

# It's a Zoo! Building Trust and Creating Problem Solvers at San Diego Zoo Global

Jeff Foster



## Managing To Create Problem-Solvers

Lean Transformation  
Summit 2017  
Carlsbad, CA | March 7-8, 2017

# Who are we?

- Not for Profit Conservation Organization
- 101 years old
- Worldwide Conservation Leader supported by 2 attractions in San Diego
- 1200+ Employees
- 5 facilities in San Diego metro area
- 28 locations worldwide

**SAN DIEGO ZOO®  
GLOBAL**

**SAN DIEGO ZOO®  
SAFARI PARK**

**SAN DIEGO ZOO®**





WILL YOU HELP END EXTINCTION?



**California Condors Soar High Again...**  
 Our efforts saved them: 400+ today, with hundreds flying free!

**African Elephants Need Your Help...**  
 Join us and stop the sale of ivory products worldwide!

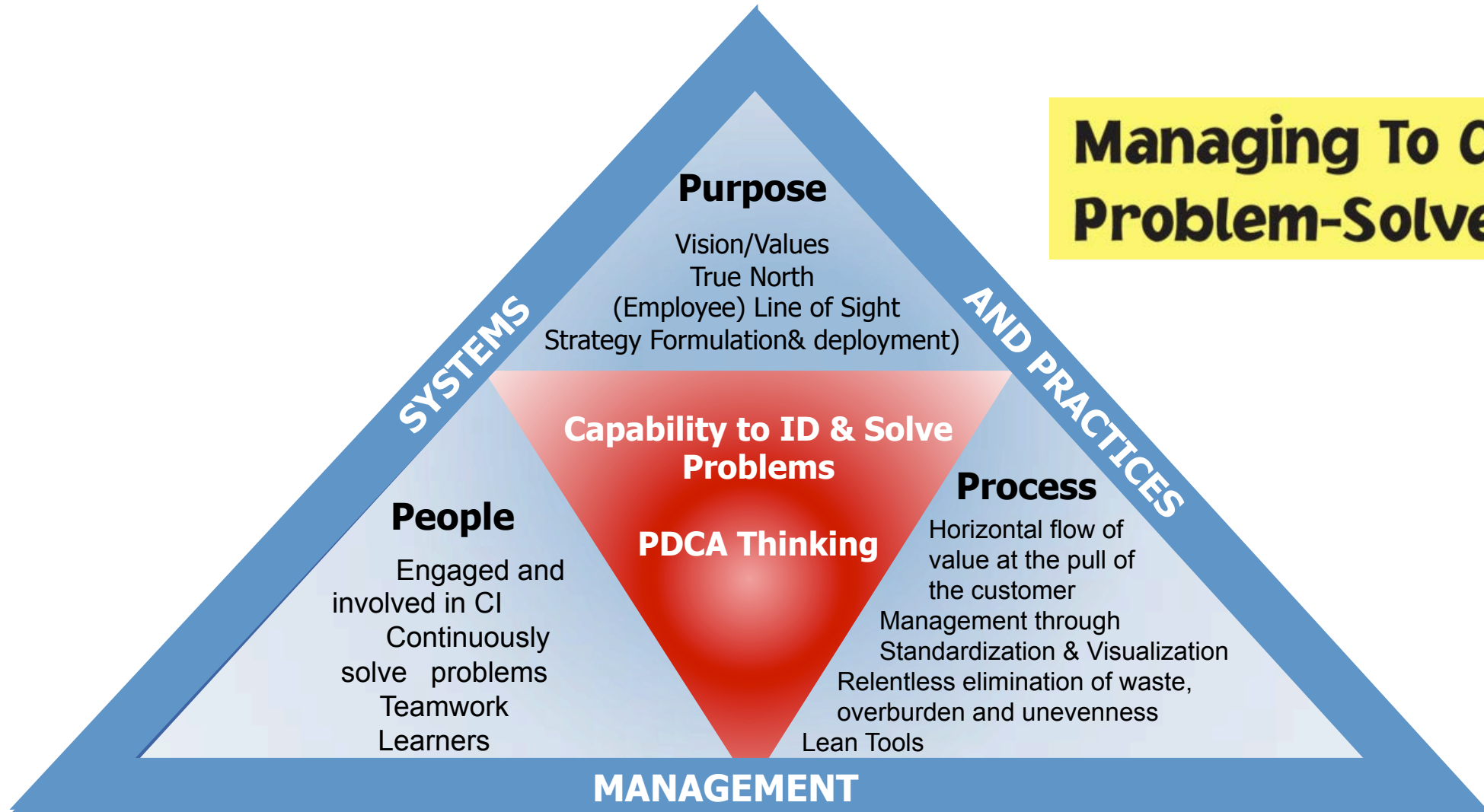
**We're Saving Rhinos...**  
 With antipoaching patrols in Africa and Asia and the world's most successful breeding program!

**Giant Pandas Are Back from the Brink!**  
 Our partnerships helped save this iconic bear from extinction!



# Lean Organization

## Managing To Create Problem-Solvers





# Toyota's struggles with Problem Solving

## 2. Grasp the current situation

**We have put huge amount of time and efforts on PS training, but it doesn't work well.**

### (1) History

1985	NUMMI established 6 step Problem Solving method.
1989	Toyota Problem Solving at TMMK targeted TL and above.
1990	PS II at TMMK targeted TL and above.
1991	President Cho (TMMK) placed renewed emphasis on building PS capabilities.
1992	Practical Problem Solving introduced.
1994	GL 40 hour Practical Problem Solving introduced, targeted Manager-GL.
1996	Practical Problem Solving for Maintenance at TMMK.
2001	Managing the Toyota Way (MTTW) PS introduced for Manager.
2004	Started joint collaboration with Toyota Institute for Global Problem Solving pilot activity.

We have tried to develop PS capability since 1985.

