

Fueling the Fire of Kaizen throughout the Lean Enterprise

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Lean Foundations

Elimination of Waste – Success Foundation

Operational Excellence or Lean is a mindset. It's all about how we can work better together – cross functionally and collaboratively – to make a difference for our customers, and to make a difference by eliminating waste. It demands excellence in everything we do through our processes and by continuously improving.

Deliver Value to Customers

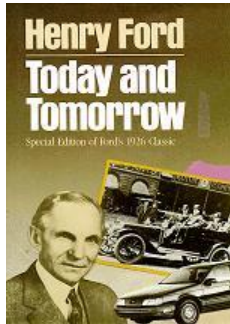
Exactly

What they want
Where they want it
When they want it

Without defects

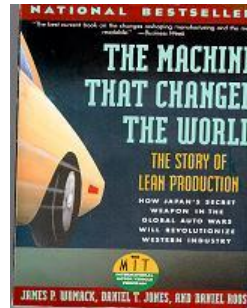
Lean Foundations

Some of The History behind Lean:



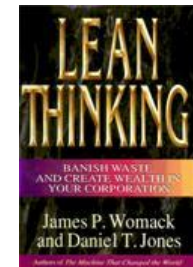
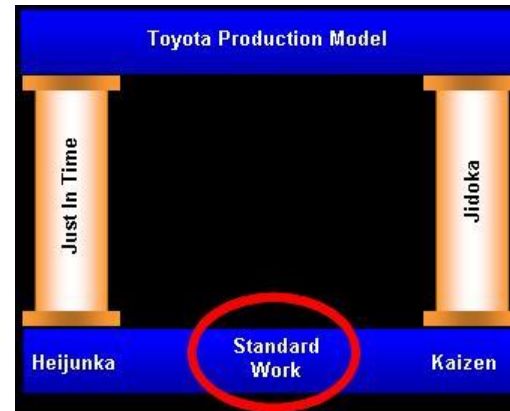
Henry Ford

- Switched from batch to continuous flow in 1913 (90% improvement)



Taichi Ohno

- Toyota Production System – Just in Time and Kanban



Deming (Plan-Do-Check-Act)

Jim Womack and Dan Jones

Lean Principles

- 
1. Specify Value through the Eyes of the Customer
 2. Identify the Value Stream (end-to-end process)
 3. Identify and Eliminate Waste
 4. Make Value Flow at the Pull/Demand of the Customer
 5. Create or Enhance Process Flexibility
 6. Continuously Improve in Pursuit of Perfection
 7. Involve Associates (Cross representation)
 8. Create a Visual Management System
 9. Do Not Reward Overcoming, Drive Root Cause Elimination
 10. Don't Fool Yourself !!

The Eight Wastes

Motion

Processing

Over-Production

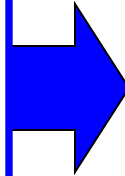
Transportation and Walking

Defects

Inventory

Waiting

Unused Creativity



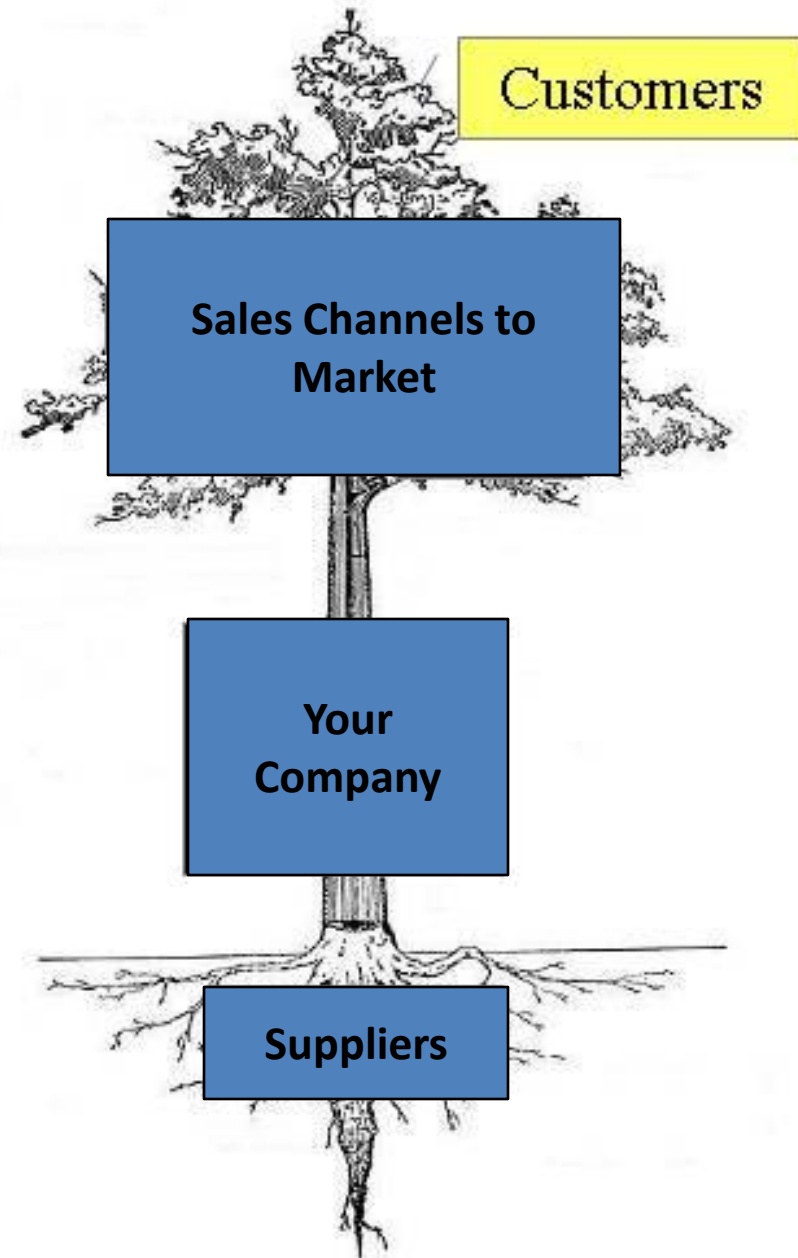
**"There is nothing quite
so useless as doing with
great efficiency,
something that should
not be done at all."**

- Peter Drucker

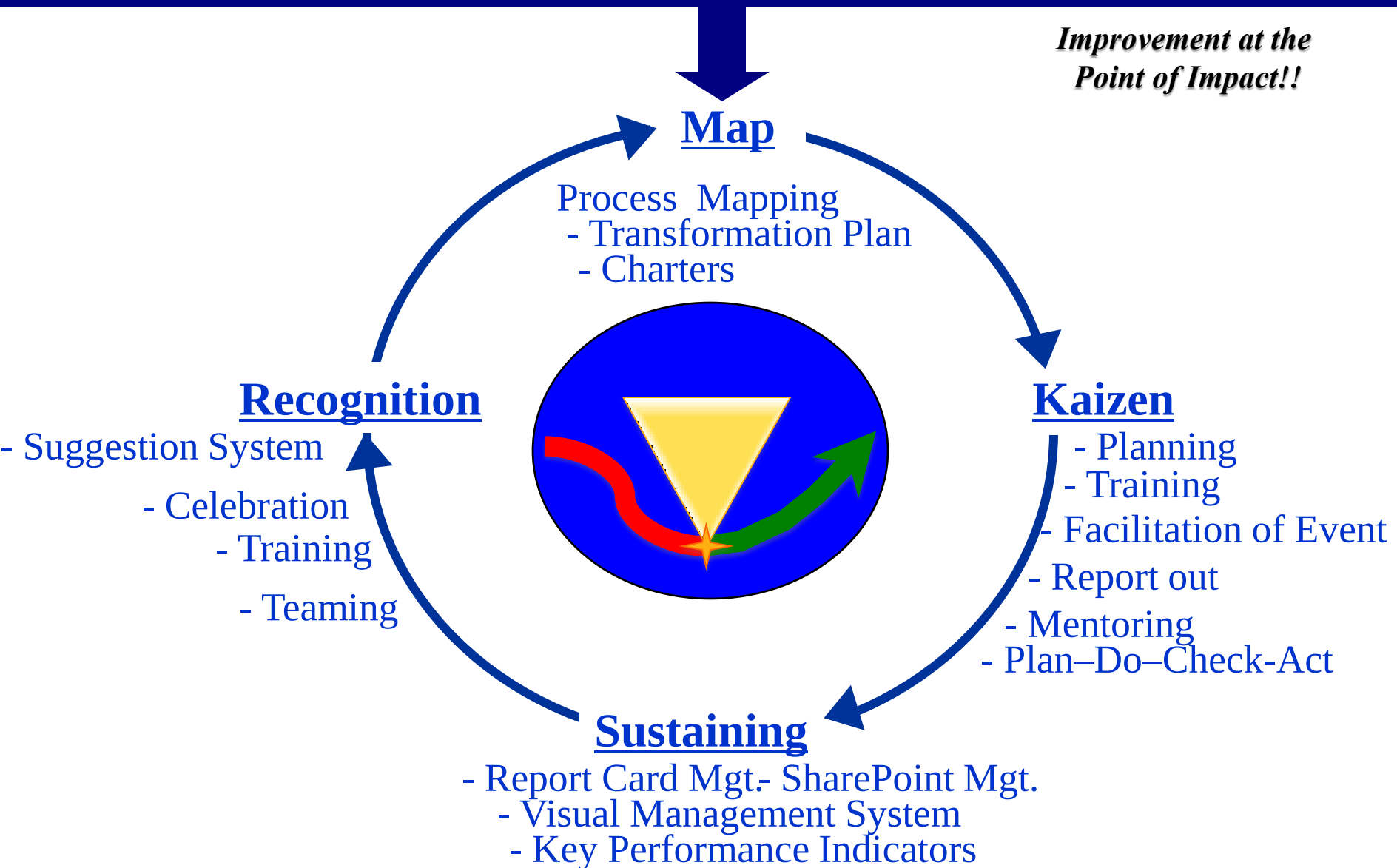
Type of Waste	Definition	Example
Motion	Unnecessary movement of people or information	Handoffs of information, poor website design and layout
Processing	Unnecessary process steps or variation of process methods	Unneeded audits of information by systems or people
Over-Production	Unnecessary information	Excessive reporting, copies, notifications and alerts that do not add value
Transportation and Walking	Walking (people) or routing (information)	Routing of AE's/other approvals, inadequate office layout
Defects	Quality issues with information or products/services	Verifying, adding, or fixing information on forms or documents
Inventory	A task waiting to be started (WIP)	Inboxes (physical or electronic), electronic work queues, excess catalogs and brochures
Waiting	Delays and queues	System downtime, waiting for approval
Unused Creativity	Time not given for improvement	Improvement ideas that are developed but not implemented

