

WELCOME

Lean in Washington – The Basics!



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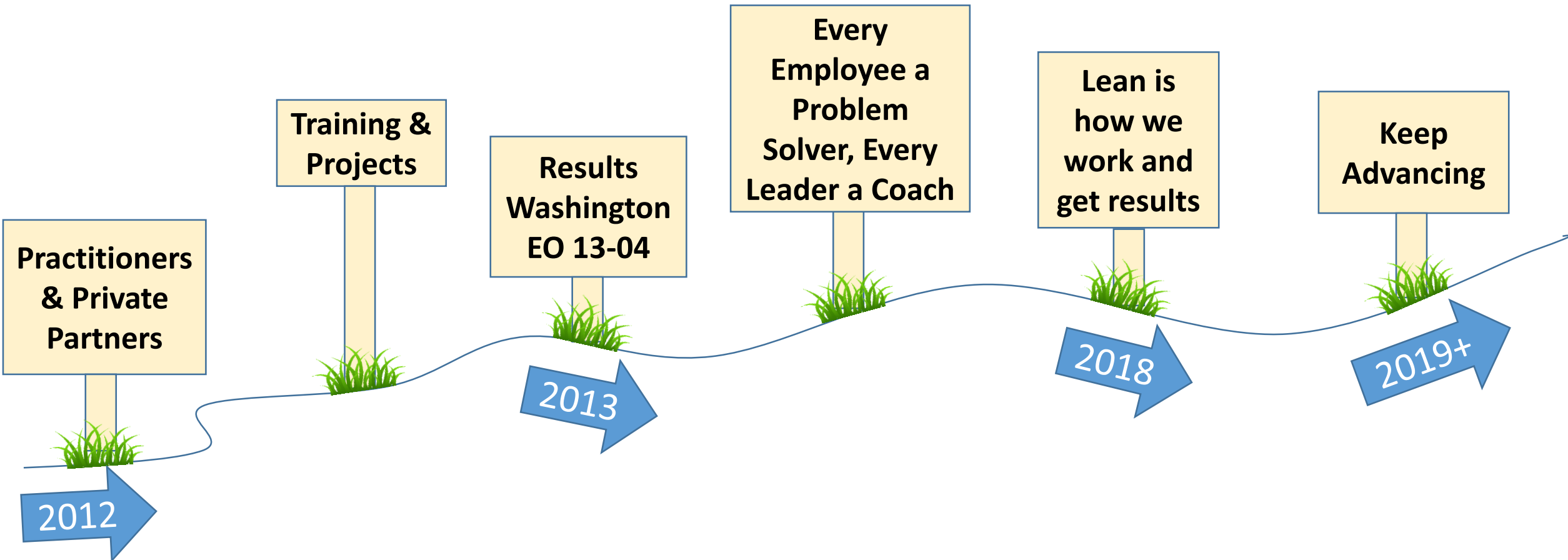
Today We'll...

- Hear how we define Lean in Washington state
- Gain insight into our state's journey
- Learn about common Lean tools or terms
- Understand that Lean is much more than tools
- Reflect and take action toward future learning

History of Lean



Washington State's Journey



Lean is...

*a way of leading and working,
built on respect and humility,
that uses continuous improvement,
to produce great results for
customers.*

Lean is for
EVERYONE
every day.