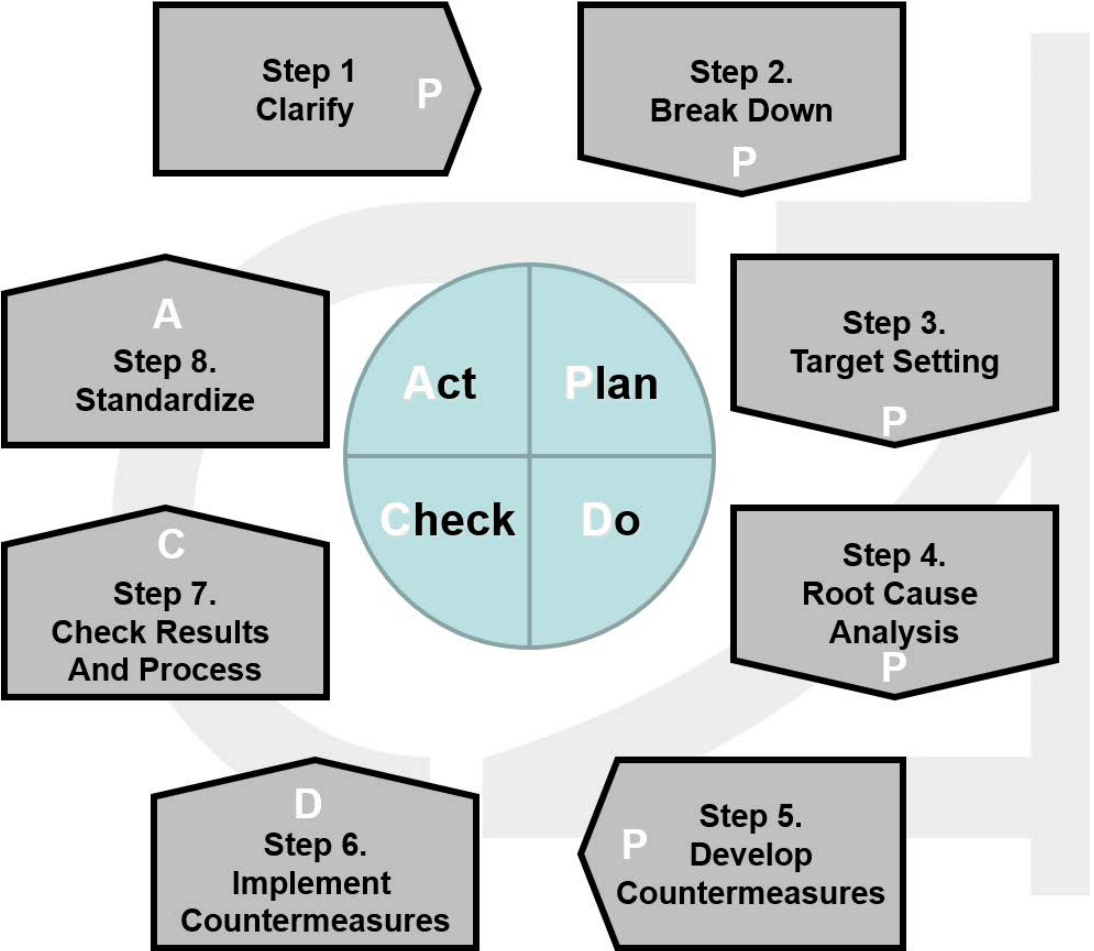
### (2) Current situation

Course Name	NUMMI	TMMK	TMMI	TMMWV	TMMAL	JABC	BODINE	TMMC	CAPTIN	TMMNA	Target Audience	Time Frame
1) Practical PS		O		O							GL and above	40 hrs
2) Practical PS	O										AM and Manager	16 hrs
3) Practical PS							O				GL, TL, Foreman	8 hrs
4) Practical PS						O					All	24 hrs
5) GL Practical PS	O										GL	40 hrs
6) PPS for Maintenance		O									TM	20 hrs
7) Introduction to PS	O	O		O							TL and above	16 hrs
8) PS II		O		O							TL and above	16 hrs
9) MTTW for Manager										O	Manager and above	8 hrs
10) MTTV for Maint.								O			GL	16 hrs
11) Problem Solving	O										Pre-TL	8 hrs
12) Problem Solving	O										Pre-GL	40 hrs
13) Problem Solving				O							Pre-TL	2 hrs
14) 5 Whys							O				GL, TL, Foreman	4 hrs
15) Advanced PS				O							TL and above	3 hrs

We have 15 PS trainings at NAMCs already.



# Global Standard Method





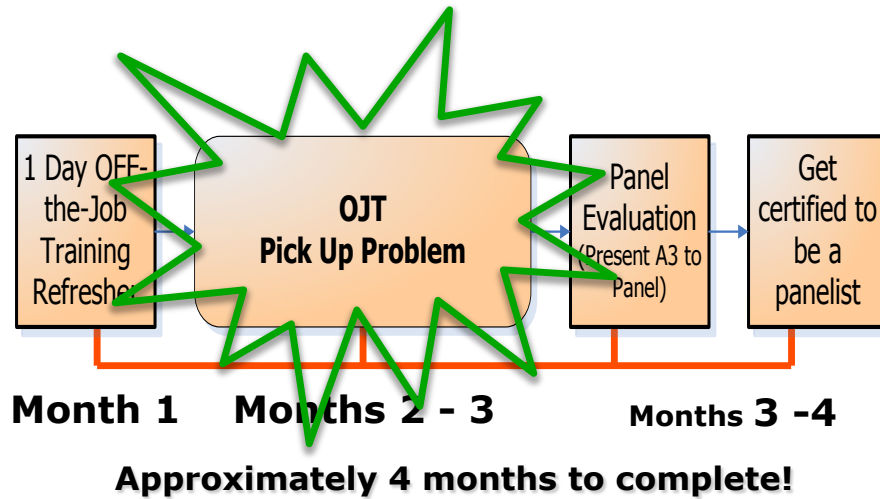
# Internal Toyota, Systems Alignment



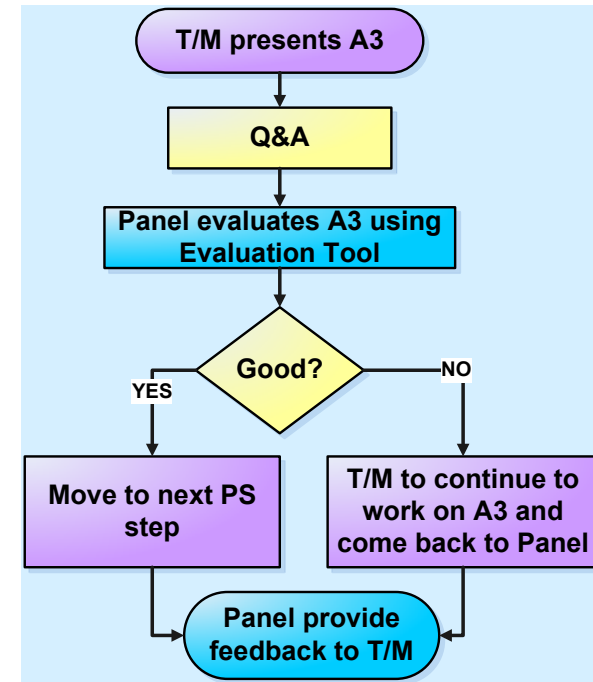
# How do we show that we know?