The Lean Enterprise

- Value stream is from raw material to final consumer
- All companies along the value stream comprise the Lean Enterprise
- ***The Entire Lean Enterprise must be healthy in order for it to survive***
- ***Every*** component of the Lean Enterprise needs to be lean (i.e. continuously improving)

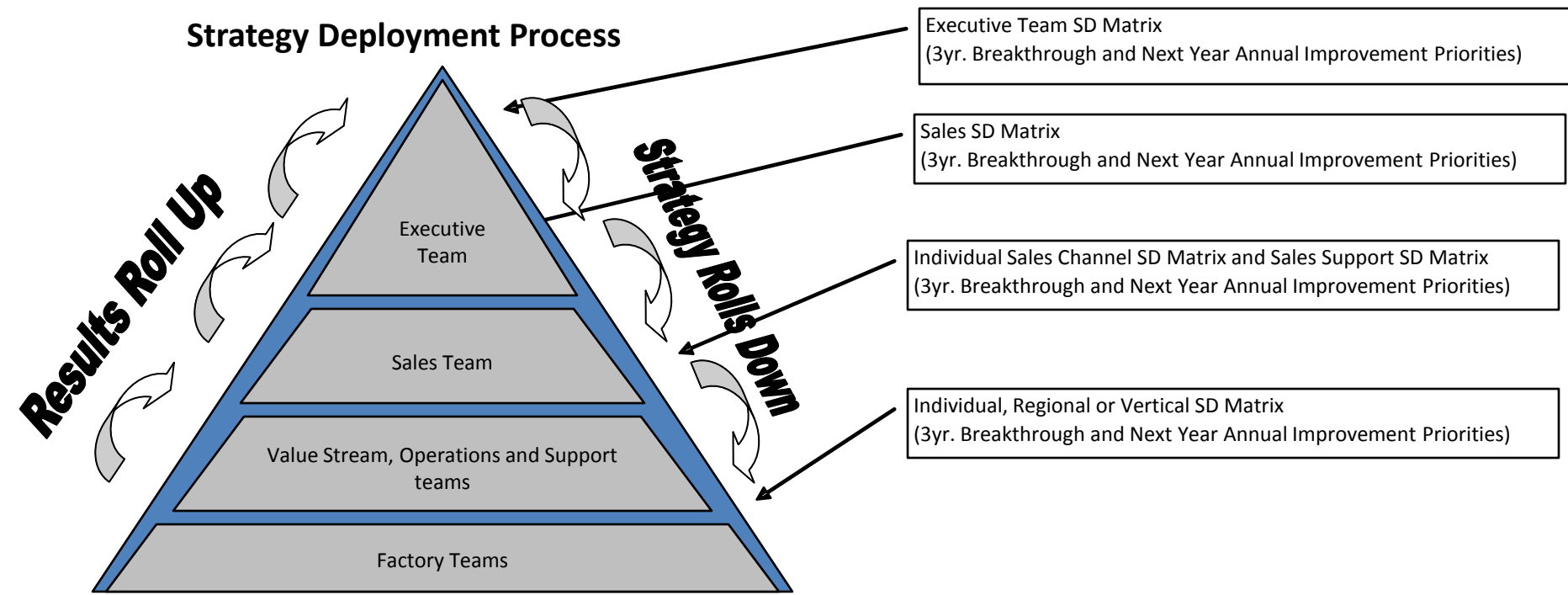


Strategy Deployment Process



Strategy Deployment

Strategy Deployment Process



The Purpose of Strategy Deployment:

- Communication of Goals throughout the organization
- Get everyone involved in Kaizen (Change for the Good)

Kaizen Process

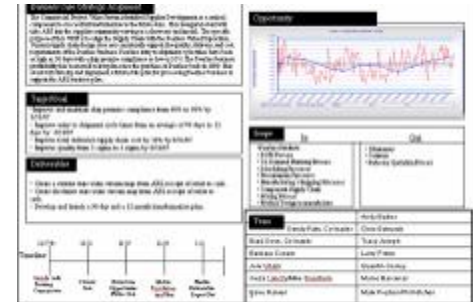
**Value Stream Map –
Current and Future with
Transformation Plan**



**Charter for Kaizen –
Target and Deliverables
Type of Kaizen – Std.
Work, Kanban, SMED,
TPM, ETC....**

**Training Day 1
Benchmarking and
Suggestions
Implementation Report
out with Report Card**

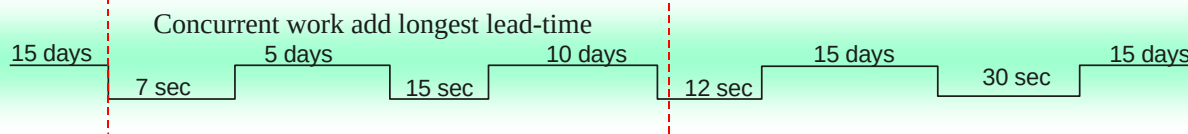
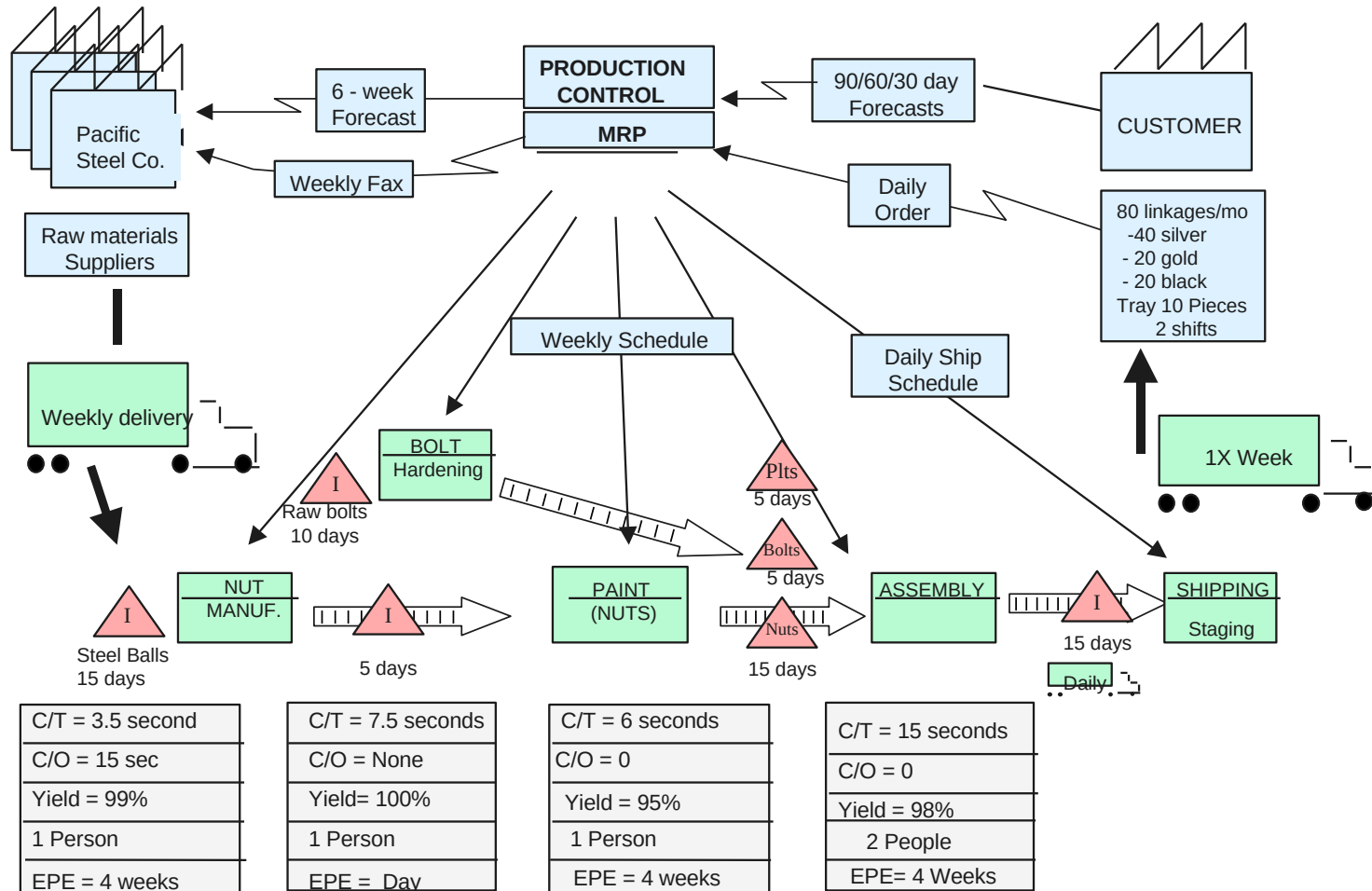
Kaizen Metrics (Target/Actual)									
Before	After	%	Before	After	%	Before	After	%	Before
30	20	66.6%	30	20	66.6%	30	20	66.6%	30
Target: 30 days to 10 days (75% improvement)									
When any Emergency Run Areas affected by this, it is, what action was taken to minimize the cost? Yes									
Remarks:									
Item/Issue	Comments	Priority	BCB	ACB	Owner	Assessment Phase or Plan			
1. Create and launch related items		High	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10
2. Create and launch related items		High	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10
3. Complete related items		High	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10	10/10/10



