

# Lean Webinar Series: 5S & Visual Management for Non-Manufacturing

December 2, 2010





# You will learn...

- ❖ Why 5S & Visual Management are critical to establishing a Lean Enterprise.
- ❖ How to implement 5S in an office, department, or organization-wide.
- ❖ How a visual workplace creates the clarity necessary for efficient and effective operations.
- ❖ Methods for creating a visual workplace.

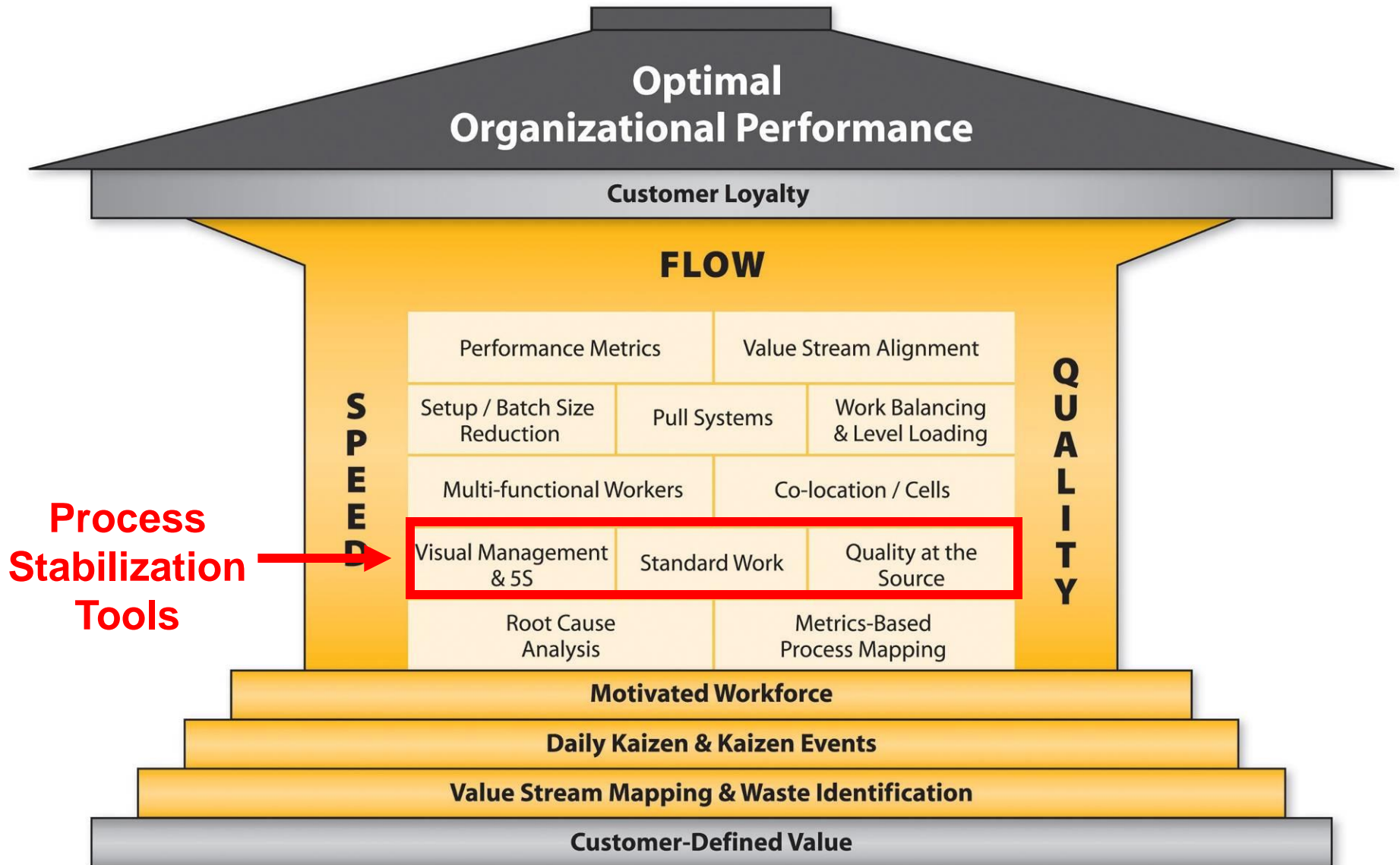
# Your Instructor

- ❖ Early career as a scientist; migrated to quality & operations design and management in the mid-80's.
- ❖ Launched Karen Martin & Associates in 1993.
- ❖ Specialize in Lean transformations in non-manufacturing environments.
- ❖ Co-author of *The Kaizen Event Planner*; co-developer of *Metrics-Based Process Mapping: An Excel-Based Solution*.
- ❖ Instructor in University of California, San Diego's Lean Enterprise program.