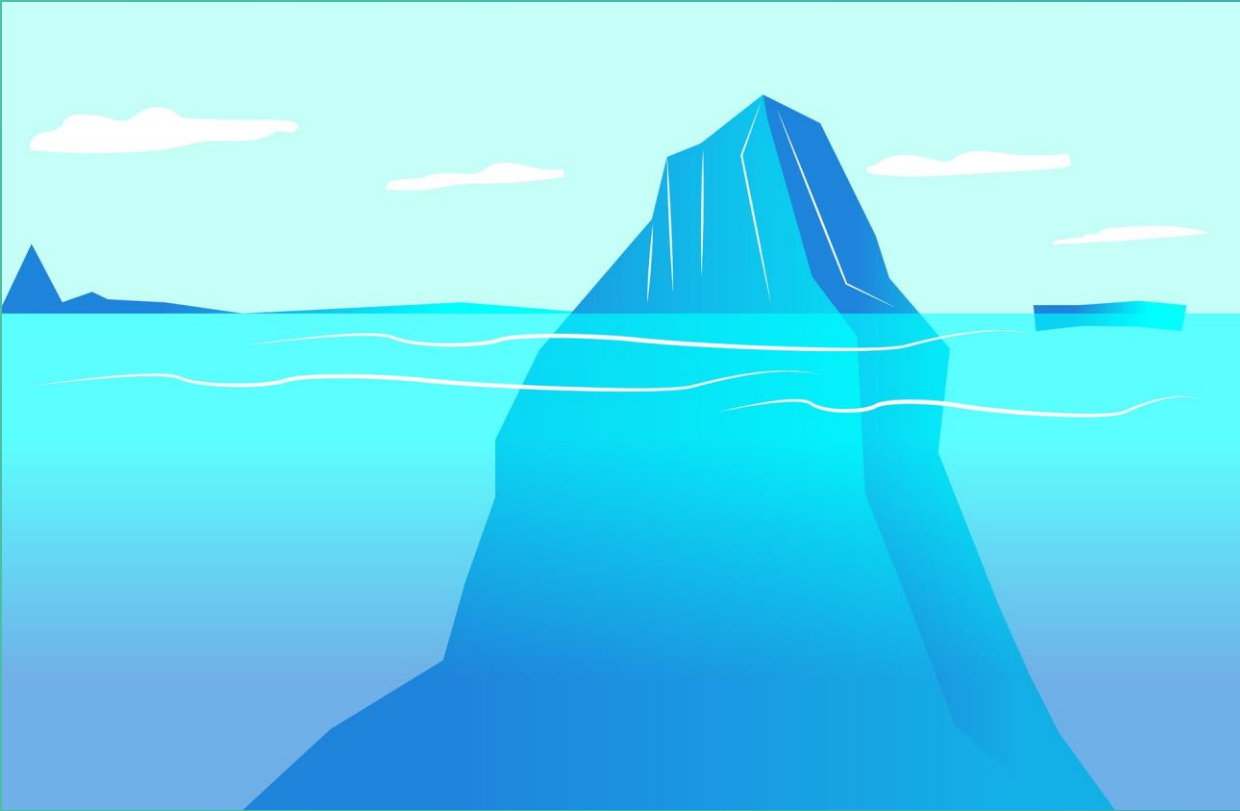


Way of Working



Lean is for everyone every day.

Human Experience Matters



- Respect
- Humility
- Diversity
- Problems are good
- Ok to make mistakes

Customers



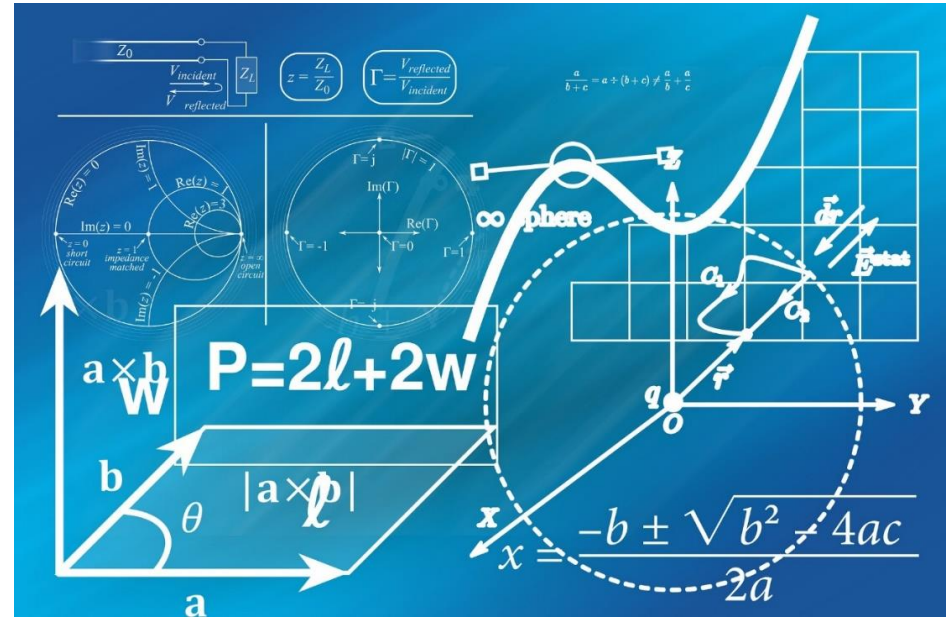
Employees



Change
for the
BETTER

Language

WILLKOMMEN
欢迎 स्वागत
BIENVENIDA
WELCOME
BIENVENUE ようこそ
добро пожаловать
ترحيب BEM-VINDO



You don't have to use foreign or technical terms to be able to use Lean.