**30-60-90 day Follow up for
Sustainment**

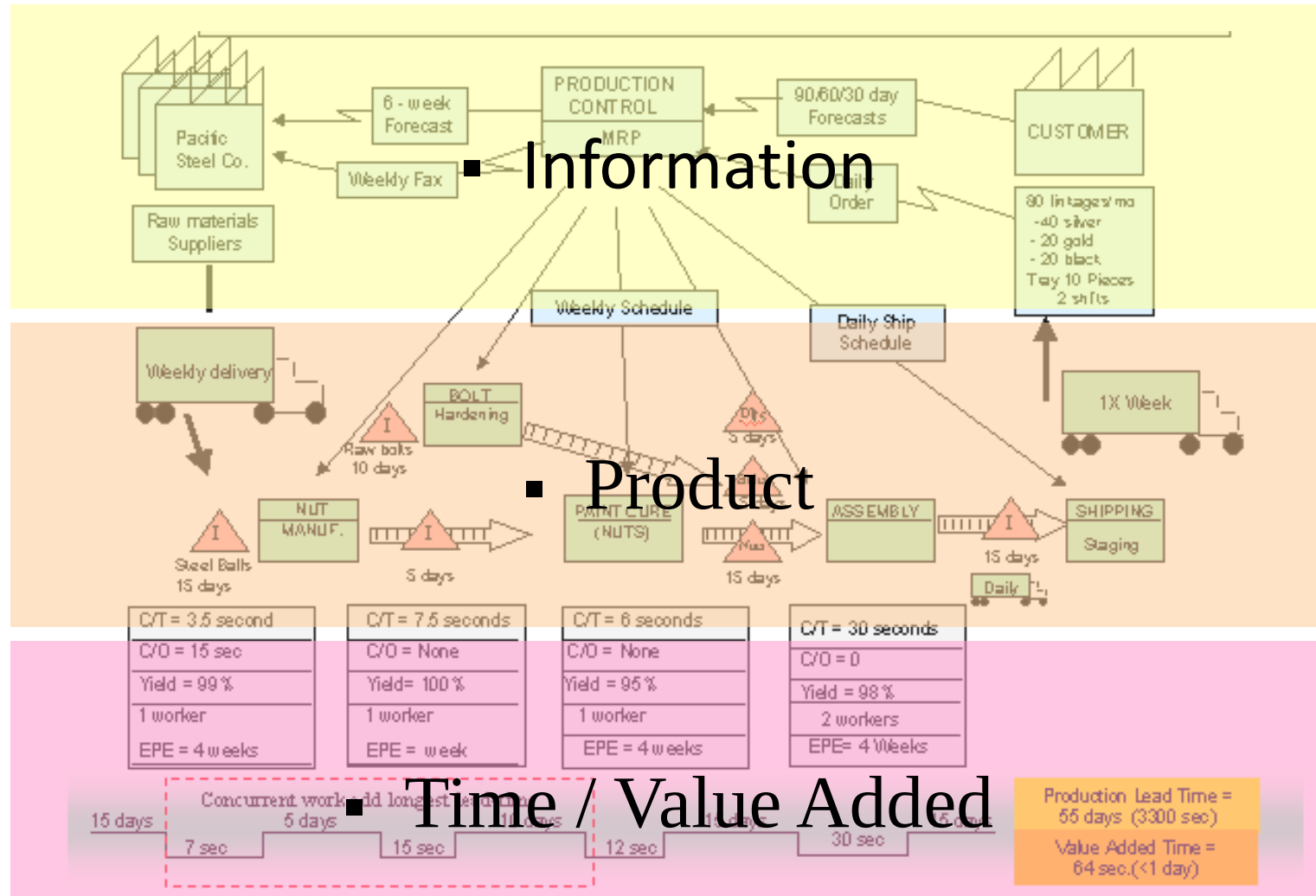


Value Stream Mapping



Production Lead Time =
55 days (3300 sec)
Value Added Time =
64 sec. (<1 day)

The Three Flows



Definition of Kaizen

Kai

- To Break Apart
- To Modify
- To Change

zen

- Think
- Make Good
- Make Better

Kaizen

- Change for Better
- Improvement
- Continuous Improvement

4M's of Operations and Office

Plant Operations

Man

- Training Opportunities
- Communication Systems

Machine

- TPM Total Preventative Maintenance
- Cycle Time
- Autonomation

Material

- Material Flow / Pull
- Kanban Replenishment
- Lead time improvement

Method

- Process Improvement
- Standard Work
- Best Practices

Office

Man

- Training Opportunities
- Communication Systems

Metrics

- Key Performance Drivers
- Windshield and Rear View Mirror Thinking

Missing

- Missing Opportunities
- Gaps that we need to close

Method

- Process Improvement
- Standard Work
- Best Practices

Learning to See

“Seeing the Whole and the Details”



Learning to See

Going on a Rattlesnake Hunt





Numero	Descricao	Valor	Conta Contabil	Conta Contabil	Conta Contabil
1	10/01/2018	100	100	100	100
2	10/01/2018	100	100	100	100
3	10/01/2018	100	100	100	100
4	10/01/2018	100	100	100	100
5	10/01/2018	100	100	100	100
6	10/01/2018	100	100	100	100
7	10/01/2018	100	100	100	100
8	10/01/2018	100	100	100	100
9	10/01/2018	100	100	100	100
10	10/01/2018	100	100	100	100
11	10/01/2018	100	100	100	100
12	10/01/2018	100	100	100	100
13	10/01/2018	100	100	100	100
14	10/01/2018	100	100	100	100
15	10/01/2018	100	100	100	100
16	10/01/2018	100	100	100	100
17	10/01/2018	100	100	100	100
18	10/01/2018	100	100	100	100
19	10/01/2018	100	100	100	100
20	10/01/2018	100	100	100	100
21	10/01/2018	100	100	100	100
22	10/01/2018	100	100	100	100
23	10/01/2018	100	100	100	100
24	10/01/2018	100	100	100	100
25	10/01/2018	100	100	100	100
26	10/01/2018	100	100	100	100
27	10/01/2018	100	100	100	100
28	10/01/2018	100	100	100	100
29	10/01/2018	100	100	100	100
30	10/01/2018	100	100	100	100
31	10/01/2018	100	100	100	100
32	10/01/2018	100	100	100	100
33	10/01/2018	100	100	100	100
34	10/01/2018	100	100	100	100
35	10/01/2018	100	100	100	100
36	10/01/2018	100	100	100	100
37	10/01/2018	100	100	100	100
38	10/01/2018	100	100	100	100
39	10/01/2018	100	100	100	100
40	10/01/2018	100	100	100	100
41	10/01/2018	100	100	100	100
42	10/01/2018	100	100	100	100
43	10/01/2018	100	100	100	100
44	10/01/2018	100	100	100	100
45	10/01/2018	100	100	100	100
46	10/01/2018	100	100	100	100
47	10/01/2018	100	100	100	100
48	10/01/2018	100	100	100	100
49	10/01/2018	100	100	100	100
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56	10/01/2018	100	100	100	100
57	10/01/2018	100	100	100	100
58	10/01/2018	100	100	100	100
59	10/01/2018	100	100	100	100
60	10/01/2018	100	100	100	100
61	10/01/2018	100	100	100	100
62	10/01/2018	100	100	100	100
63	10/01/2018	100	100	100	100
64	10/01/2018	100	100	100	100
65	10/01/2018	100	100	100	100
66	10/01/2018	100	100	100	100
67	10/01/2018	100	100	100	100
68	10/01/201				

Area and Cell World Class Needs: Non Negotiables

- No Long Term Handwritten Signs
- No Outdated, Torn or Non-Laminated Signs
- No Unpainted Wood or Steel
- Cables must be all tied and organized
- No wires on the floor
- Upon leaving the Cell – All tools are on Shadow Boards.
- The 5-S To-Do List must accompany all 5S audit sheets.
- Labeling on every designated location
- Correct any Safety issues immediately
- Designate a red tag area in the plant and disposition everything within 60 days.
- Aisle ways are clearly marked and clear at all times.
- Pallet Jacks, Carts and Forklifts are painted and not scratched
- Andon Lights must have descriptive signs of meaning.
- Eliminate Cardboard where ever possible
- All equipment and benches remain clean and painted.
- Color coding consistency must exist
- No Flat Surfaces above 6 ft.

Daily Gemba Walk

Why can a Sensei take 3 steps into the Factory and say there is no Standard Work?