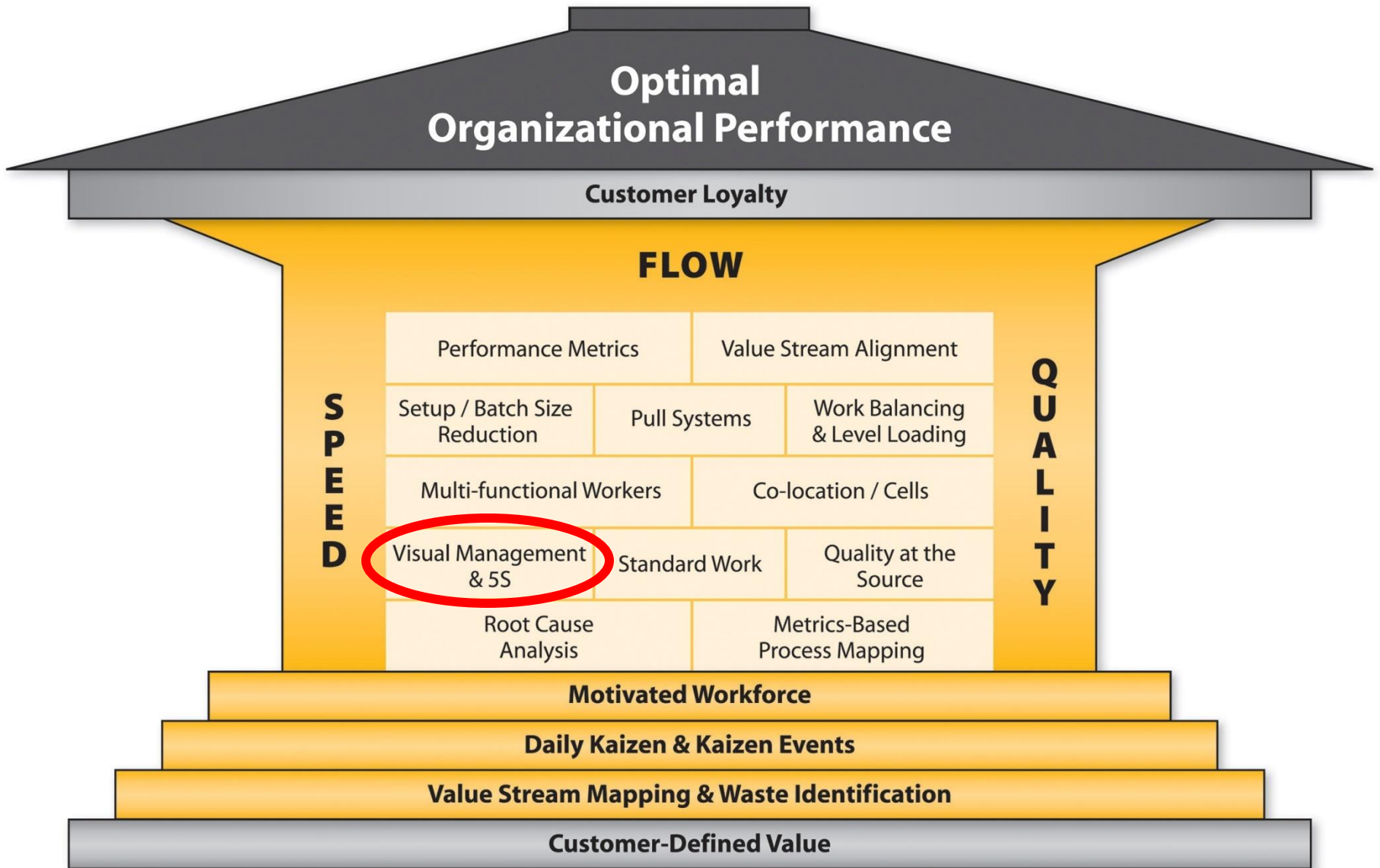


Karen Martin,  
Principal  
Karen Martin &  
Associates

# Building a Lean Enterprise



# Building a Lean Enterprise



# 5S Elements

❖ Sort	Seiri	Tidiness
❖ Set in Order	Seiton	Orderliness
❖ Shine	Seiso	Cleanliness
❖ Standardize	Seiketsu	Standards
❖ Sustain	Shitsuke	Discipline

***... and SAFETY above all else***

# 5S: The Concept

- ❖ An organized and clean environment:
  - Simplifies work
  - Increases productivity (less time looking and waiting)
  - Reduces expenses
  - Increases the speed at which services can be delivered
  - Creates a safer workplace
  - Reduces workforce frustration; improves morale
  - Builds pride in the workplace
  - Builds customer confidence
  - Reduces exposure to risk (legal, financial, accreditation)
  - Makes it easier to train new staff
  - **Makes problems visible**



# Looking for Stuff: Time is Money

- ❖ Organization with 1,500 employees
  - Earn average of \$22 per hour
  - Work 250 days per year
- ❖ Each employee spends an average of 10 minutes per day looking or waiting for equipment or material
  - Individual impact
    - = 41.7 hours wasted time per year
    - = Over a week of frustrating, unfulfilling, nonproductive time
  - Organizational impact
    - = 62,550 hours of nonproductive time
    - **30 FTEs worth of valuable resources doing non-value-adding work**
    - = \$1.4 Million unnecessary direct expense per year (unloaded)



# Why doesn't every work environment look like this?



# Which Office *Feels* Better?



# Office 5S

**BEFORE**



**AFTER**



**BEFORE**



**AFTER**



# Morale Implications of Messy Workplaces



# Conference Room 5S



**Before**

**After –  
Standard  
Supplies;  
Ownership**



# 5S Forms Storage Area - Before



# 5S Forms Storage Area - After



# Healthcare 5S: Before / After

Expired and mixed items



Forced rotation; A place for everything and everything in its place.





# What should you 5S?

- ❖ Offices & work areas
- ❖ Hallways, lobbies, common areas
- ❖ Break rooms
- ❖ Storage areas
- ❖ Drawers, shelves, cupboards
- ❖ Hard drives; shared drives!!!!!!



**Sort**

**Set in Order**

**Shine**

**Standardize**

**SUSTAIN**

# 5S Event Planning

- ❖ Formal charter may be necessary
  - Form team
  - Plan report outs and/or an “open house”
- ❖ Measure the current state
  - To establish a baseline from which to measure improvement
    - E.g. Audits, staff surveys
    - Take before photos
    - Gather data, if relevant
- ❖ Plan your approach
  - If in active work area, how to best at least intrusive as possible
  - Define your sort area
- ❖ Gather cleaning, labeling and other supplies
  - If also implementing kanban, greater planning needed!



# Consider Pre- and Post-5S Staff Surveys

## Staff Inventory Management Survey



Date: \_\_\_\_\_ Name (optional): \_\_\_\_\_

Area or department: \_\_\_\_\_ Title (optional): \_\_\_\_\_

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
1. The supplies I need are available at all times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. If an item is out-of-stock, I receive the item within the necessary timeframe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The supplies I need are located close to where I need them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Overall, I'm pleased with supplies availability, location, and organization?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How often is an item you need out-of-stock?	_____ times per <b>day</b>			
6. How often do you obtain supplies from your department's "official" stock locations?	_____ times per <b>week</b>			
7. What improvements would you like to see related to supplies/materials? (Use reverse side for additional comments)	_____ _____			



# 5S Event Supplies Checklist

Leadership Sponsor		Area to Be 5S'd	
Team Lead		Event Dates	
	<input checked="" type="checkbox"/>	N/A*	Description
1	<input type="checkbox"/>	<input type="checkbox"/>	Adhesive supplies - tape, push pins, rubber bands, paper clips, velcro, etc.
2	<input type="checkbox"/>	<input type="checkbox"/>	Cleaning supplies - buckets, cleanser, sponges, rags, scouring pads/steel wool, broom, dustpan, etc.
3	<input type="checkbox"/>	<input type="checkbox"/>	Cutting supplies - scissors, box cutters, etc.
4	<input type="checkbox"/>	<input type="checkbox"/>	Digital camera
5	<input type="checkbox"/>	<input type="checkbox"/>	Gloves
6	<input type="checkbox"/>	<input type="checkbox"/>	Flip chart and markers - to communicate progress, capture ideas, categorize items, etc.
7	<input type="checkbox"/>	<input type="checkbox"/>	Labeling supplies - label maker, labels, etc.
8	<input type="checkbox"/>	<input type="checkbox"/>	Ladders, step stools, etc.
9	<input type="checkbox"/>	<input type="checkbox"/>	Laminator and laminate sheets
10	<input type="checkbox"/>	<input type="checkbox"/>	Markers - Sharpie, permanent, highlighters, etc.
11	<input type="checkbox"/>	<input type="checkbox"/>	Organization supplies - file folders, hanging folders, containers, dividers, akro bins, etc.
12	<input type="checkbox"/>	<input type="checkbox"/>	Paint & paint pens
13	<input type="checkbox"/>	<input type="checkbox"/>	Post-it notes
14	<input type="checkbox"/>	<input type="checkbox"/>	Rolling tape measure or pedometer
15	<input type="checkbox"/>	<input type="checkbox"/>	Tape - masking, scotch, electrical
16	<input type="checkbox"/>	<input type="checkbox"/>	Scrapers, box cutters, etc.
17	<input type="checkbox"/>	<input type="checkbox"/>	Stapler
18	<input type="checkbox"/>	<input type="checkbox"/>	Three-hole punch
19	<input type="checkbox"/>	<input type="checkbox"/>	Three-ring binders
20	<input type="checkbox"/>	<input type="checkbox"/>	Tags - red, yellow, green
21	<input type="checkbox"/>	<input type="checkbox"/>	Tape measure, yard stick, rulers
22	<input type="checkbox"/>	<input type="checkbox"/>	Tools - hammer, screw drivers, drill & bits, nails, level, liers, etc.
23	<input type="checkbox"/>	<input type="checkbox"/>	Signage supplies
24	<input type="checkbox"/>	<input type="checkbox"/>	
25	<input type="checkbox"/>	<input type="checkbox"/>	