EVERY salaried TM in the WORLD will go through the TBP confirmation process.

- TTC Example



Approximately 4 months to complete!  
**Receive  
Coaching**





“How can you expect to  
solve problems without  
getting your hands dirty?”  
Kiichiro Toyoda



# Example

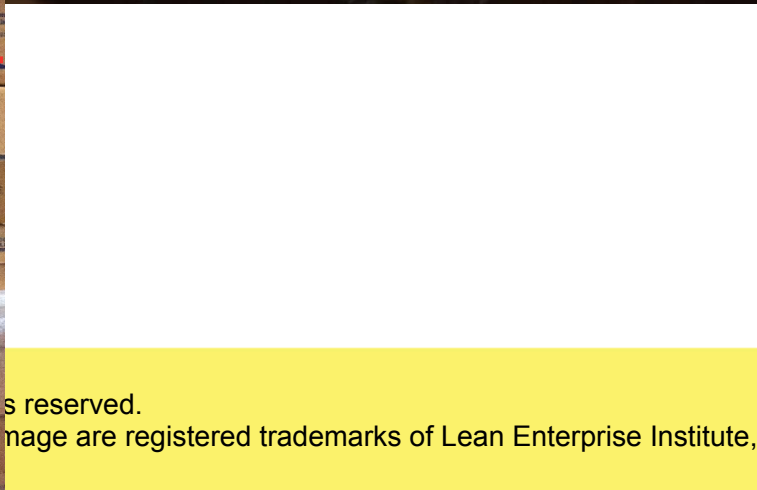
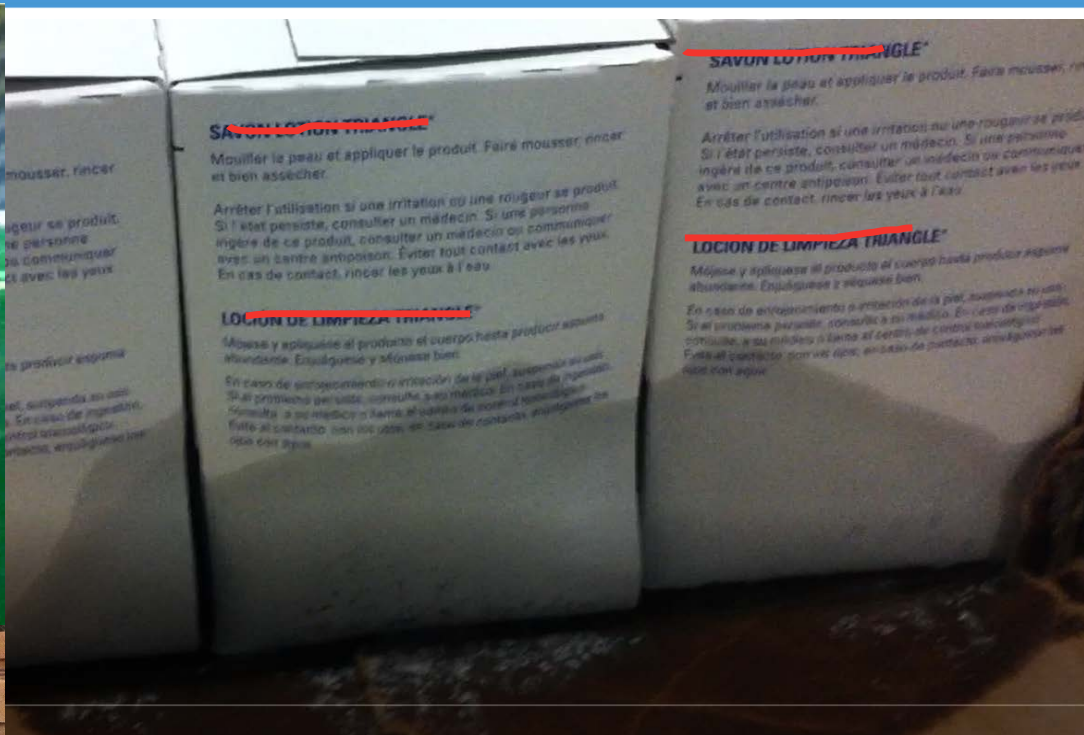
## Soap Company

- Them-“We have a lot of Leakers”
- Me- “Can we get the data?”
- Them- “I’ll go get that right now.”
- Me- “Thank you, we will go to the DC and collect data”





# What's a Leaker?



...s reserved.  
...age are registered trademarks of Lean Enterprise Institute,



# Grasp Situation



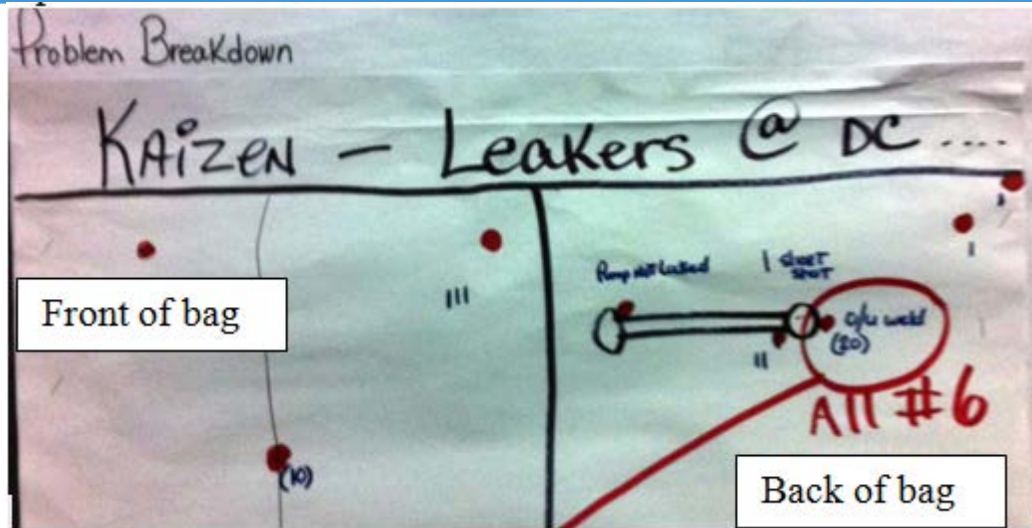
# Grasp Situation

Ideal - zero leakers (less than 1%)  
Current - 50 Leakers in spotcheck @ DC





# Break Down the Problem



Also checked:

- Location on the bag
- By Date-Trending up
- By Machine 4 Machines, 80% from Machine A
- By Operator-No difference

Division Points



# Target



Eliminate Leakers? Or.....

Eliminate Weld Seam Leaks on Machine A from 20 to 0 by December 1

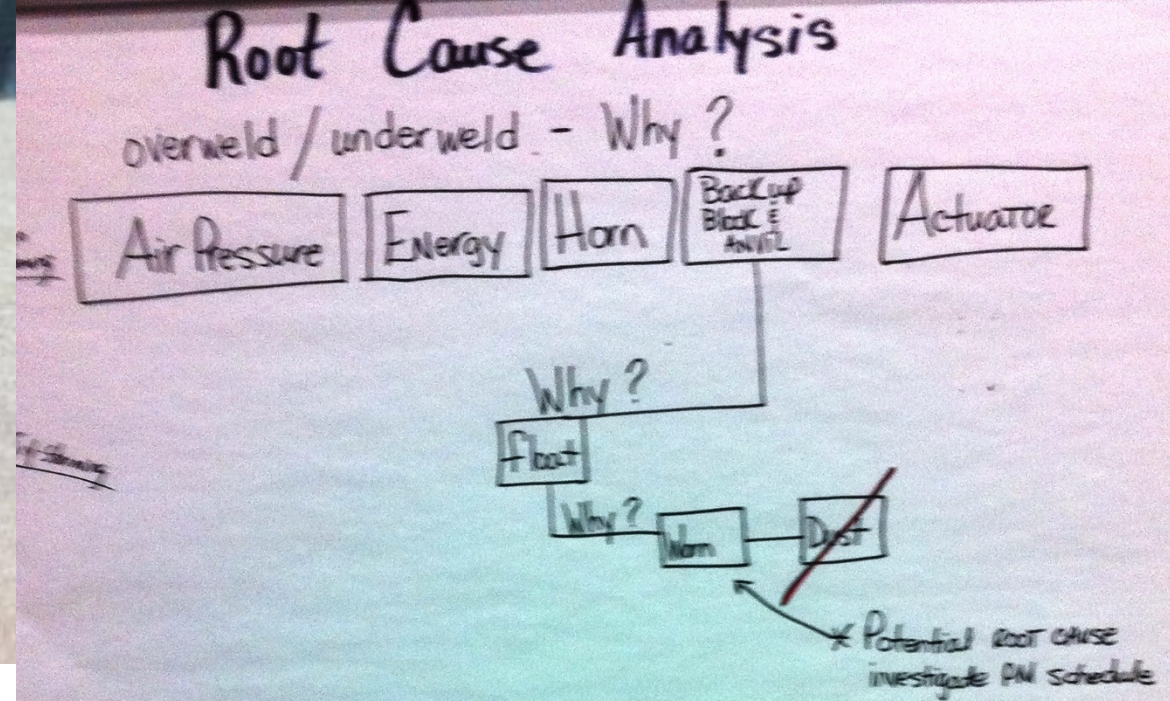
Which is preferable?





# Leakers Root Cause Anal

Why do we have Leakers? Or.....  
Why does the weld fail to seal on  
Machine XYZ ??



Immediate Action:  
Replace Anvil → problem solved

### Next Steps:

- DC escalation process on informing/communicating regarding leakers. - Jesse North
- Develop bounding simple for firm weld GIC check. (Navy) - Feb 25\*
- Implement a wdy check of Anvil (John) - every Friday
- Develop standardized work for firm change (Tito) need support
- Implement countermeasure from customer #6 to all customers. (Navy/Tito)





# Their + ▲ and Key Learning



+

(see customer)

- + eliminated work for DC by sorting
- + structured approach, Problem Solving
  - usually we try to solve before we understand
  - multiple DATA points by location on bag itself & patterns, Leaker & around Leaker, old + new inventory
  - Recognized need for more standardization
  - Identified POINT OF CAUSE
- + Power of Teamwork, Diverse Knowledge
- + Immediate Corrective ACTION
- + "We can do this." John

▲

- PLAN/MAP for Locating Leakers
- Better way to discard waste
- Better way to sort Leakers
- Tendency to jump to conclusions
- Historical Data not quickly Available

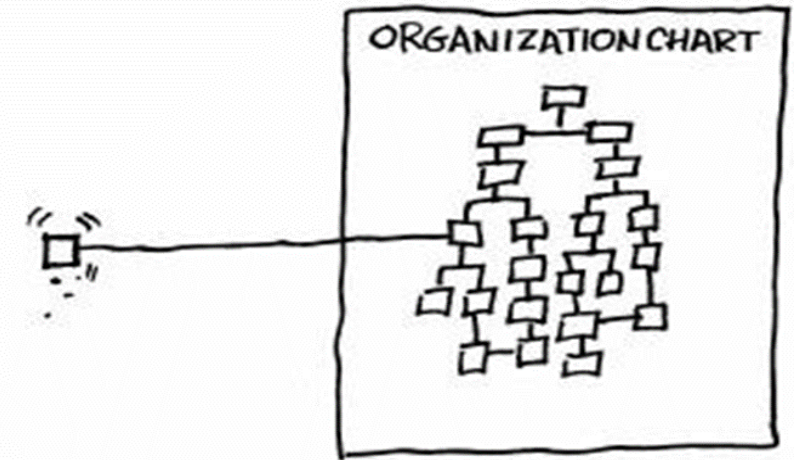
## Key Learning Points

- Standardization is the key to sustainment.
- Structure is better than random.
- 5 why's after identifying point of cause.
- Root cause P.S. creates positive energy (feels great)
- You have to roll your sleeves up & get your hands "clean" to solve a problem.
- Lean is Common Sense / organized approach - P.D.C.A.