- First Impression Area – WOW Factor
- 5-S Culture – Everything has a place and Everything is in it's place
- Closed Loop Systems
- Visual Management
- 4 M Control
 - Data
 - Root Cause Counter Measure System
- Measurement Feedback to the Cell Level
- Visual Evidence of Ownership and Accountability



Plant Conversion

Conveyor Lines to U-Shaped Cells



From Lines to Cells

Before



**28 people producing
280units/hr. in 5000 sq. ft.**

After



**16 people producing 300 units/hr. in
2200 sq. ft. with 2 cells**

5S & Standard Work Assessment Loop System

Closed

Responsibility Map

Stand. Work Assess. Summary

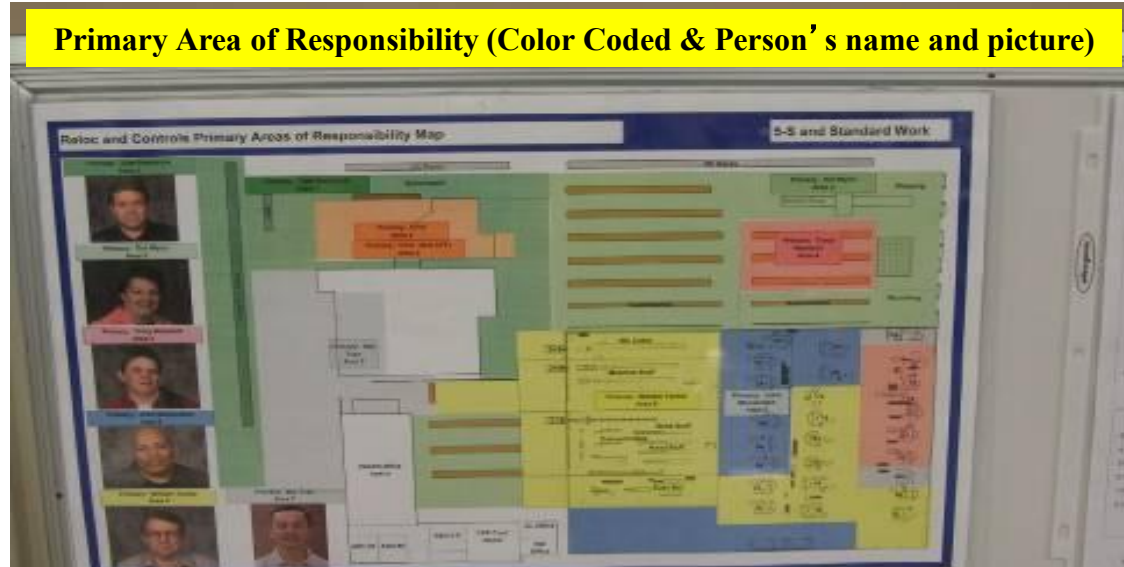
5S Results Summary

Graphs by Cell / Area

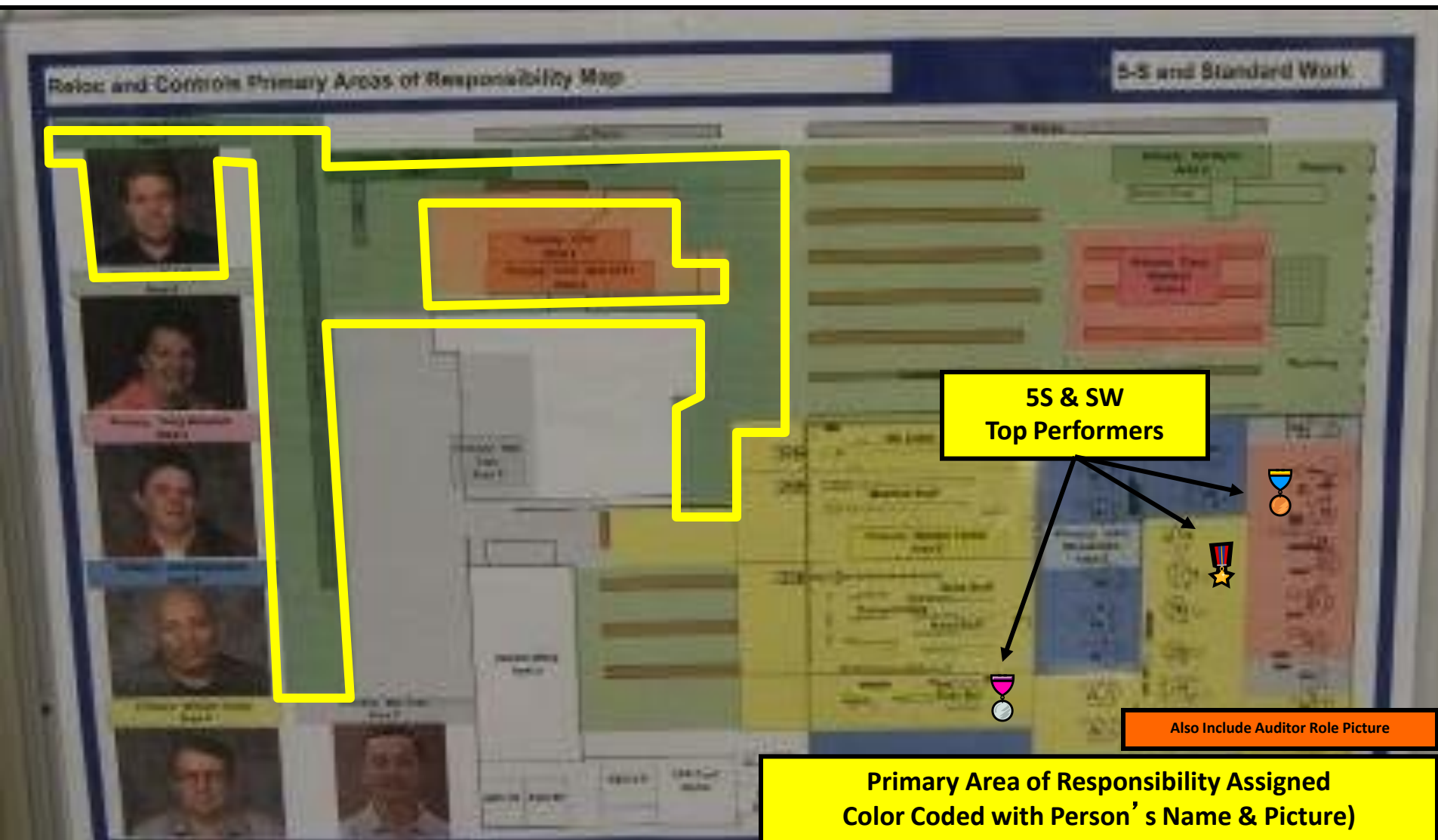
Monthly Results Summary (Averaged by Plant and Area)

Location	Area #	Sept. 07	Oct. 07	Nov. 07	Dec. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08	Jun. 08	Jul. 08	Aug. 08	Average
Cell 10	4	1.2	1.2	2.0										1.7
Cell 11	4	1.2	1.2	2.0										1.7
Cell 12	4	1.2	1.2	2.0										1.7
Cell 14	4	1.4	1.4	2.0										1.7
Cell 16	4	1.2	1.2	2.0										1.7
Cell 18	4	1.2	1.2	1.4										1.3
Cell 20	4	1.2	1.2	0.6										1.0
Cell 22	4	1.0	1.0	0.0										0.6
Cell 24	4	1.2	1.2	0.6										1.0
Cell 26	4	1.2	1.2	1.2										1.2
Cell 28	4	0.2	0.2	0.2										0.2
Cell 42	6	1.4	1.4	1.4										1.4
Cell 44	6	1.2	1.2	1.0										1.1
Cell 46	6	1.2	1.2	0.8										1.1
Cell 48	6	1.2	1.2	1.2										1.2
Cell 50	6	1.4	1.4	1.0										1.2
Cell 54	6	1.4	1.4	1.0										1.2
Cell 56	6	1.4	1.4	0.8										1.2
Cell 58	6	1.2	1.2	0.8										1.1
Cell 74	6	1.0	1.0	1.0										1.0
Cell 76	6	0.8	0.8	0.2										0.6
Cell 78	6	1.1	1.1	0.8										1.0
Mc. Cable	6	1.0	1.0	1.2										1.1
Machine Staff	6	0.0	0.0	0.0										0.0
Hand Staff	6	0.0	0.0	0.0										0.0
Base Bar	6	0.0	0.0	0.0										0.0
Production	6	0.0	0.0	0.0										0.0

Primary Area of Responsibility (Color Coded & Person's name and picture)



5s and S/W -- Responsibility Map





**Black Toilet Seat
Award
Worst 5-S**



**Golden Flag
Best
5-S**

Kanban Events



flow to cells

← Supermarket

From Supermarket
to Production Cell

Kitting Cars
identified by cell
and workstations

Kanban mixed:

Visual Kanban by bins and Kanban
by Cards.