# 5S Resources

- ❖ [www.5Ssupply.com](http://www.5Ssupply.com)
- ❖ [www.the5Sstore.com](http://www.the5Sstore.com)
- ❖ [www.visualworkplace.com](http://www.visualworkplace.com)
- ❖ Grainger industrial supply

**Sort**

**Set in Order**

**Shine**

**Standardize**

**SUSTAIN**



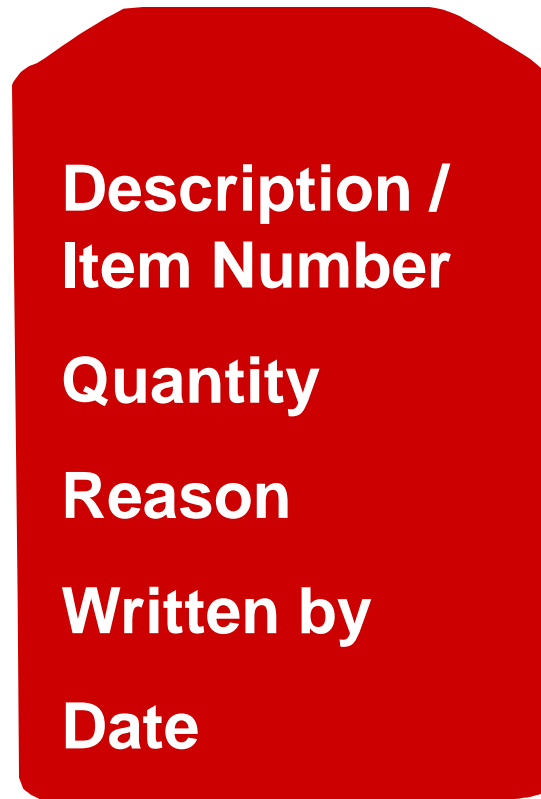
## Sort

**What is the “minimum necessary” to produce “maximum outcomes”?**

# Sort

- ❖ Objective: Reduce clutter
  - Desks, drawers, counters, storage areas, hallways, walls, break rooms, treatment areas, offices, waiting areas, patient rooms, etc.
- ❖ Keep only essential items
- ❖ **Evaluate** every item
  - Need – is it used frequently?
  - Functionality – does it work optimally?
  - Compliance – does it meet accreditation standards and statutes?

# **Red Tag what is not needed on a regular basis**



**(or place item in a “red tag” area)**

# Cleve with Garbage Bin #10



**Sort**

**Set in Order**

**Shine**

**Standardize**

**SUSTAIN**

## Set in Order Shine

**Create designated locations**  
**Clean everything**



# Set in Order

- ❖ Objective: A place for everything and everything in its place
  - Staff should be able to find what they need without asking anyone
  - Everything should be in optimum working order
- ❖ Determine the best location for remaining items (so they're easy to find and use)
- ❖ Relocate out-of-place items
- ❖ Arrange **and label** items and storage areas so items are easy to find and to put away
- ❖ Set inventory limits

# Storage Guidelines

Frequency of Use	Storage Proximity
Hourly	Within arm's reach
Every shift	Within a short walk
Daily	Further away
Monthly	Department storage
Annually	Hospital or offsite storage

Mark Graban, *Lean Hospitals*, 2009



# Clean everything!



# Implement “Cord Management”



**Sort**

**Set in Order**

**Shine**

**Standardize**

**SUSTAIN**

## Standardize

# Maintain the Organized Workplace



# Standardize

- ❖ Create a method (rules) for monitoring and maintaining the first three elements (sort, set in order, shine).
  - What's the process for deciding where new material will be stored?
    - Potential rule – if something new comes in, something must leave.
  - Who cleans? How frequently?
  - Who measures? How frequently?
- ❖ Heavy use of audits and visual controls.
- ❖ Must have an owner!
  - Can be rotating

Sort

Set in Order

Shine

Standardize

**SUSTAIN**

## Sustain

**“Bake” 5S into the  
Organization’s DNA**

# Sustain

- ❖ Ensure adherence to 5S standards through:
  - Assigned accountability (may be rotating)
  - Consistency
    - Regularly scheduled 5S “periods”
  - Communicate expectations and results
  - Training
  - Measurement
  - Rewards
  - Self-discipline; habit
  - Monitoring one another
  - Modeling
- ❖ Conduct weekly or monthly 5S audits







