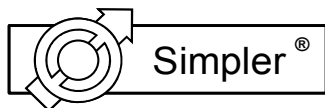


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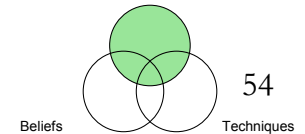




# Color Coded Press with visual signals

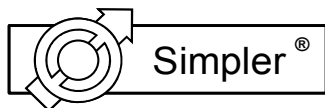
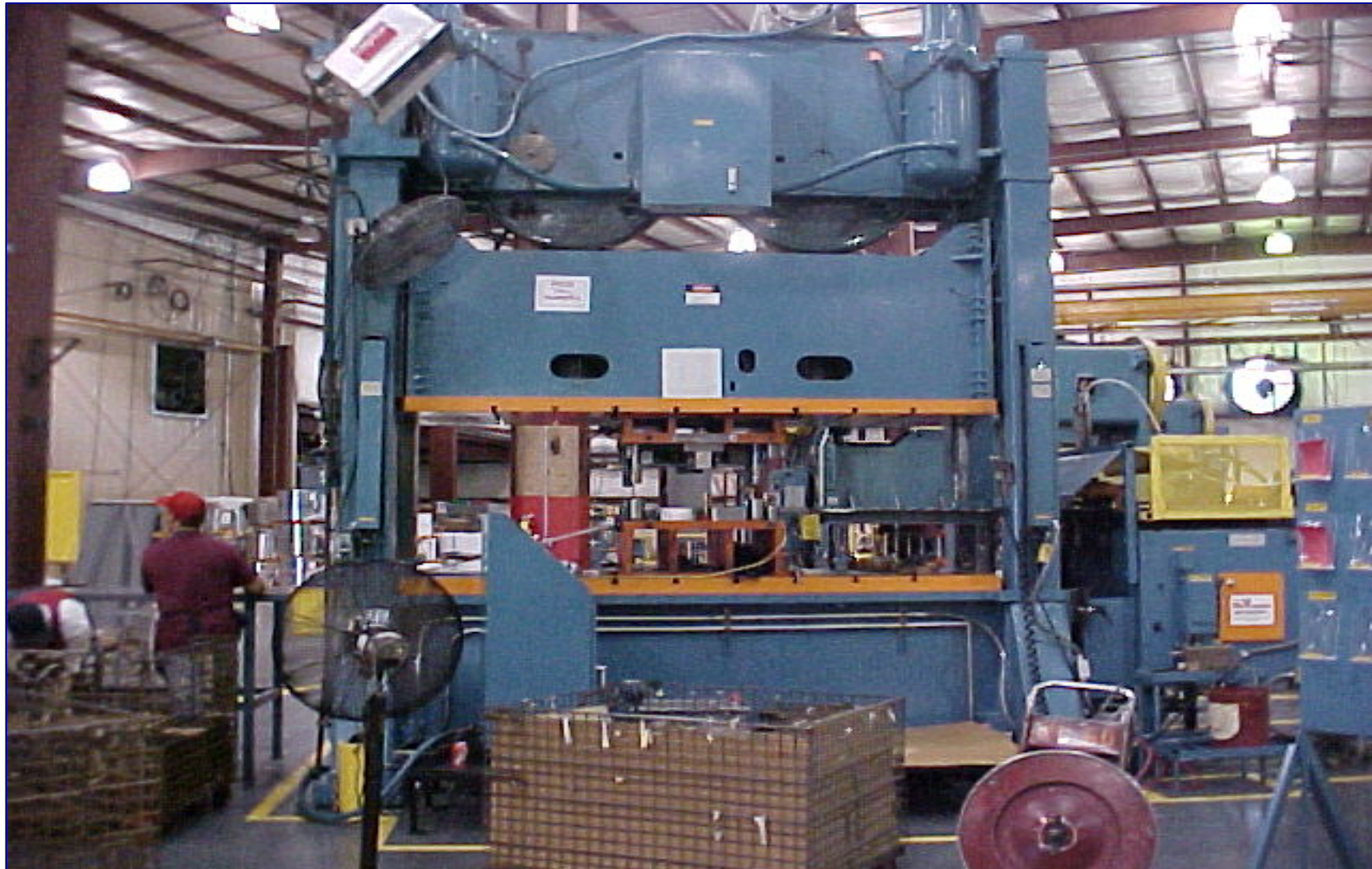


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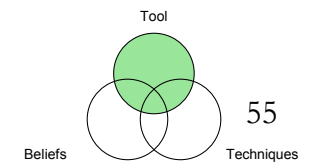