Making Product Flow from the Customer Pull



ABS in our Value Streams

Material presentation reducing motion

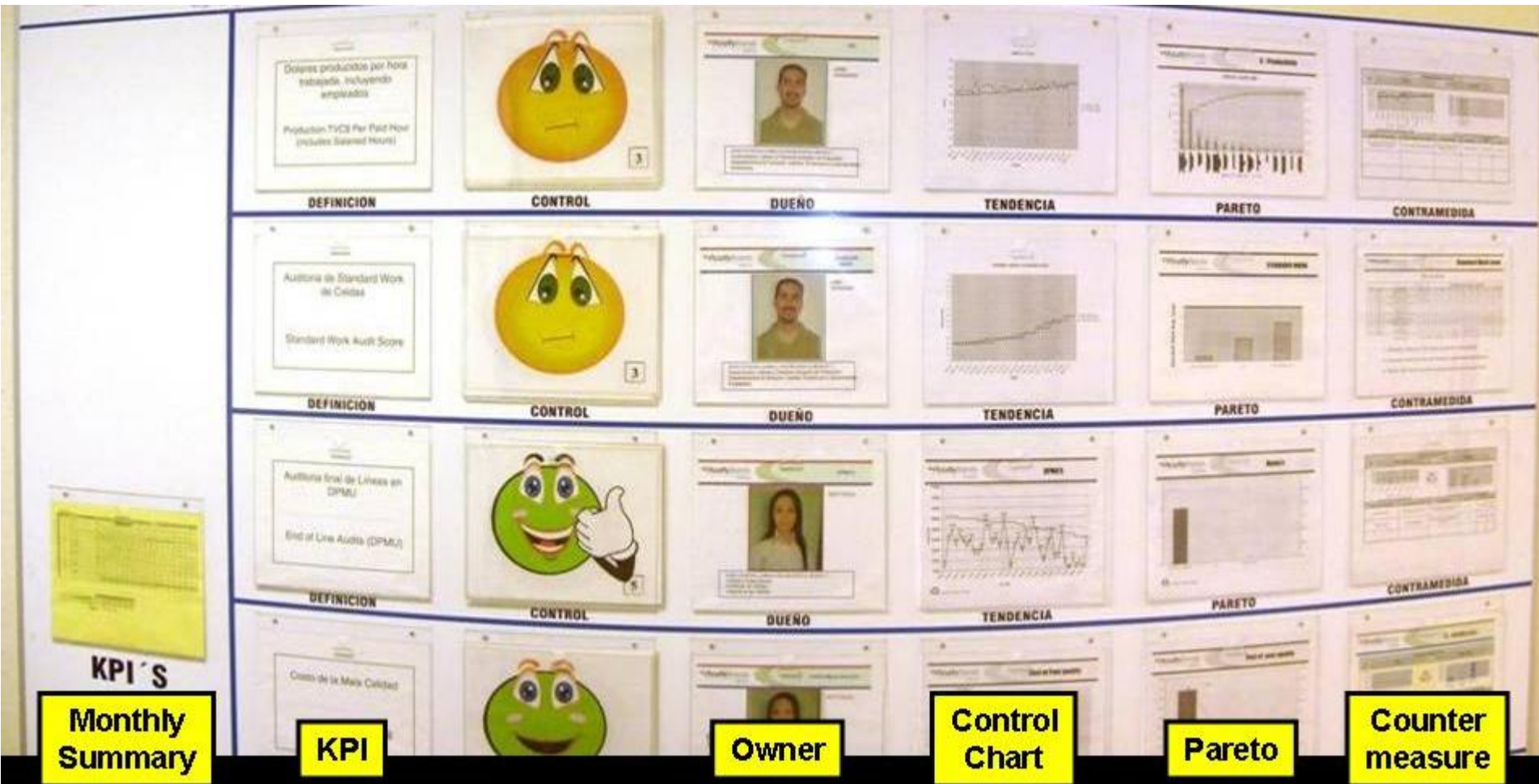
- Material Presented in tubes



Employee Ownership



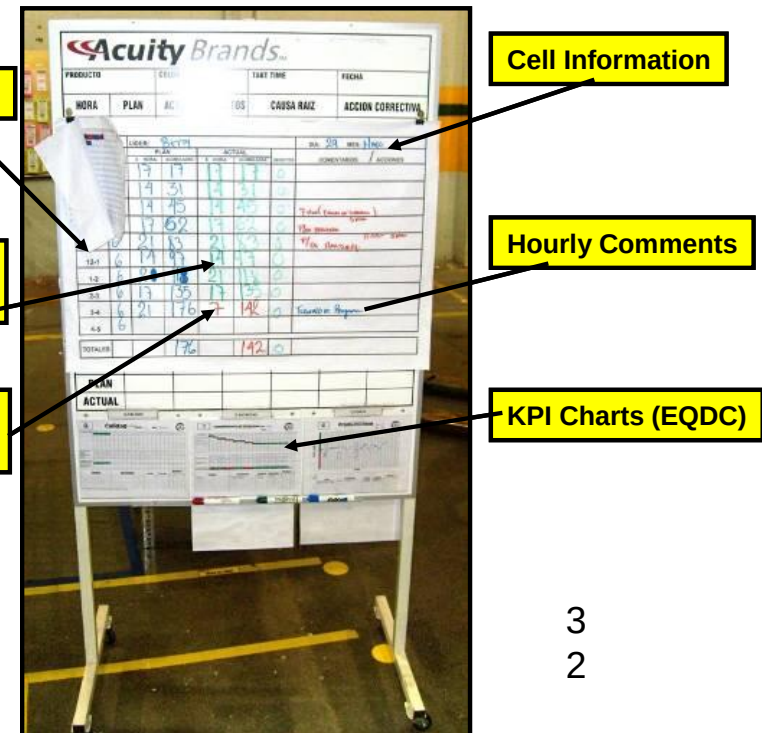
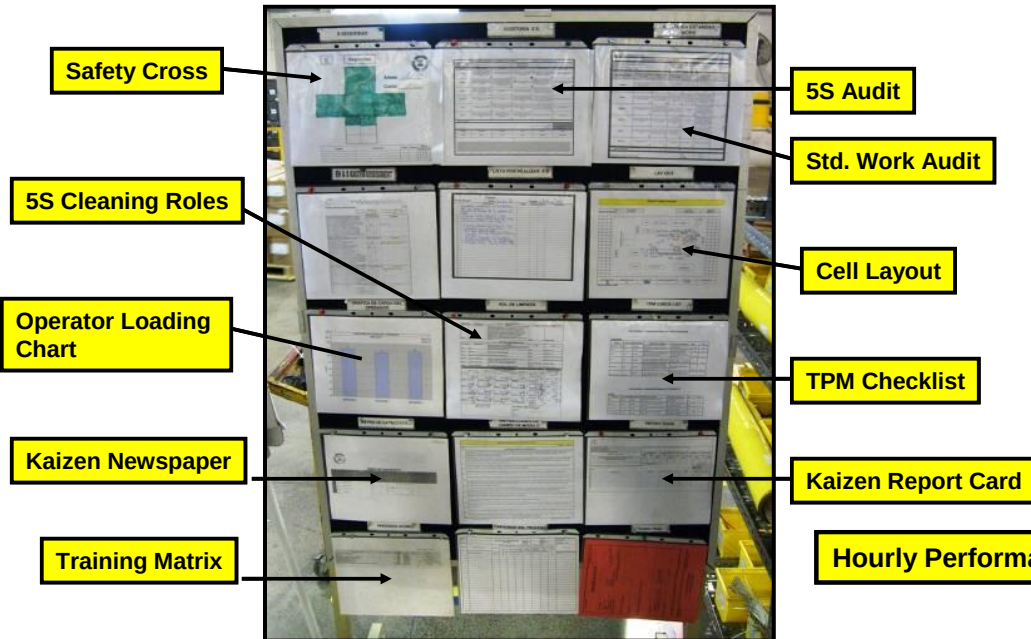
Plant KPI Board



Focused Factory (Value Stream) Level



Cell Level



Assembly Cell Hourly & KPI Board

Lego Plant Layout – True scale model



Lego Layout



Monthly Kaizen transformation Board



Lean Leadership Training

Lean Leaders Standard Work

“Seeing the Whole
and the Details”

- Lean Leaders Playbook
Reference Material
4M Questions and Answers
Individual Standard Work



2. Kaizen War Room Organization



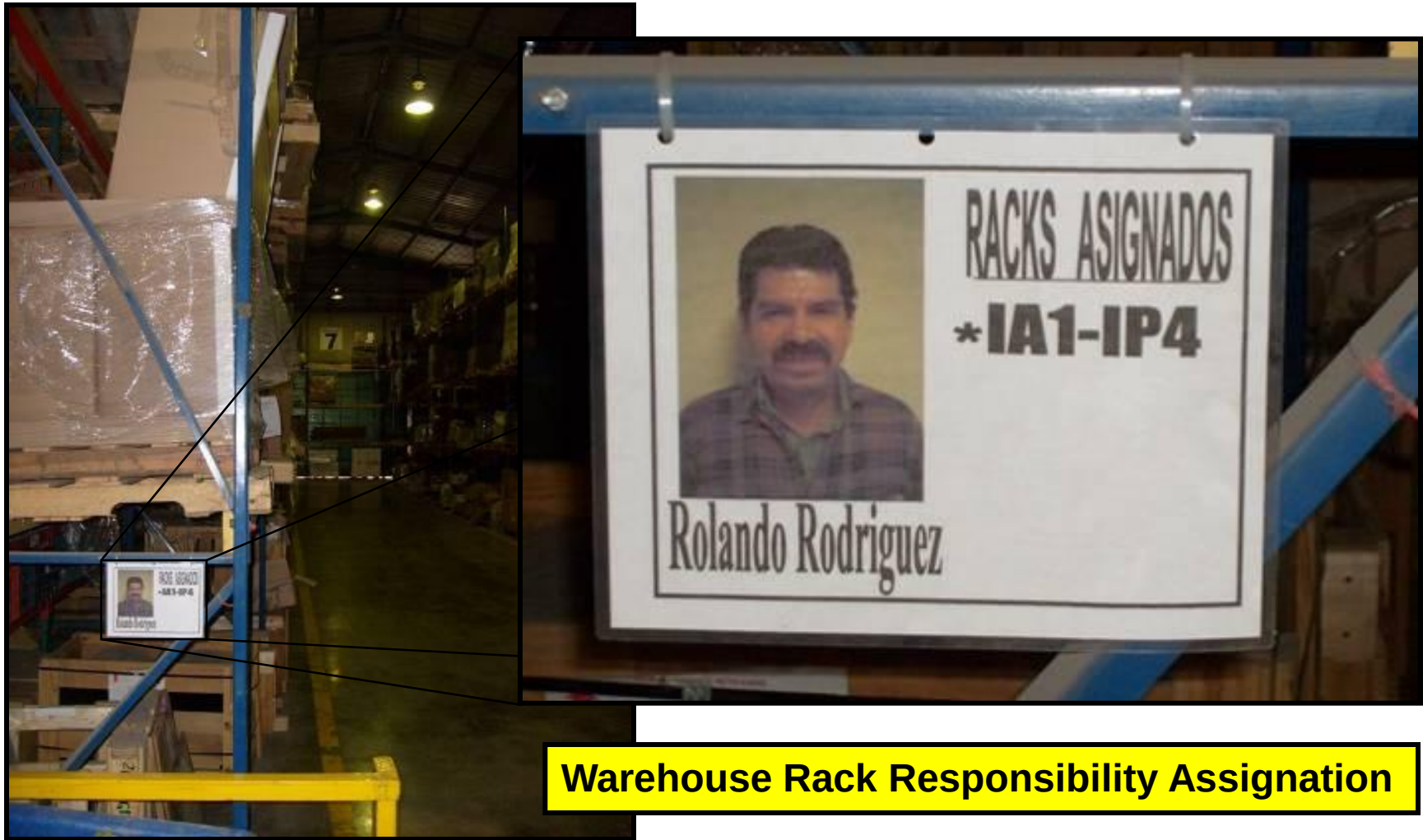
Mobile Cart with all Kaizen Supplies
for point of use availability