# Visual Management

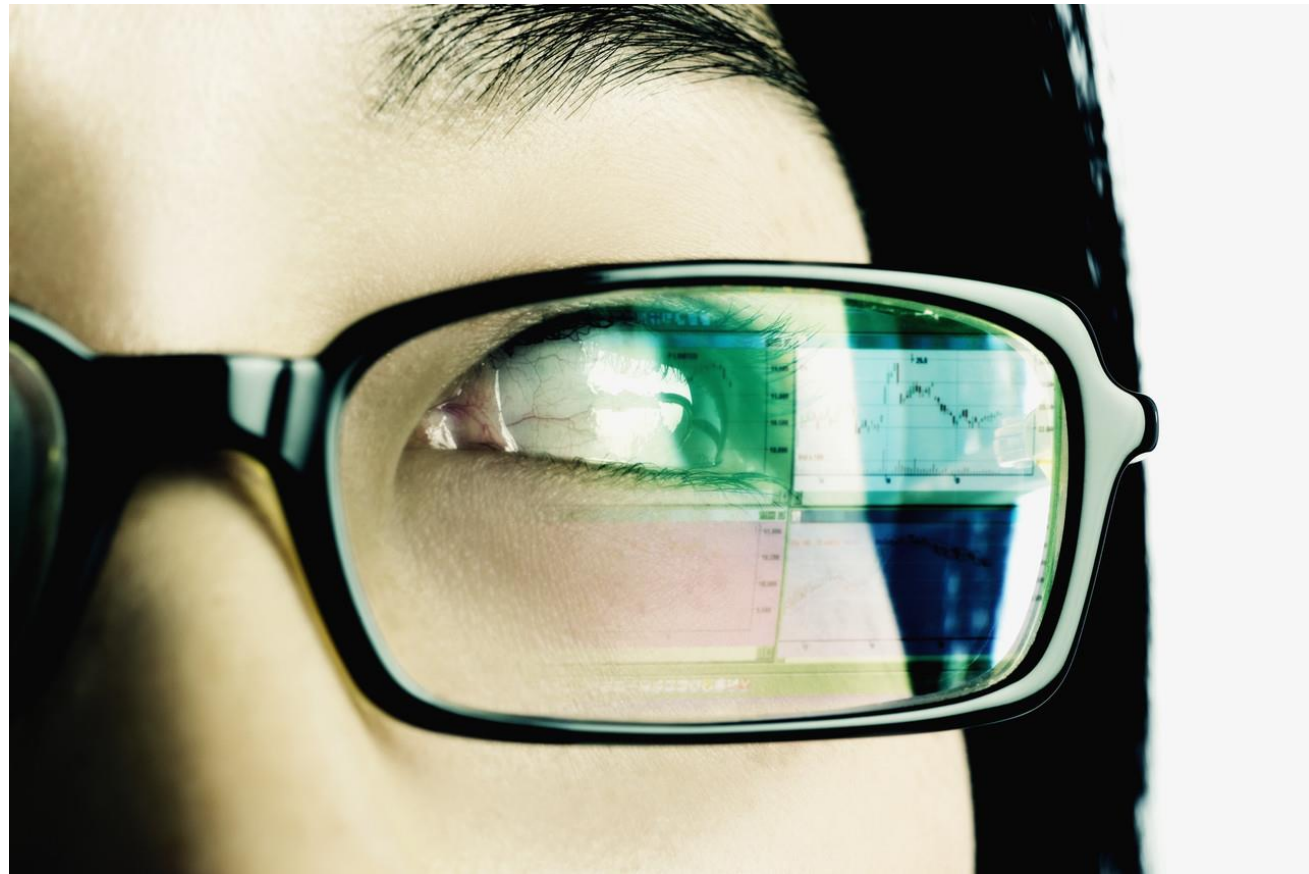
# Visual Management

**Make  
problems  
visible**

**Communicate  
status**

**Improve  
productivity**

**Improve  
confidence**





# Visual Management Tenets

- ❖ Make information *physical*; get it out of the computer!
  - Progress – Work tracking / status
    - Volume; WIP (work-in-process); bottlenecks
    - Types
    - Actual vs. Estimated/Target Key Performance Indicators
  - Problems – What needs attention?
  - Results – How did we do?
- ❖ Anyone should be able to go into a work area and know what's going on within a few minutes without asking many questions.

# Make Problems Visual



**Communicate  
Who, What,  
Where and  
What if?**



## **PURCHASING**

**Marilyn Johnson (ext 7413)**

**COMMODITIES:**

- Sheet Metal
- Welded Frames



.....  
**BACK-UP WHEN OUT OF OFFICE:**

**Carol Tillinghast (ext 3353)**

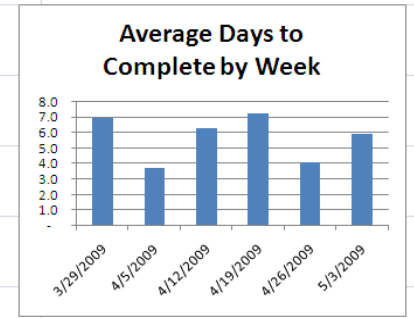
# 5/8/2009

# Sacramento

# 152

sac

	Threshold Days	Total Calls	Below Threshold	At Threshold	Above Threshold	% above threshold	Current Open Calls
UNASSIGNED	2	41	20	5	16	39%	
DISPATCHED	1	3	0	3	0	0%	
FOLLOWUP	2	40	10	1	29	73%	
COMPLETE	1	30	0	26	4	13%	
NEED PART	1	7	0	1	6	86%	
NEED BID	1	-	0	0	0	0%	
ON ORDER	ETA	17	1	0	16	94%	
PENDAPPROV	14	7	6	0	1	14%	
CUST PARTS	ETA	-	0	0	0	0%	
PART@SHOP	2	1	0	0	1	100%	
SCHED APPT	ETA	-	0	0	0	0%	
OTHER	1	6	0	4	2	33%	



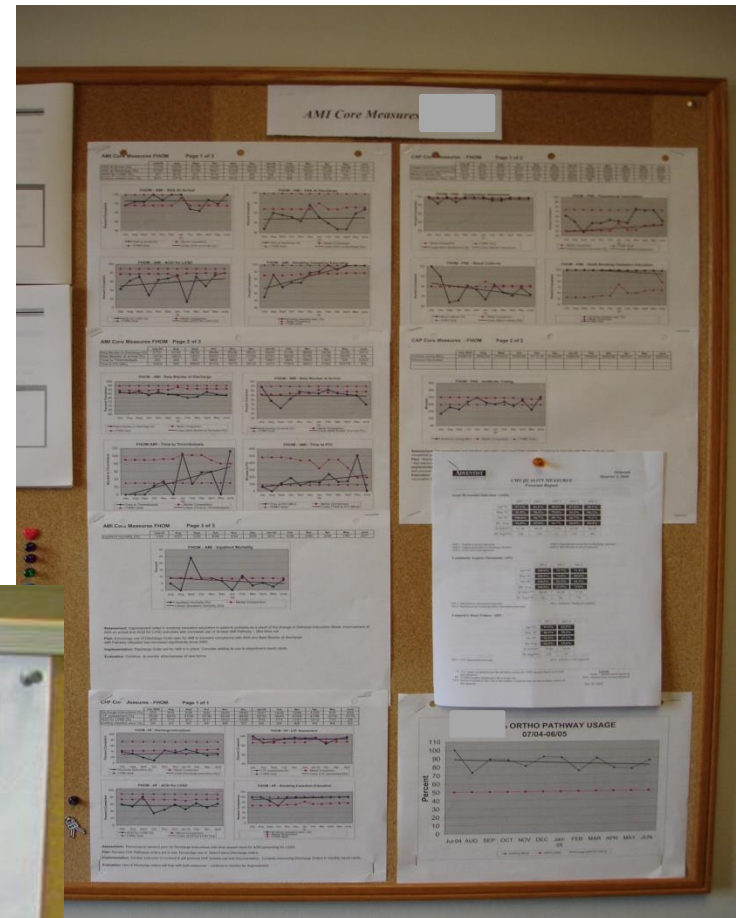
Yellow lines % above max threshold > 0%, red lines % above max threshold > 25%