# Who am I?

- 13 years into my Lean journey
- 21 years in Hospitality Operations (Service)
- 6 years as San Diego Zoo Global Director of Process Improvement
- Our Center of Excellence is a team of 1
- I report to the CEO with no direct reports  
(How much change can I make?)



# Lean at SDZG

## For-Profit Company

LEAN to save time/money/resource  
(usually financial metric)

Cost Savings

Reduce lead time

Provide primary value to Customer

Provide secondary value to Associate

## Not-for-Profit Company

LEAN to increase associate  
'Bandwidth' (usually time metric)

Time Savings

Reduce lead time

Provide primary value to Associate

Provide secondary value to Customer

# Adjusting the message is critical to success!



# Trust enables Problem Solving



# Building Trust and Problem Solving

- Trust is the belief in ability/capability
- Belief in ability/capability creates Leaps of Faith opportunities
- Leaps of Faith support Change Management
- Change Management is the cornerstone of Problem Solving

## Trust is the basis for Problem Solving





# 4 Leadership approaches for successful Problem Solving

1. Transparent Communication
2. Break Down Silos
3. Open-Minded
4. True North



# Start with a Clear Purpose



# Scoping the Problem

- Don't underestimate the time required to scope the problem, it may take weeks/months
- Can take a LONG time to appropriately complete!
- Allow time to vet properly, any slight deviation in scope can cause monumental 'misses' in goal
- The more you limit (3-5) the inputs and outputs, the faster you will see results



# Planning is key

Plan takes about 70% of time in a PDCA cycle.

Be flexible with tool use. One size does NOT fit all!

**PDCA** is good for minute to minute change for  
Problem Solvers

**Kaizen** is perfect for quick change (days) results

**A3** is great for a long term (weeks to months)  
projects and provides clear communication of  
scope for larger projects

**Hoshin** is the vision on the horizon (year or years)



Our Purpose is ALWAYS value to customer – internal or external





# Art of Communication



# Messaging the Audience

- ✓ Appealing to the audience builds cooperation, understanding, relationship
- ✓ Speak their language (doing your homework)
- ✓ Visualize your message purpose in your mind to clearly communicate



# Message Interpretation

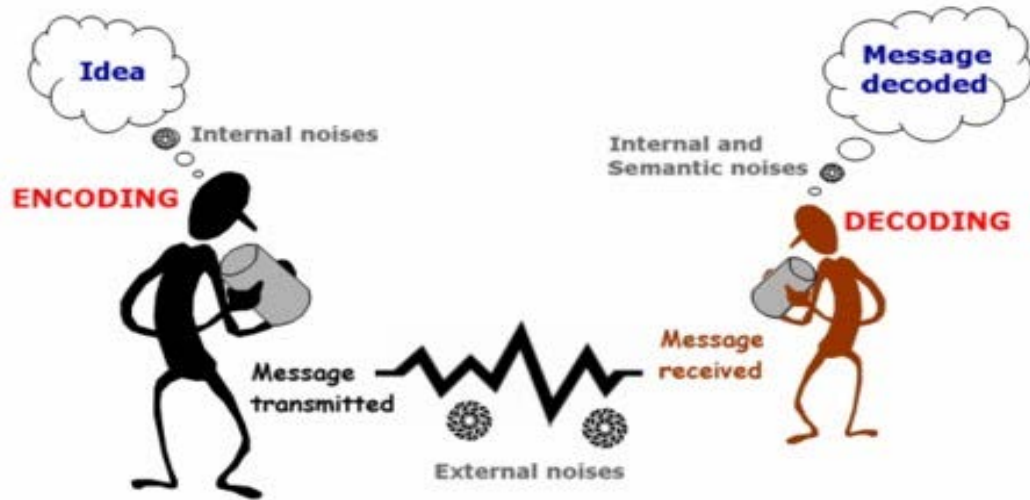
Remember the children's game – Telephone

Why didn't it work?

Interpretation

Translation

Perception





# How many F's?

**FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF MANY YEARS OF EXPERTS.**



# 8 types of message styles

1. Financial Benefit
2. Data Driven
3. Name Dropping
4. Empathic/Emotional
5. Passionate/Compassionate
6. Subject Matter Expert
7. Humble/Humility
8. Filling a Missing Need



# 8 types of message styles

## Financial Benefit - Finding the 'Sweet Spot'

Message: Internal competition for same guest within Southern California

Solution: Most profitable balance of Membership and Admission purchases

Result: 16% increase in revenue with 0 increase in costs

Audience: CEO, CFO, CMO, CDO, and Directors

## Data Driven – Lagging indicators

Message: Maintenance Department can not complete daily work orders

Solution: Actual complete per day: 72. Technology upgrade for current platform (included in regular system maintenance fees)

Result: 184% improvement in completed work orders plus project time

Audience: Director of Maintenance, IT, Maintenance staff





# 8 types of message styles

Name Dropping – ‘(your name here) says....’

Message: CEO says we need more hay for feeding

Solution: Began purchasing Hay using Kanban system

Result: Reduced hay storage needed. Created Animal Enrichment Workshop space in Hay Barn

Audience: Curator, Nutritional Service Manager, Lead Keepers

Empathetic/Emotional – It feels like...

Message: (Associates feel) guests wait a long time for the Bus Tour (in fighting)

Solution: Changed bus boarding process

Result: Reduced wait by 22%

Audience: Bus Department Manager, Supervisor, Leads





# 8 types of message styles

Passionate/Compassionate – Fixing is the right thing to do

Message: Hippo have no stimulation in enclosure

Solution: Introduced fish to Hippo pond in exhibit

Result: Hippo visually more active

Audience: CEO, Mammal Curator, Hippo Manager, Veterinarian

Subject Matter Expert – Teaching opportunity

Message: Gorillas have heart condition

Solution: Contracted Cardiologist outside of our expertise

Result: Gorilla Heart Project kicked off nationwide

Audience: Gorilla Keepers, Veterinarians, Curator, Chief Life Science Officer



# 8 types of message styles

Humble/Humility – I do not understand, but am willing to help

Message: Tours have multiple empty seats when they depart

Solution: Change mix of tours and measure 'fill rates'

Result: Increase fill rate by 9%

Audience: Tram Leads, Manager

Filling a missing need – Don't know what you don't know

Message: Desire for culture of problem solving and process improvement

Solution: Hired me!