“Dedicated Location for Every Part,
Every Part in its Location”



1. Employee Ownership





Team working in configuration tests for components
positioning

**Standard Work
Kaizen Event**





ABS with Suppliers – Sur-Seal



**Cleaning
Station
Carts**



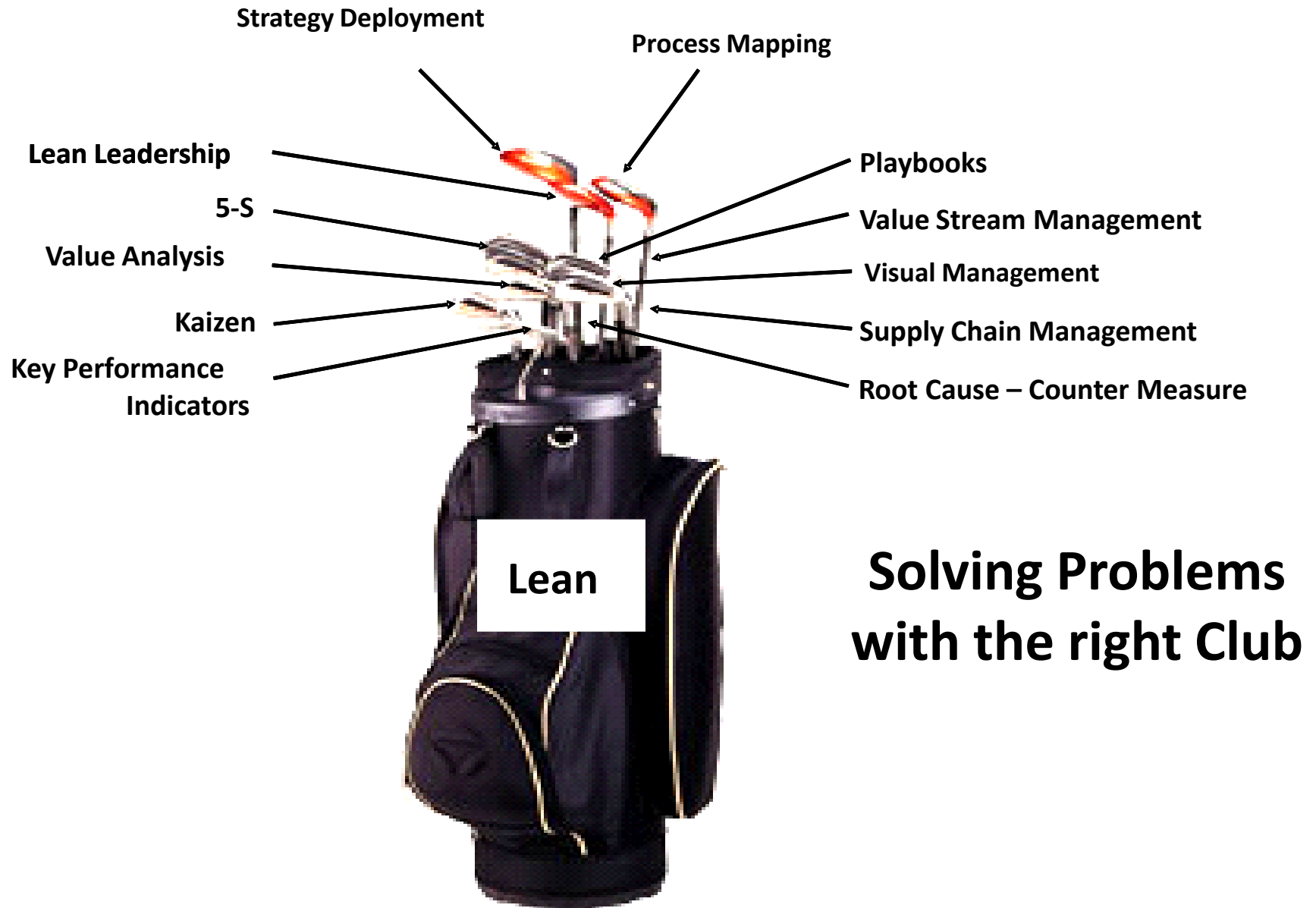
**Remove
Cabinet Doors**

**Organize
No Hidden
Waste**



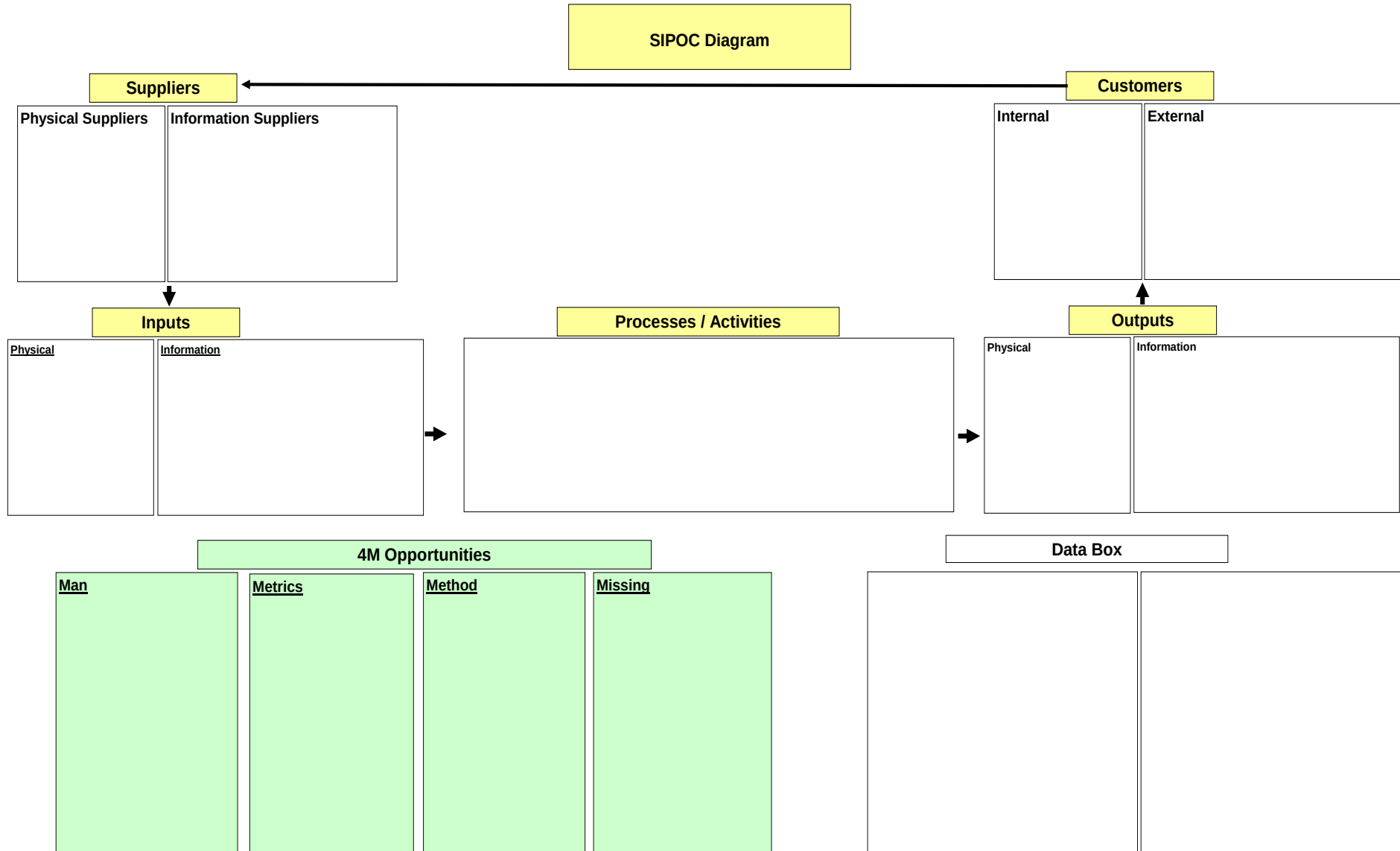


Playing a Round of Golf with the Lean Golf Bag for Sales



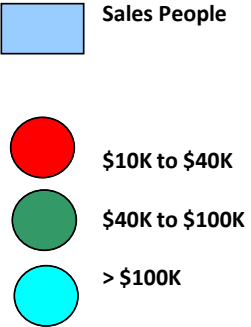
Create High Level Map First – SIPOC

- Company, Value Stream, Team, Job --- Great Place to Start



Visual Management

Sales Project Board



30	30	Week 1	30	Week 1	30	30
60	60	Week 2	60	Week 2	60	60
90	90	Week 3	90	Week 3	90	90
>90	>90	>3 weeks	>90	>3 weeks	>90	>90