PART@SHOP includes PART@STORE and ONWILLCALL Statuses

UNASSIGNED includes RE-ASSIGN

OTHER includes NEXT, NOTIFIED, ENROUTE, ONSITE, CHECKOUT

# How are we performing?



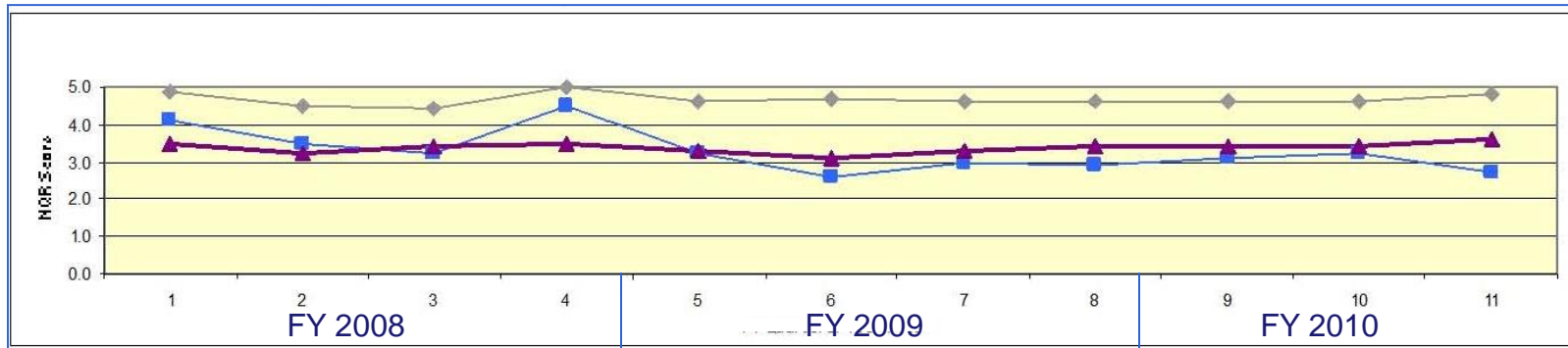
A hand is pointing to a large data table pinned to a corkboard. The table has multiple columns and rows of data, likely representing performance metrics over time. The table is organized into several sections, with columns for various categories and rows for individual data points. The data appears to be organized into several sections, with columns for various categories and rows for individual data points. The table is organized into several sections, with columns for various categories and rows for individual data points. The data appears to be organized into several sections, with columns for various categories and rows for individual data points.

# Communicating Data: Which is more effective?

**A.  
Numbers  
only**

Quarter/FY	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09	Q1-10	Q2-10	Q3-10
Score	4.1	3.5	3.2	4.5	3.2	2.6	3	2.9	3.1	3.2	2.7
Benchmark	3.5	3.2	3.4	3.5	3.3	3.1	3.3	3.4	3.4	3.4	3.6
Best	4.9	4.5	4.4	5.0	4.6	4.7	4.6	4.6	4.6	4.6	4.8

**OR**



**B.  
Shows the  
relationship  
between the  
numbers**

**Gray** – highest industry quality scores

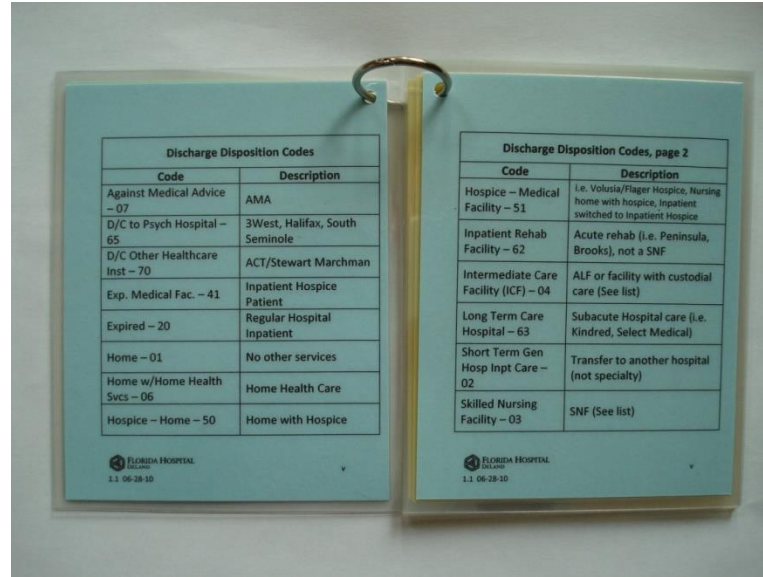
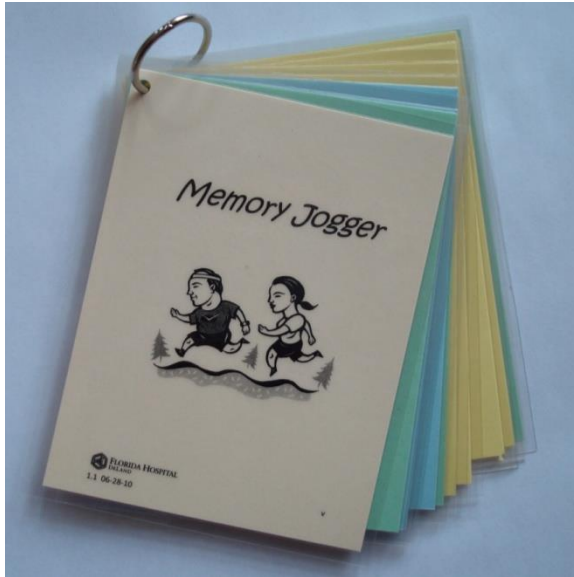
**Purple** – average industry quality scores (benchmark)

**Blue** – client quality scores





# Visual Job Aids to Standardize Work & Reduce Errors



Pre-improvement - 40% errors  
 Post-improvement - 10% errors



Pre-improvement - 15% errors  
 Post-improvement - 5% errors

# Visual Feedback - Make It Harder to Make Errors

Amazon.com Checkout: Verify Address

amazon.com

SIGN IN SHIPPING & PAYMENT GIFT-WRAP PLACE ORDER

### Verify Address

When finished, click the "Ship to this address" button to proceed with your order. Or you may return to your Address Book.