Result: Coached & Developed 40+ leaders

Audience: Everyone



# Flexible messaging up and down the Org Chart

## Business Environment Change - Gap Identification!

- CEO – desire to lead Innovation
- Executive Team – desire to produce results
- Facility Leader – desire to manage the variables
- Department Head – desire to keep up with work
- Manager – desire to build team
- Associate – desire to produce quality work

The message must be aligned and reach all audiences.



# Maintain the Gain





# Coaching versus Leading Problem Solving

- Don't Solution jump
- Do not offer/recommend/suggest possible changes or solutions
- Build consensus
- Flexible Interpersonal skills are critical
- Regularly Ask for Feedback



“Understand that those most closely affected by the change in the end, will be most concerned about participation in the process improvement in advance, and make sure they are included along the way”



# How do we know if we are successful?

- Make sure the KPI's are clear and aligned to the company True North
- If no KPI in place, then begin by measuring *ANYTHING* to visually demonstrate the success of the work
- Don't worry if the metric is not representative, allow the team to decide that
- Change the metric as frequently as needed to find the most representative one

|||||   |||||   |||||  
|||||   |||||   ||

*How many stalks  
of bamboo did  
Gao Gao eat?*



# How Change happens

**Conversation!** Non judgmental communication with Integrity, Relationships

## What is the Purpose?

*Jack of all trades  
Master of none*

**Asking open ended, key questions;**

What do we know?  
How do we know it?  
What do we need to know?  
How will we find it?

### Provocative Questions – 4 C's

Context – Who? What? Where? When? How?

Causal – 5 Whys, What is the thought behind...?

Challenge – What are possible alternatives (countermeasures)?

Calibration – What are Next Steps (using metrics and data as parameter)?



# Cheetah Conservation





# Leaders Support Change

- Allow the process owners to describe the problem
- Repeat for understanding
- Understand Change Zones
- Frequently assess 'temperature' of team
- Patience. Allow the change to happen organically
- Ask open ended questions
- Support associates learning by providing time and removing roadblocks
- Immediate results may be needed, but suggest the parameter versus providing solution
- Change takes continuous PDCA cycles. Support repeated cycles.



# Change Zones

Comfort Zone – We've always done it this way! (Status Quo)

Predictable

Consistent

Challenge Zone – Can it change? (Revelation)

Questioning

Learning

Fear Zone – Change it NOW! (Revolutionary)

Unpredictable/Uncertainty

Panic



# Sustaining Lean thinking

- Relationship Building and Actively Listening
- Integrity/Credibility
- Unbiased Process Improvement
- Benchmark to other industries (Vet Hospital Scheduling to Human Hospital scheduling)
- Use Provocative Inquisition – 4 C's (Context, Causal, Challenge, Calibration)





# Sustaining the Change (Roar Forward)

- Follow Up
- Accountability
- Supporting ALL efforts regardless of impact
- PR the change
- Remove the Roadblocks
- Solicit Feedback
- Be Flexible – Continuous Change not Continuous Results



# Key Learnings



# Key Learnings

- Success of Lean methodology depends primarily on ability to Message the Audience
- Lean methodology does NOT sustain independent of clear messaging
- Leaders and their teams interpret communication differently based on previous experience and perceptions, right or wrong
- Coaching Problem Solving versus Doing Problem Solving



***If you can't write your message in a sentence,  
You can't say it in an hour***





# Additional Key Learnings

- Repeated PDCA is the center of the universe
- Process Owners create change from the bottom of the organizational chart
- Leaders support Process Owners creating change
- Everything communicates – Think about what the purpose of the message is how the message will be perceived



**everything**  
communicates



# Beware of Pitfalls

- Strict application of Six Sigma or Lean methodologies was fruitless and expensive
- Implementation without understanding by process owners took immense effort and time
- Solutions presented may be 'shiny' but not work as a solution
- Patience