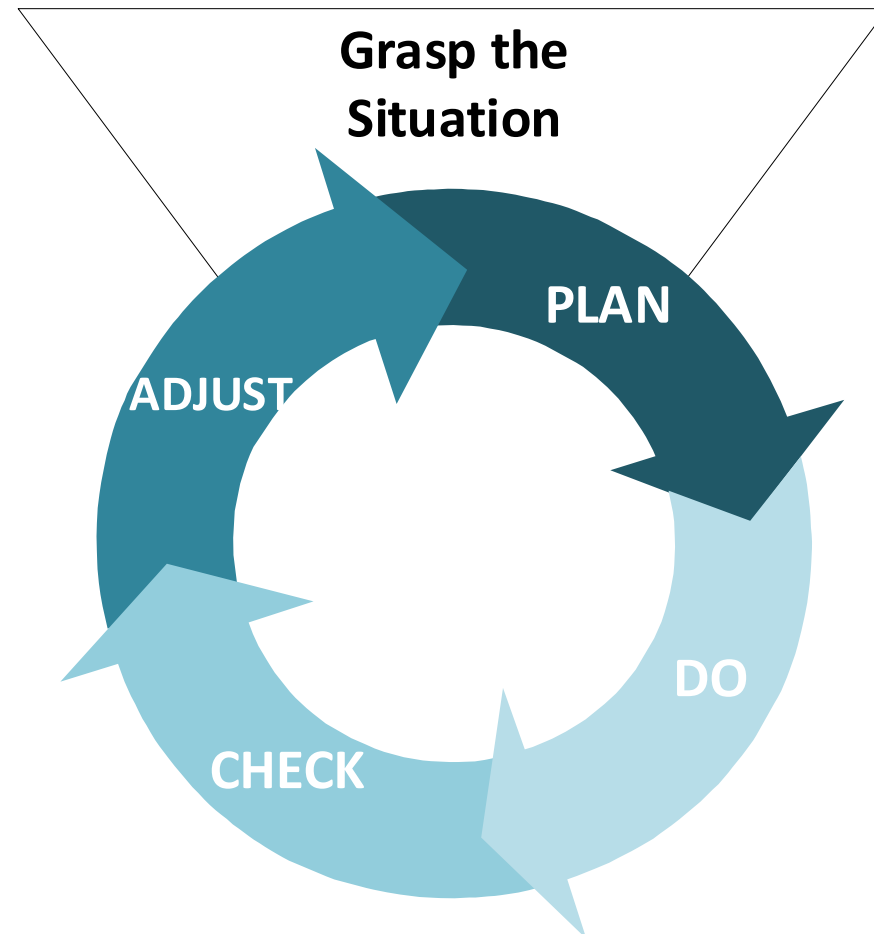
Consistency



Principles

gPDCA

- Grasp the Situation
- Plan
- Do
- Check/Study