**Important Message**  
There is a problem with your address submission. Please fill in all required address fields.

Full Name:

Address Line1:   
Street address, P.O. box, company name, c/o

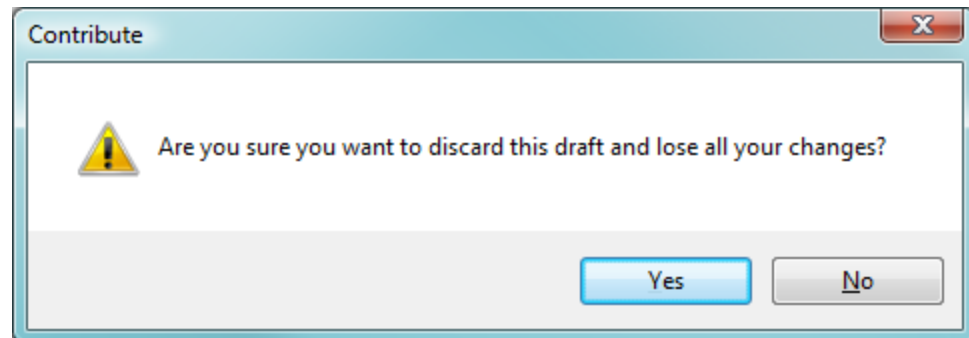
Address Line2:

City:   
Please supply a city for this address

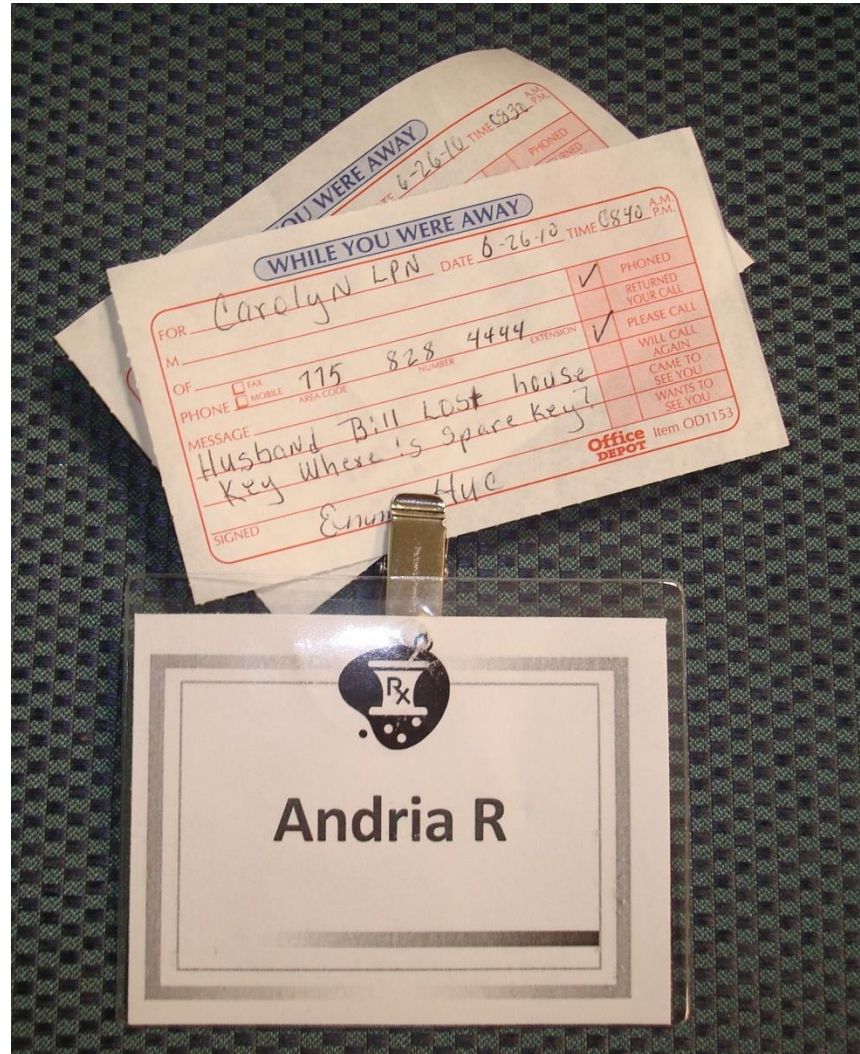
State/Province/Region:

ZIP/Postal Code:

Country:



# Visual Management Tool for Reducing Interruptions During Medication Administration



# Standardize Work - Visually

## Tips & Techniques for Fast Stacking Success



### Tips

1

If you are just beginning cup stacking, start off on the floor with your Speed Stacks in front of you.



2

Always keep stacks close together to create a solid base for your pyramid. In fact, let your cups touch in your pyramid.



3

Use a light touch, don't be heavy-handed. As Ali once said, "float like a butterfly, sting like a bee". Lift with a light, natural grip — try not to squeeze the cup — and let gravity do the work.



4

If you lead with your right hand (that is, if it feels best to use your right hand first) — the right hand should pick up the top cup.



5

Alternate your lead hand. Practice leading with one hand and then the other.



### Tips

6

Let the cups slide down.

Let gravity do the work. Never slam the cups or force them down.



7

When handling the cups, your hands should be positioned on the sides of the cups, never over the tops of the cups.



8

Separate the cups using your fingers, resting the last (or bottom) cup on your pinky finger.



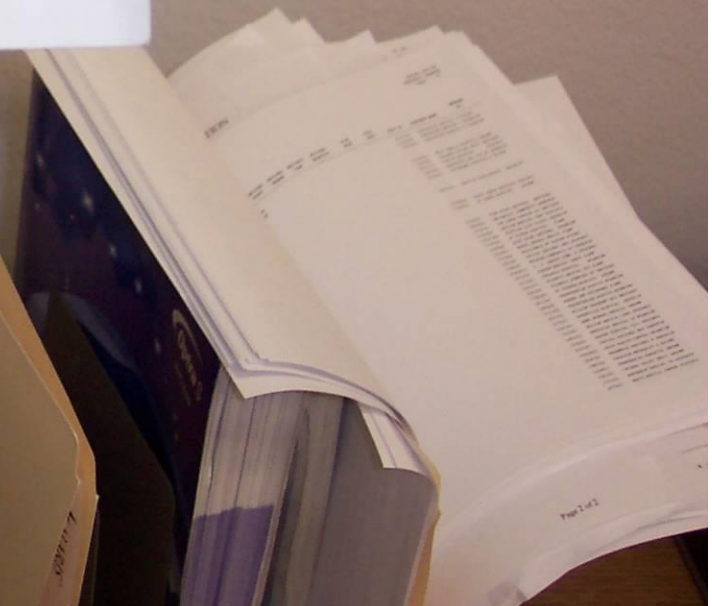
9

Stack in a circle - that means, use a circular motion with your hands and arms instead of back and forth.