Opportunity	Spec Complete	Quote Request	Quote Issued	Job Awarded	Buy Price Issued	Hold Order	Submittal Required	Submittal Complete and Forwarded	Hold Order w/ Approved Submittal	Won	Lost
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Sales KPI Boards

EARN VENDOR OF THE YEAR

Catalog Sales KPI Board

Source / Definition of KPI	Visual Indicator and Trend Chart	Goal / Actual	Counter measure Owner	Root Cause / Corrective Action
Growth - J&J Inc Sales Monthly GAPE for Sales from Catalog Distribution P & L Track year over year growth		Goal: YTD \$31,494,819 Actual: YTD \$28,000,000 Mth \$2,333,333	Jed Frazier	Root Cause: Corrective Action:
Ordering Cycle Time 95% shipping measurement defined and tracked by Greiner Measurement provided to customer (1-7 days)		Goal: 98% Actual: 94.6	Karen Greene	Root Cause: Corrective Action: 40% Emergency (short parts or sleep parts) 10% Advanced Demand (ordered but build not complete) 10% Special Order items 10% Stock out 10% L.P. discrepancies 10% Limited Supply 10% Reporting the item wrong P&L / Communication / Standard work 10% Process / People issues 10% Production shop received a rush order that for Alliance demand 10% Low inventory on regular order (inventory on spec, don't in stock) 10% Customer stock in lot, none of spec = P&L drops 10% Customer stock in lot, none of spec = P&L drops
Market Segment Penetration Growth of Healthcare Sales measured by year over year sales growth in each segment Measurement provided by Greiner Track Code report		Goal: YTD \$5,718M Actual: YTD \$4,877M	Sean Buckley	Root Cause: Corrective Action: Goal - 100% customer use of for x Healthcare - ABL's foreigner team not aligned resources or product to the healthcare market Goal - Increase sales volume Healthcare - Extra sales in Healthcare segment to growth Healthcare - Increase sales volume
Returns Returns both into returns and overfillation error return by / Measured tracking and charge correct per our previous year		Goal: Fully Actual: \$23,231 Goal: Fully Actual: \$23,231	Rita Tingler	Root Cause: Corrective Action: Goal of KY Review / Needed USPDM 3139744 (73511) Actually not a return, but Greiner billed twice 3140211 (73511) Wrong color - old spec Define review process to avoid RA Confirm specs w/ customer
Market - P&L Sales Monthly P&L P&L Sales Measurement generated from the monthly P & L		Goal: YTD \$11,000,000 Actual: YTD \$10,000,000 Mth \$1,000,000	Jed Frazier	Root Cause: Corrective Action:

5 Key Performance Metrics

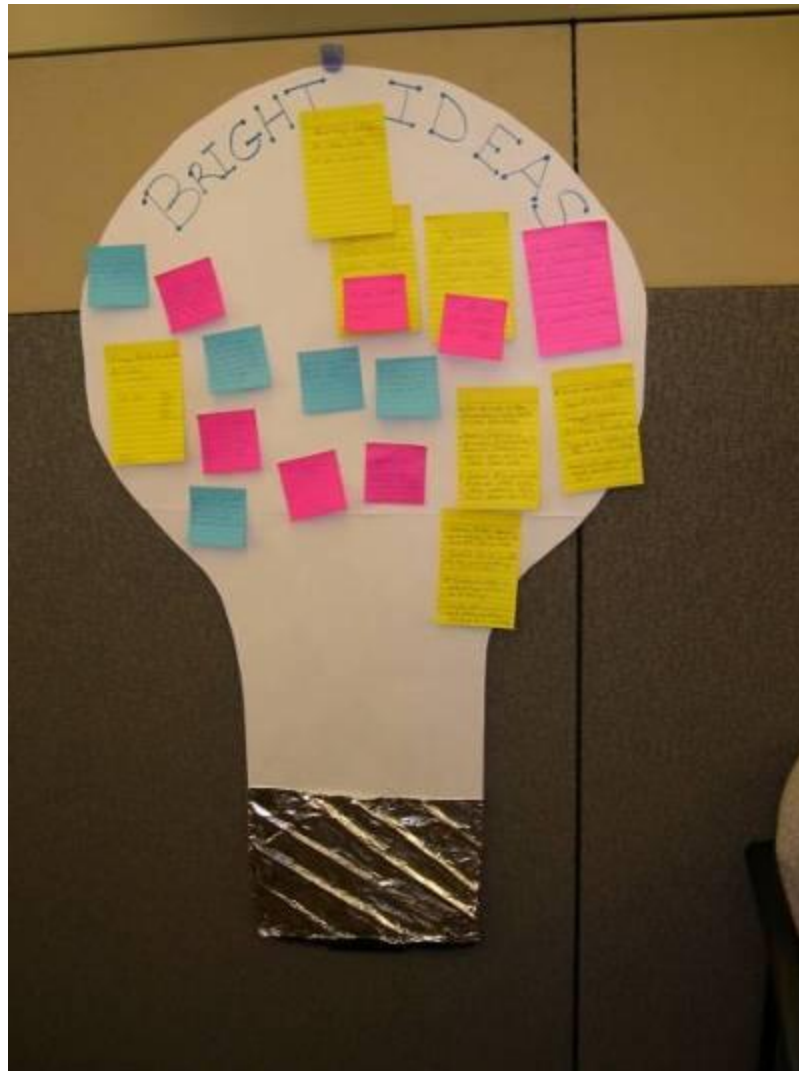
Visual Indicator and Trend

Goal vs. Actual

Owner

Root Cause Corrective Action

Team Suggestion Board



Types of Playbooks

For each customer demand level or planned process deviation, there is a “Play”



1.) Job Playbook

2.) Business Unit Playbook – Channel, Value Stream

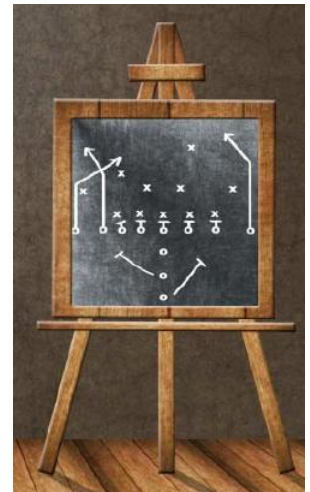
3.) Product Playbook



What is in a Playbook?

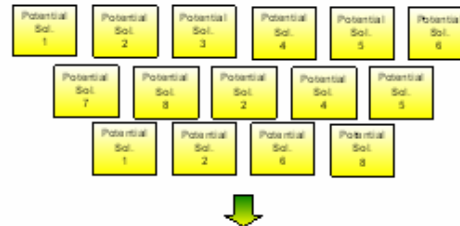
Results and Accomplishments from Playbooks

- Unified Message
- Clear understanding of the Products - - Pros-Cons-Gaps
- Sales Approach Best Practices
- Product Portfolio Roadmap
- Model Best Practice Approaches for each Specifier Type
- Communication and Connection to the Product Value Streams
- Checklist
- 90 Day Plan



Affinity Process

Brainstorm Ideas



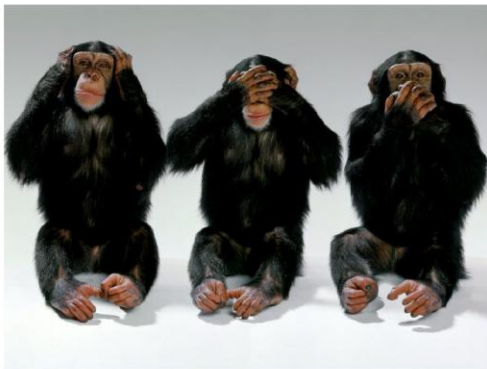
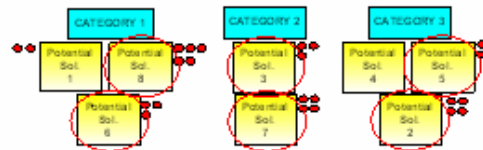
Clarify – Gain common understanding - Eliminate Duplicates