- Adjust/Act



8 Wastes

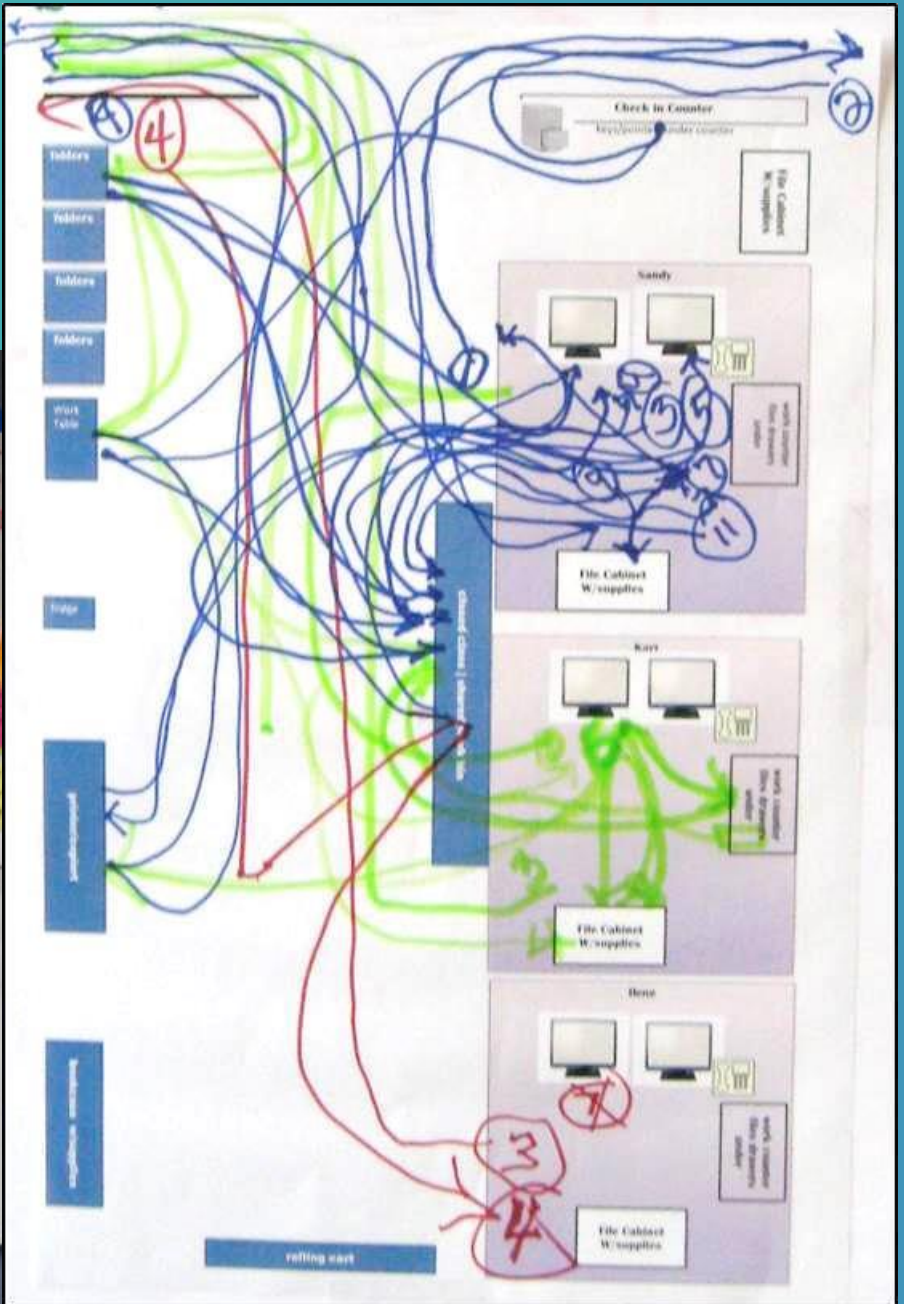
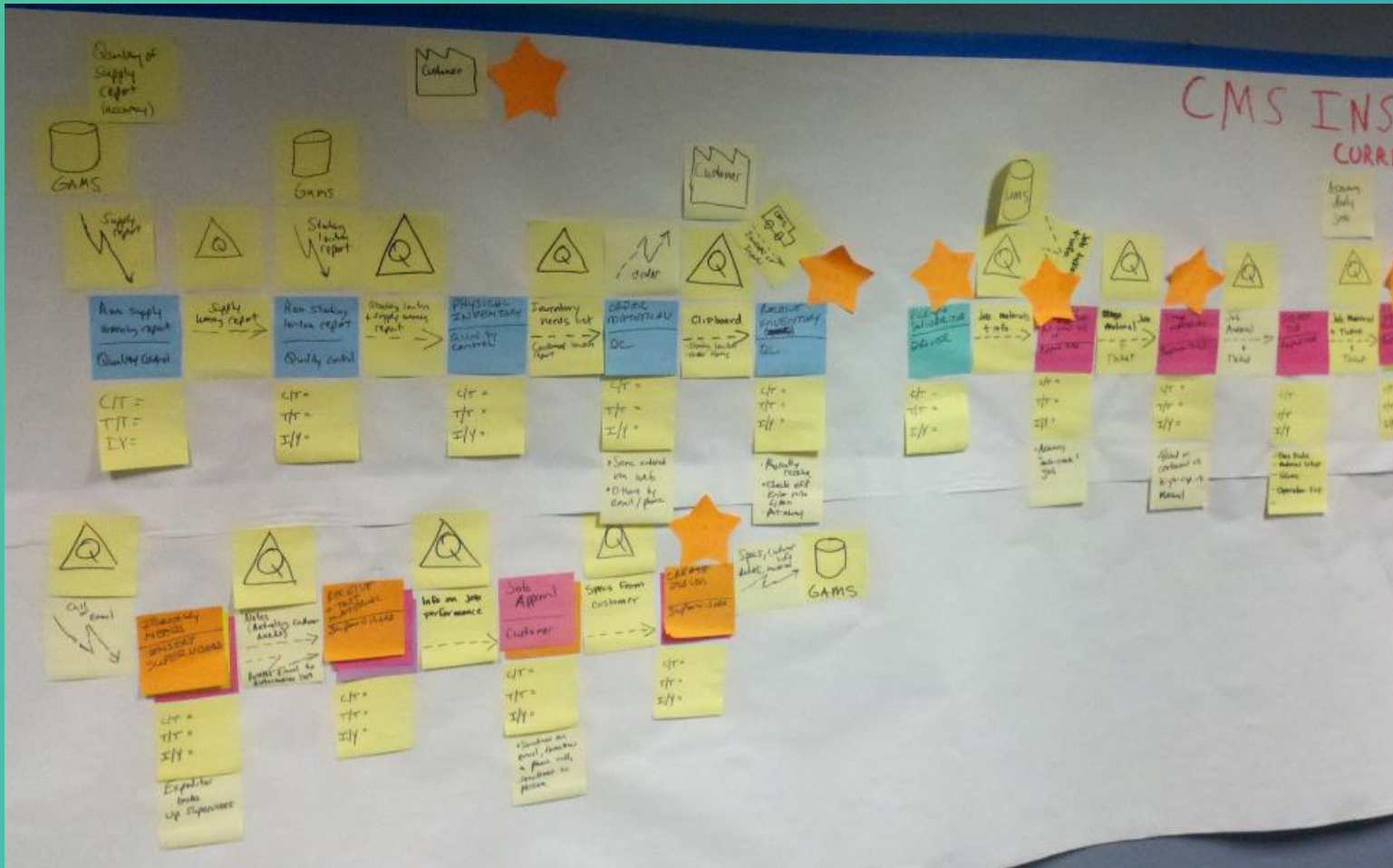