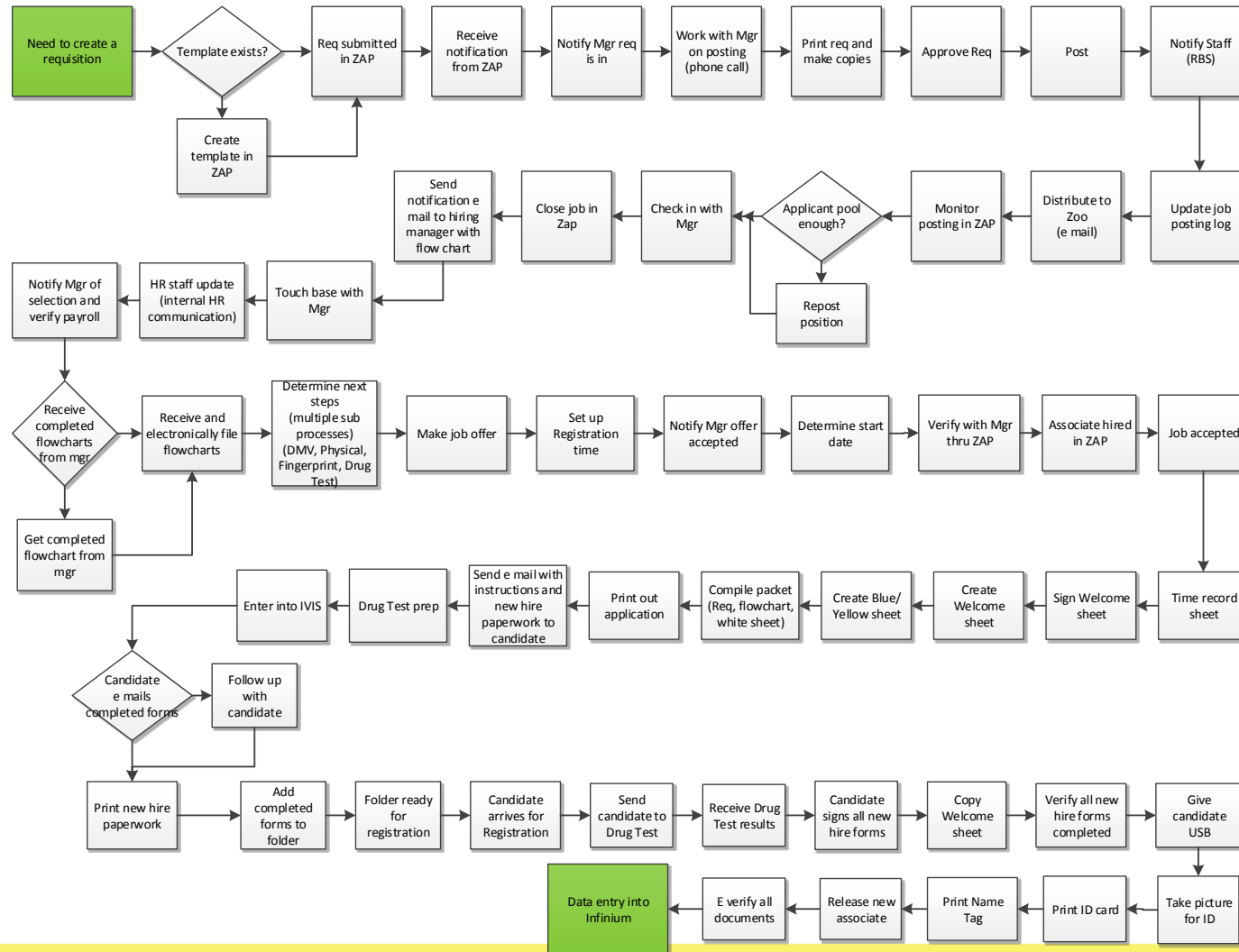
# Summary

1. Trust enables Problem Solving
2. Start with a Clear Purpose
3. Use the Art of Communication
4. Maintain the Gain
5. Remember your Key Learnings





# Human Resources Requisition Process



# Tool Organization



Tortoise &  
Armadillo tools  
– Before

Tortoise &  
Armadillo tools  
– After





# Tool Organization



Singing dog &  
Aardvark tools  
– Before & After





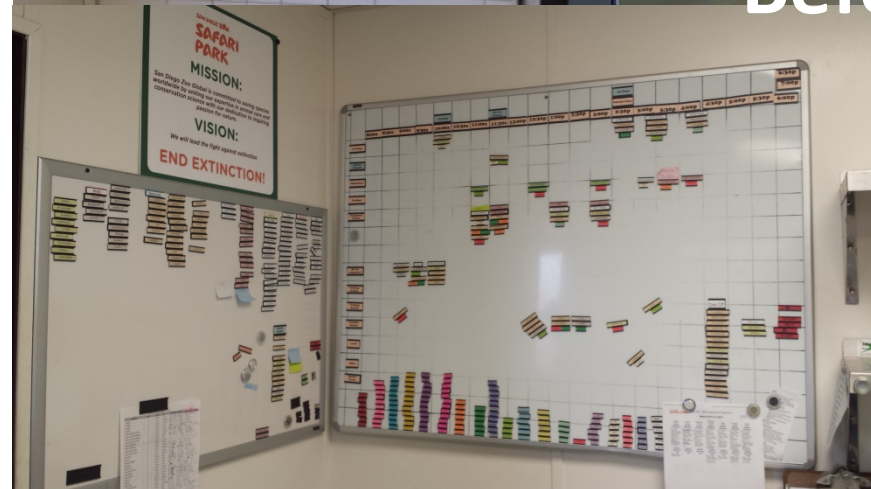
# Cell & Facility Layout



Before



After

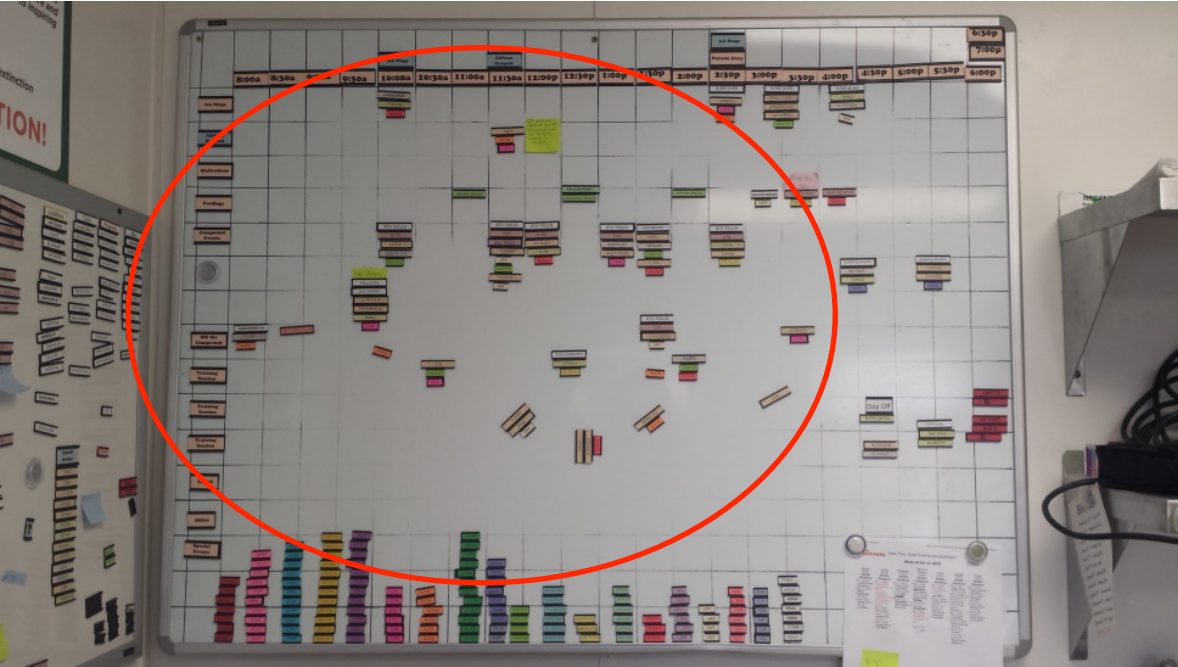


- Daily String check/diet
- Eliminate in/out during shift
- Reduced workflow regularly