Categorize – Sort into related Categories

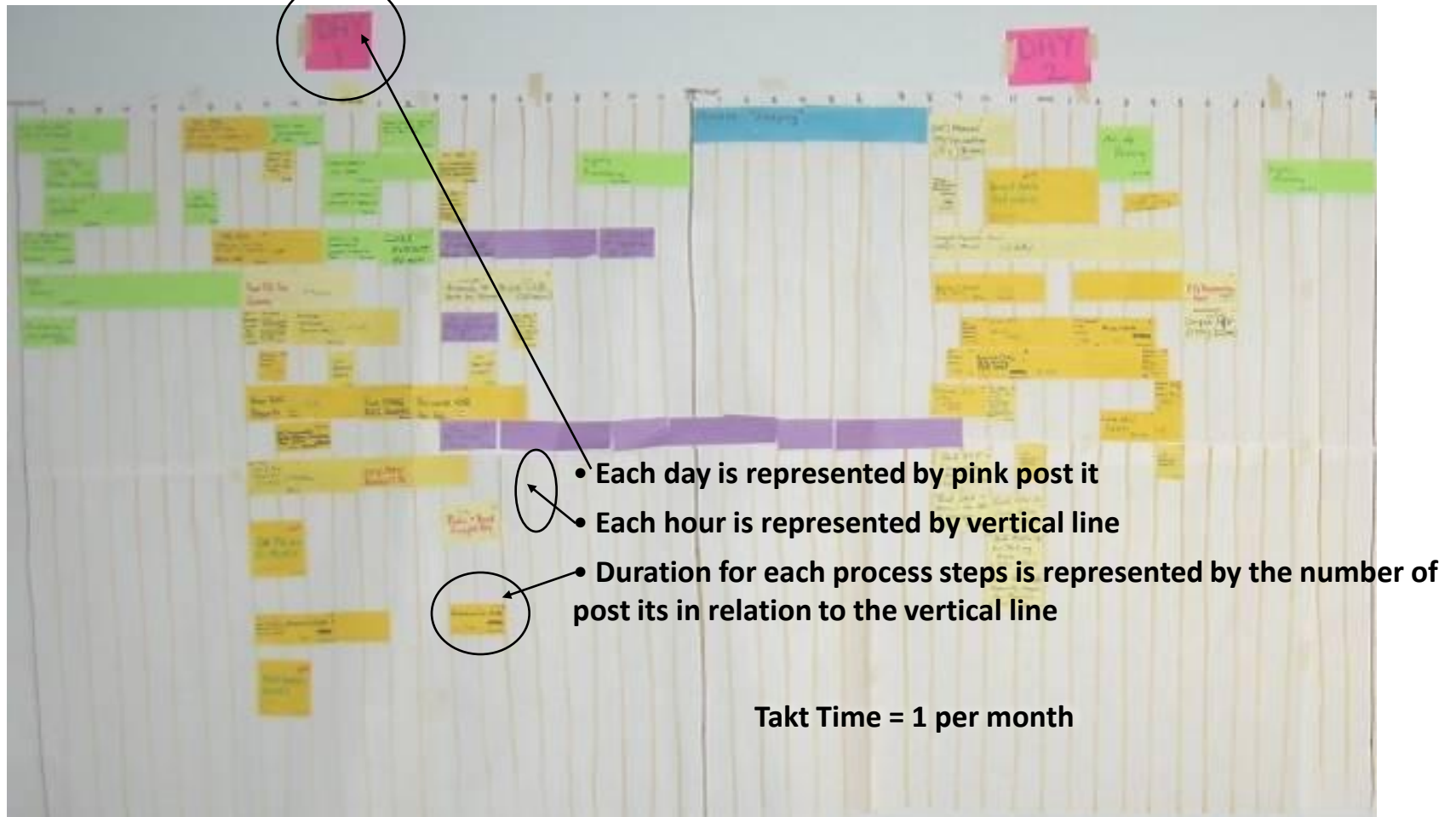


Multi-vote – Identify Top Priority Items

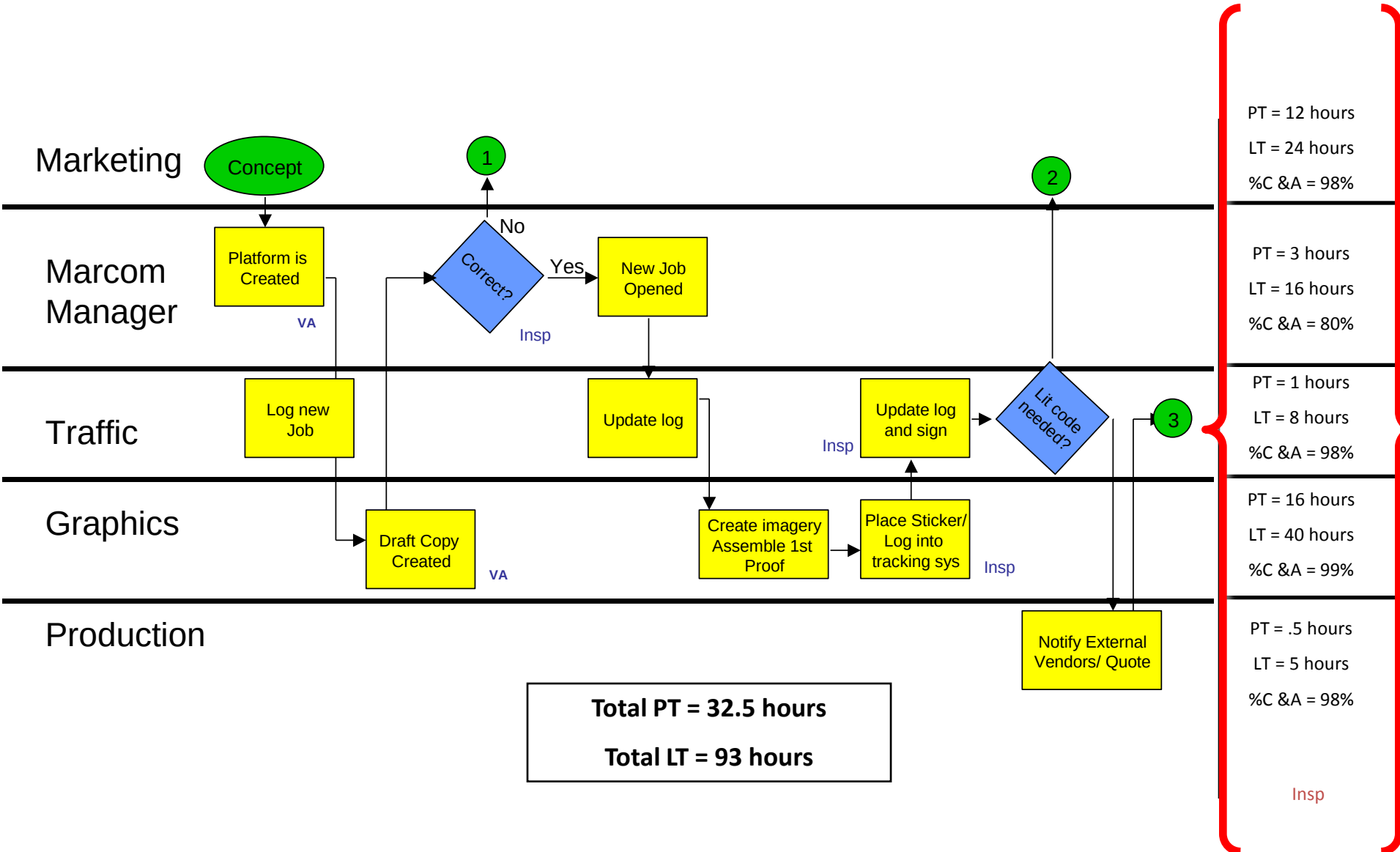


Hear no problem, See no problem, Speak no problem

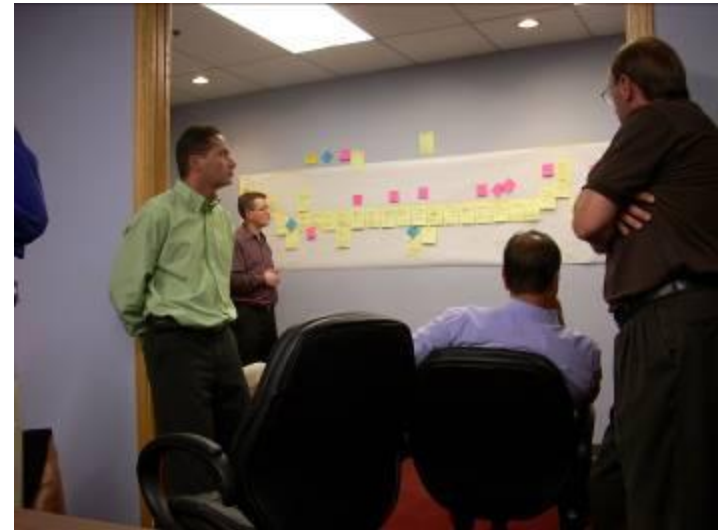
Time-bound Process Map



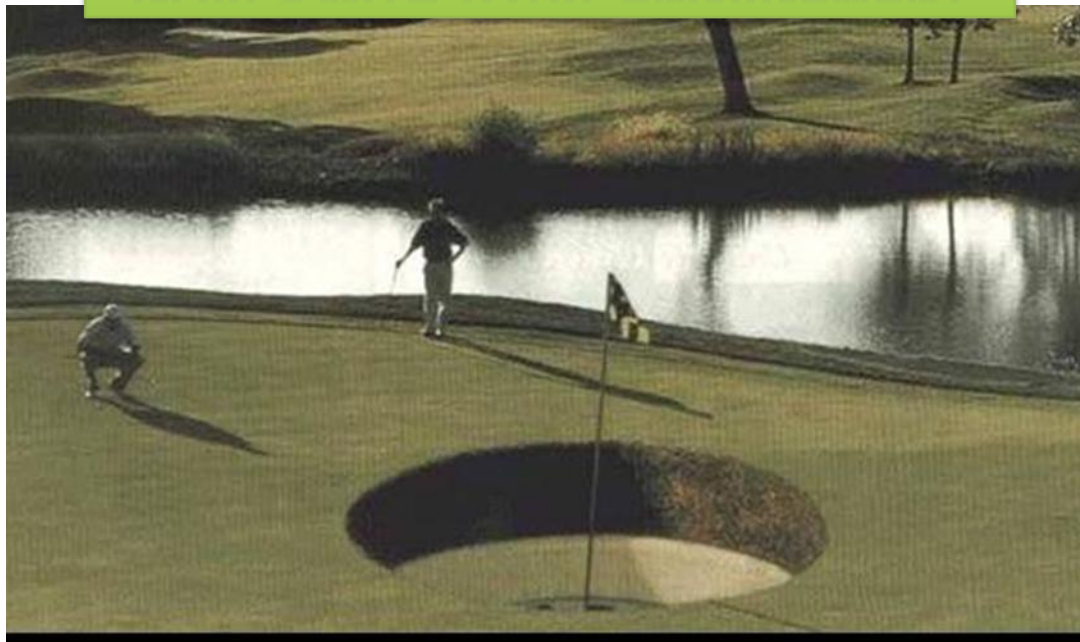
Create “Time-bound” As-Is Process Map



Process Mapping with Customers



**KAIZEN HELPS YOU ACHIEVE YOUR
GOALS WITH TOTAL ENGAGEMENT**



Lean World



Questions?