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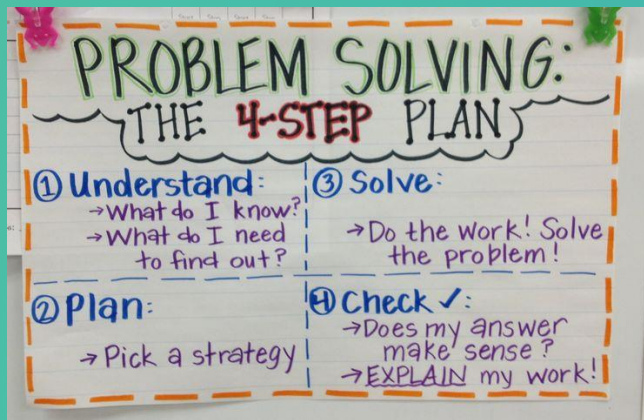
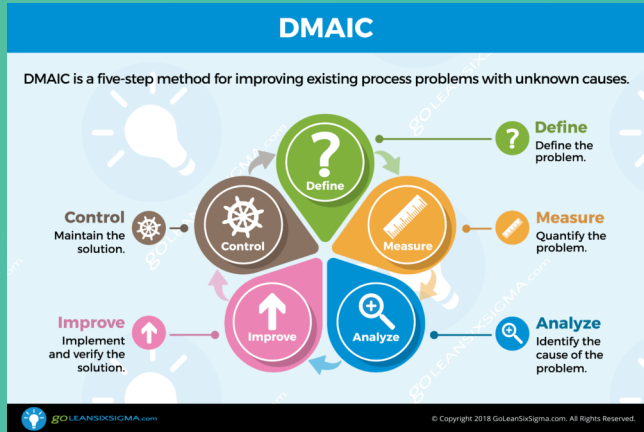
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Mapping



Problem Solving



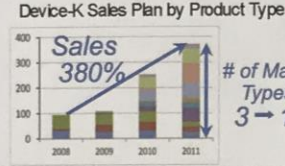
Managing to Learn — A3 Example #3: Reducing Assembly Defects — Mary's Case