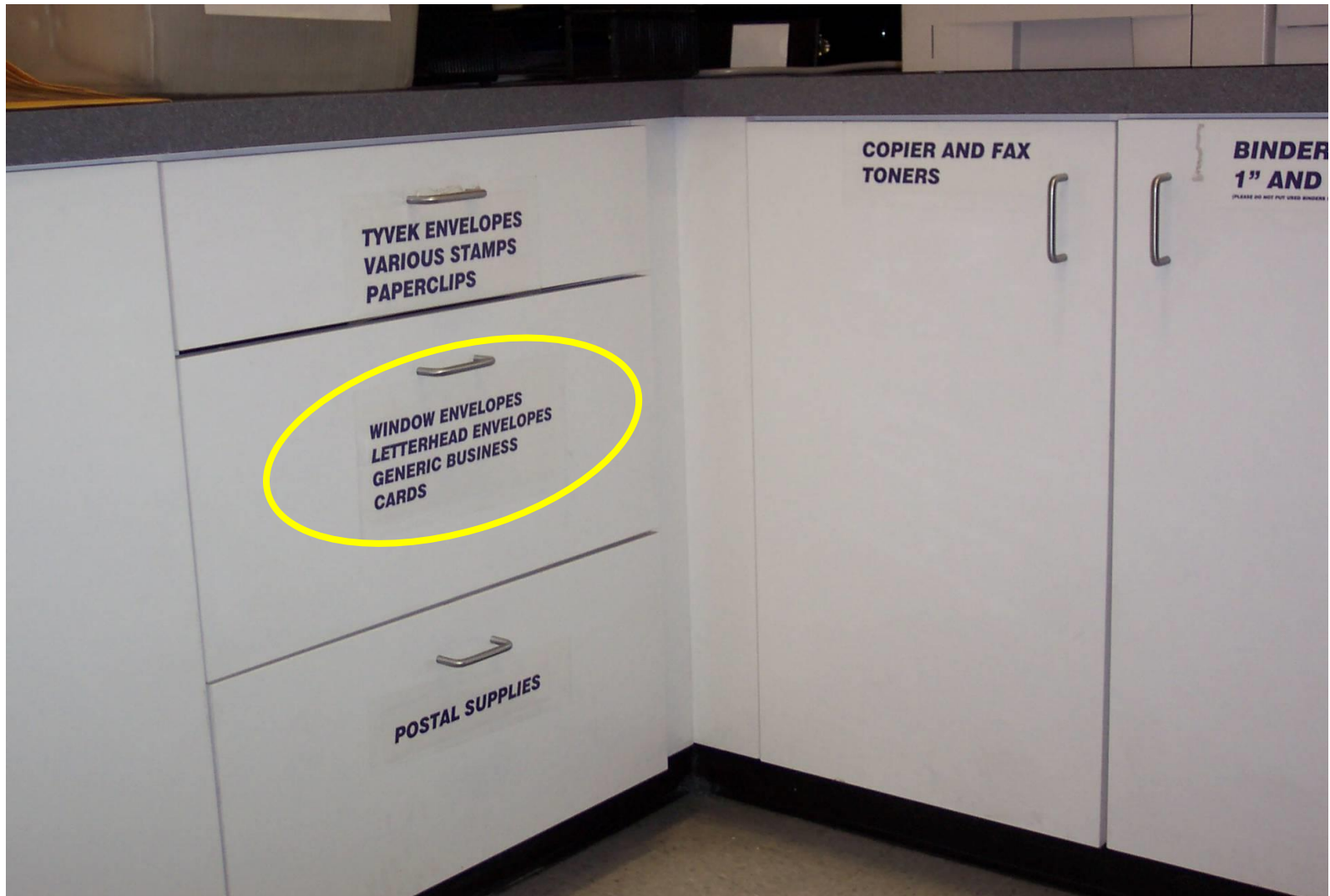
# Label Everything



 **Optra S 2450**



# Stage 1: 5S / Visual Management Label Everything





# Stage 2: Open shelving



# Heijunka Wheel – Visual Management of Incoming Work







# Heijunka for the Office



# Strong Use of Color: File Storage

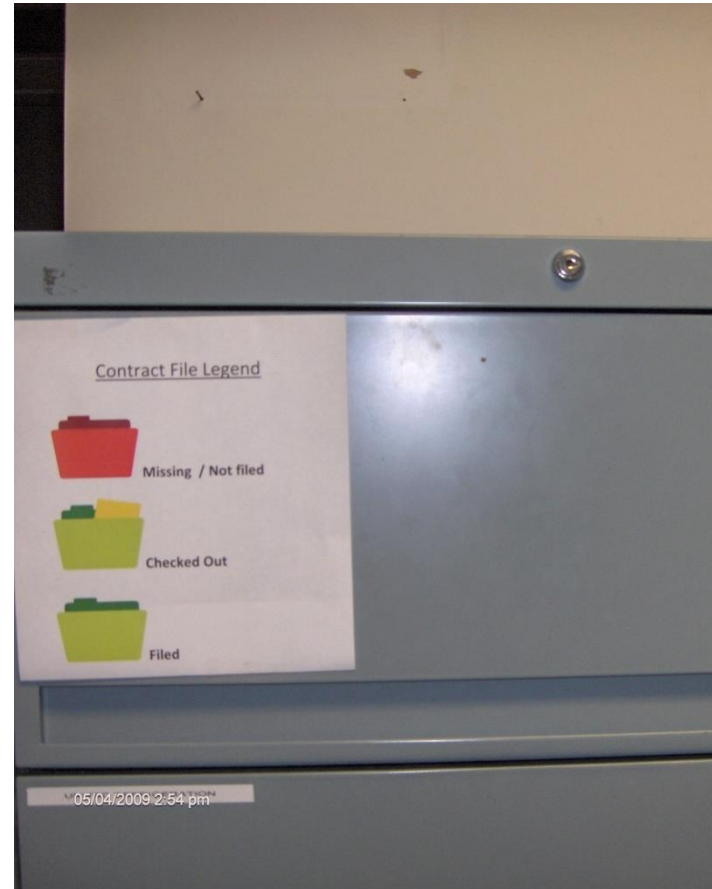
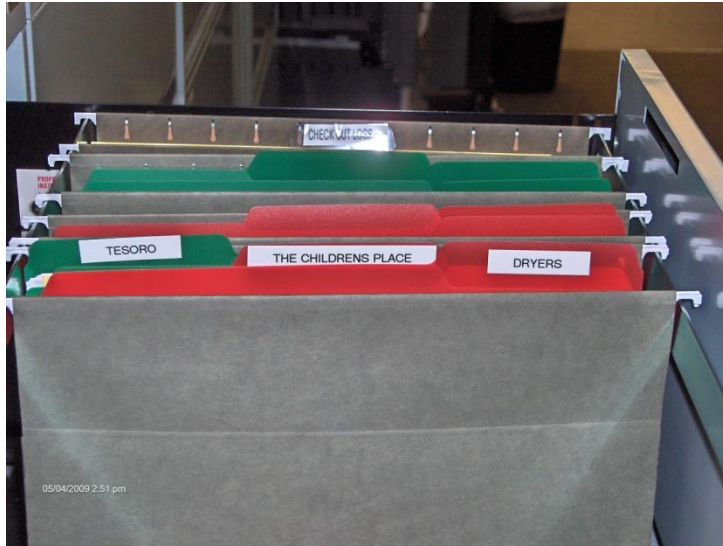
## DISTRIBUCION DE ARCHIVO MUERTO