# Stamping Press - start of Set-up Reduction Event



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# Stamping Press - Information Board from TPM Event





# Press - Decoiler, requires coil change with each die change



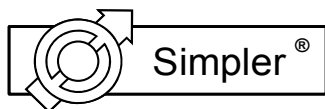


Press - Coil Feeder, front:

(Feed adjustment required each change)



Press - Coil Feeder, back



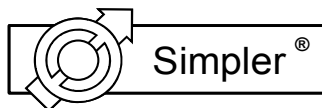
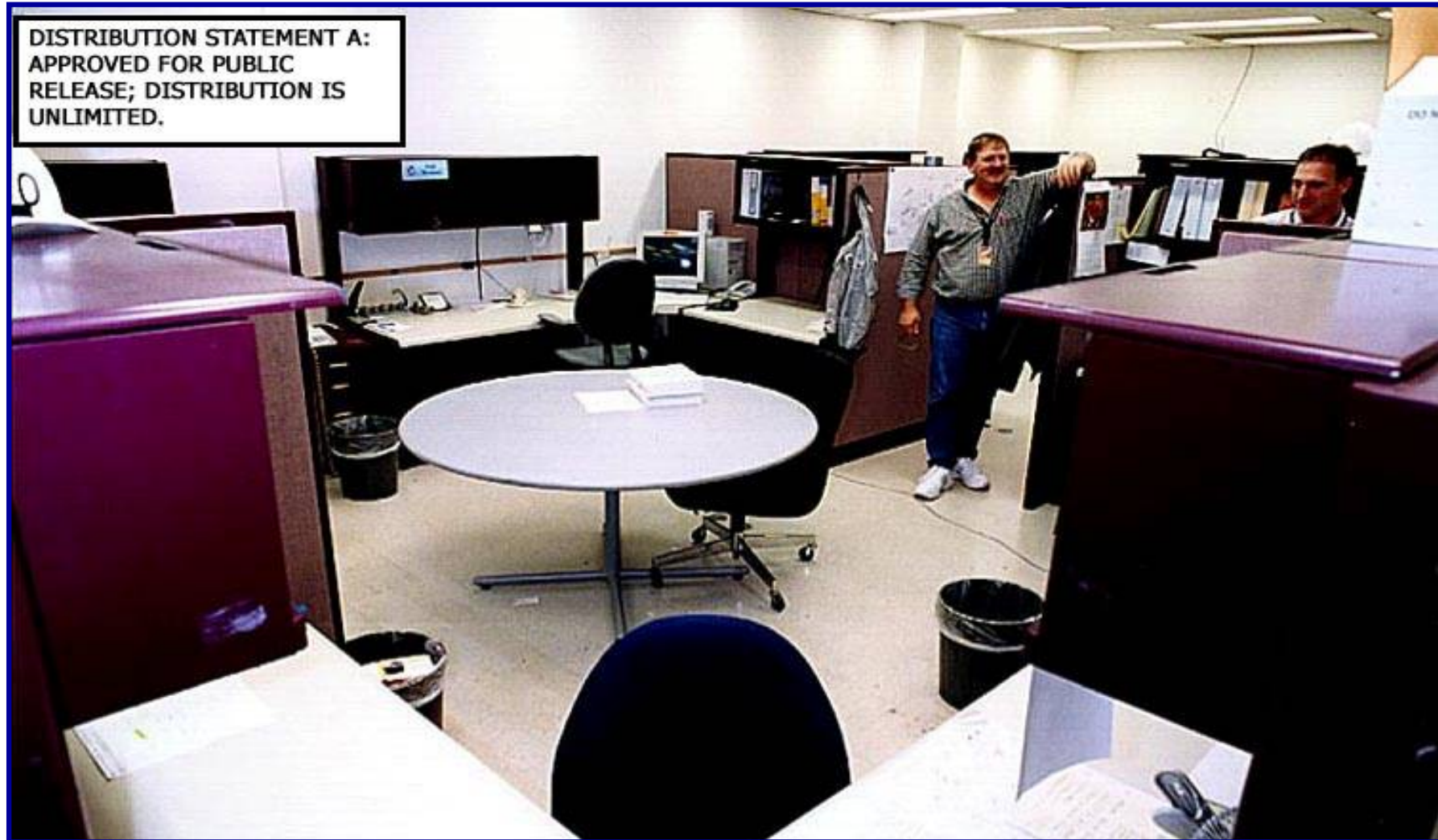


# Stamping Press - Rear of press used to collect off-fall





# Business Process Cell Example



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