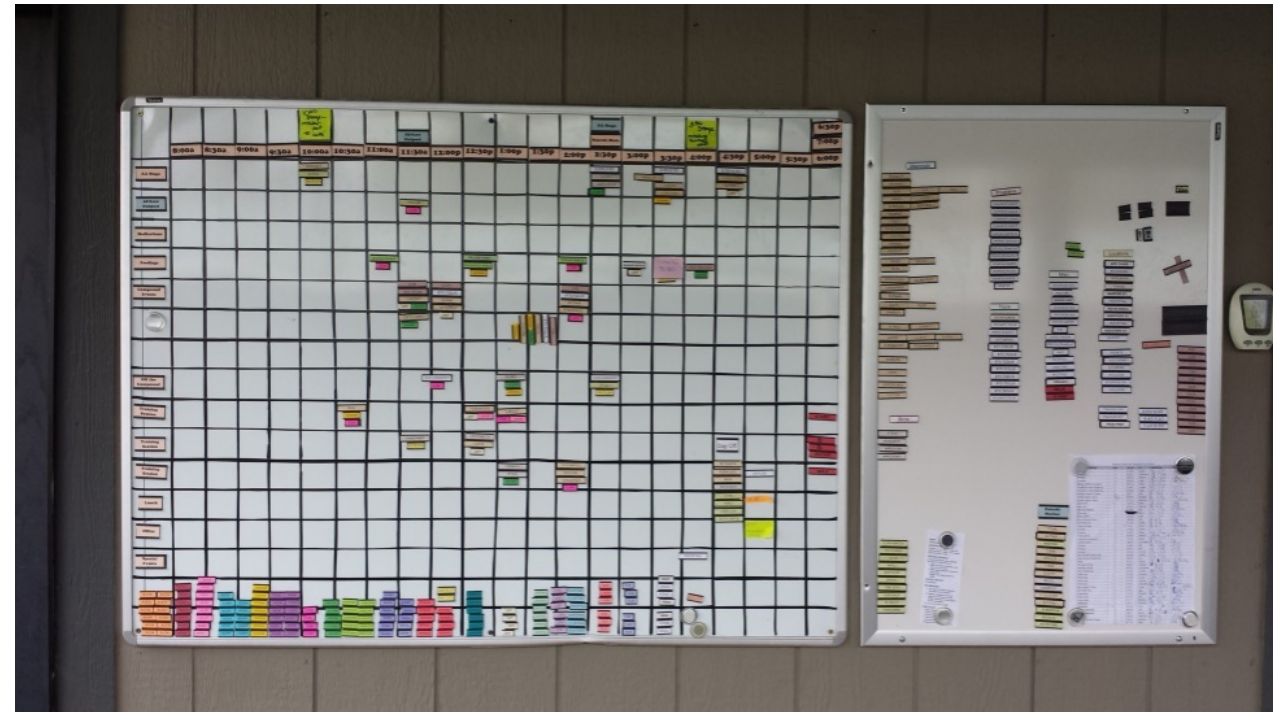


# TPM: Daily Assignment Board

Before



After







# Cell & Facility Layout Example: Pokie

Pokie's enclosure  
**Before**



~30 ft

Pokie's tools

Pokie's enclosure  
**After**



5 ft

Pokie's tools





# Poke Yoke - Mistake-Proofing

Tortoises

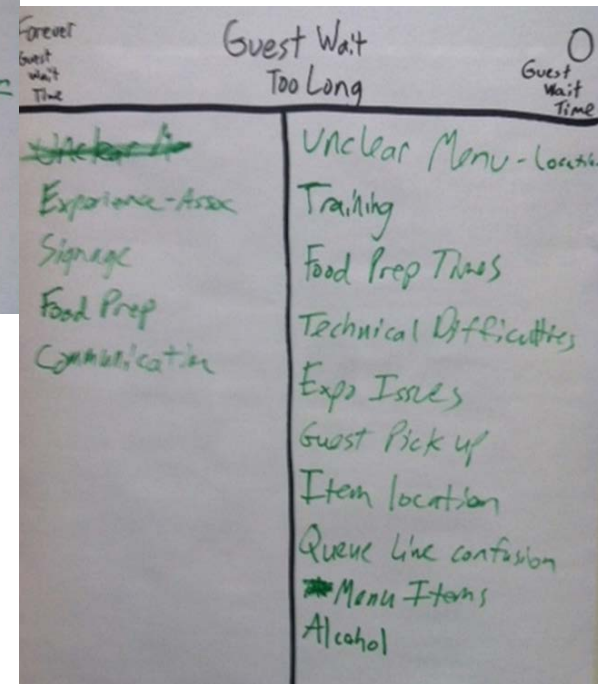
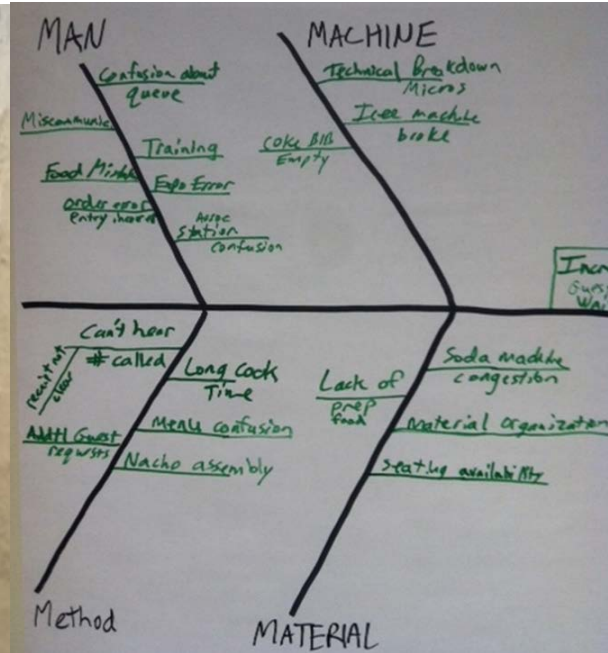


Armadillos





# Single Piece Flow – Guest Queue Line



**Current**

**TPT**

729 sec  
or  
12.15 min

**TCT**

1818 sec  
1735 or  
30.3 min  
28.9



# Questions, Comments, Feedback, Thoughts

Jeff Foster

[jfoster@sandiegozoo.org](mailto:jfoster@sandiegozoo.org)

**SAN DIEGO ZOO®  
GLOBAL**