## CODIGO DE COLORES PARA DOCUMENTOS DE ARCHIVO MUERTO

- RECURSOS HUMANOS
- IMP./EXP
- SERV. CLIENTE
- GERENCIA
- Q.C.
- CAPACITACION
- CONTABILIDAD

# Improved File System



# Anesthesia and Surgery Two-Bin System (Front and Back w/ Color)

**Blue & Red Bins –  
Material Management  
Managed**

**Yellow Bins –  
Special Orders;  
Department Managed**

**Green Bins –  
Managed by Other  
Departments (e.g.  
Pharmacy, SPD, etc.)**

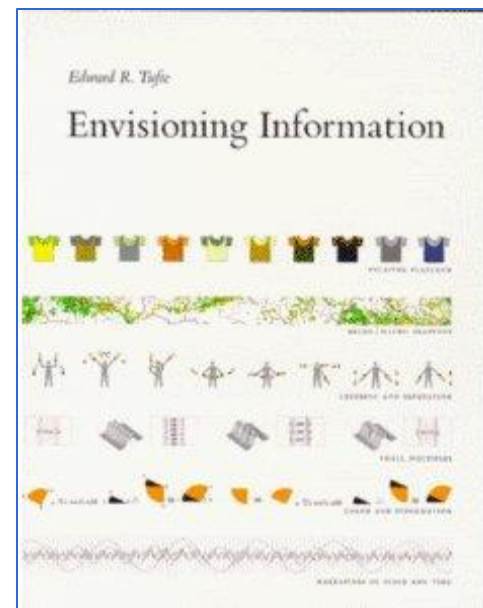
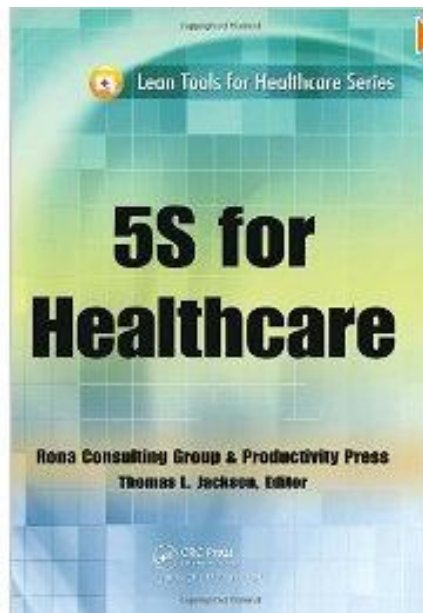
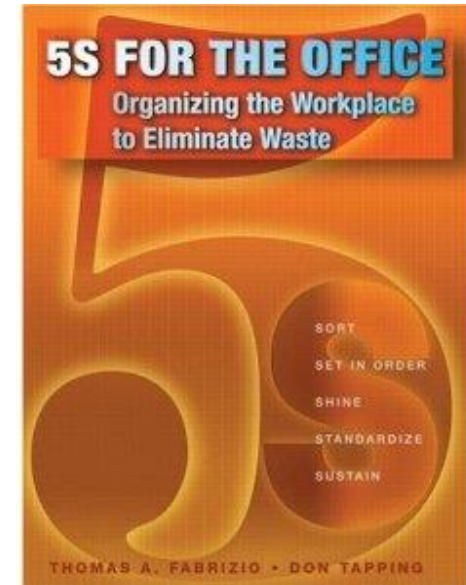
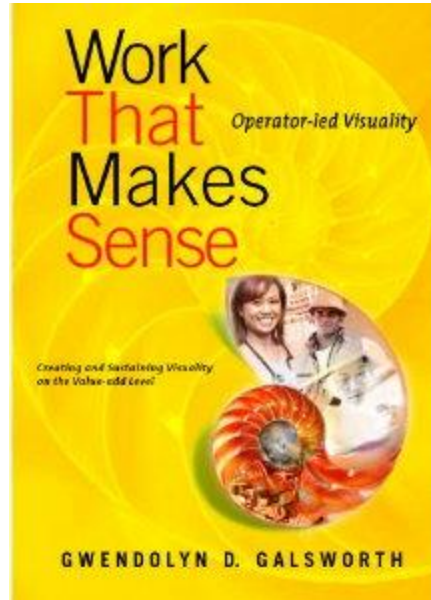
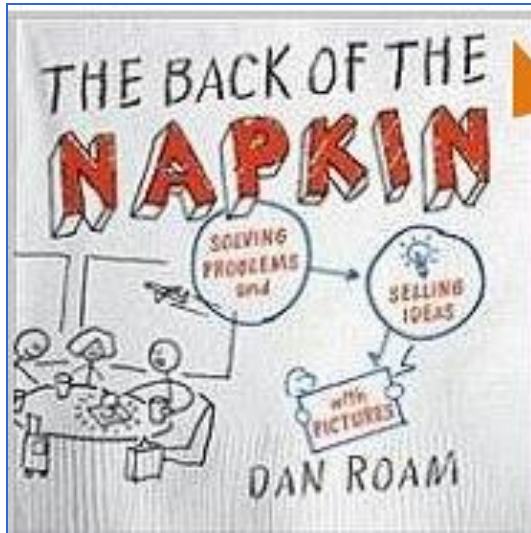




**Do your visuals  
provide clear  
direction?**



# For Further Learning



## The Master:

Edward Tufte,  
Professor Emeritus,  
Yale University  
(Political Science,  
Statistics &  
Computer Science)



# You will learn...

- ❖ Why 5S & Visual Management are critical to establishing a Lean Enterprise.
- ❖ How to implement 5S in an office, department, or organization-wide.
- ❖ How a visual workplace creates the clarity necessary for efficient and effective operations.
- ❖ Method for creating a visual workplace.

**Next Webinar – Thursday, January 6**

***Making it Stick:  
The Four Elements for Creating Sustainable Improvements***

**[www.ksmartin.com/webinars](http://www.ksmartin.com/webinars)**

# For Further Questions



**7770 Regents Road #635  
San Diego, CA 92122  
858.677.6799  
ksm@ksmartin.com**

**Free webinars and monthly newsletter:  
[www.ksmartin.com/subscribe](http://www.ksmartin.com/subscribe)**

**Connect with us:**