Title: Reduce Scratches in Assembly

Manager	Supervisor	Shop: Device-K Assembly
	Ichiro Dec. 15, 08	Owner: Mary Update: Dec. 15, 2008

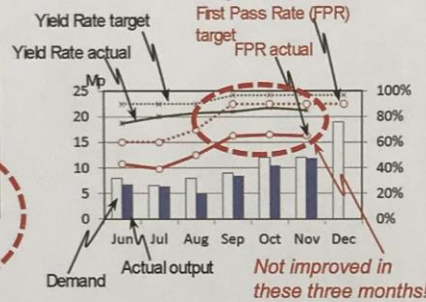
1. Background

- Device-K is our next main product!
- Increase in variety of mounting/casing types
- Quality is a key success factor in assembly as well as in the chip process

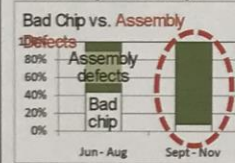


2. Current state (Based on November data)

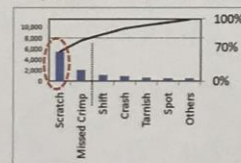
Metrics	Target	Actual
Output/Demand	100%	99.2%
Yield Rate	97%	85.2%
First Pass Rate (FPR)	90%	65.1%



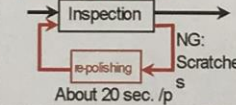
92% of defects were caused by Assembly!



Scratches are most often identified at inspection: 47% of assembly defects



Most scratches are repaired by re-polishing = Waste!

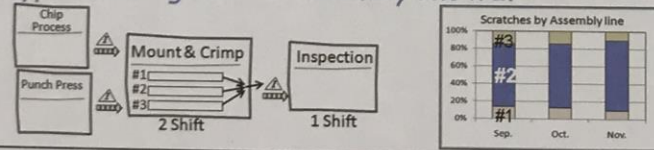


3. Target

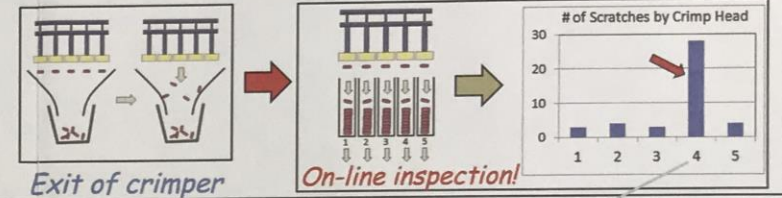
- (1) Zero scratches! 15% to Zero → FPR = 90%
 - (2) Reduce missed crimp! 10% to Zero
- * Based on November data

4. Analysis

4-1. Hypothesis & go see -1: Assembly line #2?



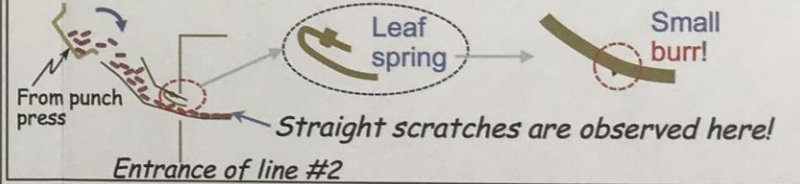
4-2. Trial-1: On-line inspection just after line #1 crimper



4-3. Second observation: types of scratches

- Rounded 70% → Fixing crimper head 4 also reduced missed crimp defects.
- Straight 28% → Observed only in line #2 → Next go see-2
- Others 2% → Observed in all lines → Punch press?

4-4. Hypothesis & go see-2: First step of assembly line #2?



5. Countermeasures and plan

#	Action item	Dec. 5	12	19	26	Jan.	Responsibility	Status
1	Fix crimper head						Mary & Jack with Facility Team	Done
2	Fix leaf spring						Mary & Jack with Facility Team	Done
3	On-line inspection	Trial		Prep.		2-shift inspection	Jimmy Mgr. Assembly	On track
4	Reduce inventories between processes		Stop machines alternatively		Implement VM	Maintain	Team	On track

6. Result & next challenge

Metrics	Target	Actual
Yield Rate	97%	96.0%
FPR	90%	90.2%

- (1) Remaining Defects
 - Scratches (2%)
 - Missed crimp (1%)
 - Others
- (2) "Why" after current countermeasures
 - Broken head - why?
 - Burr - why?

Produce Great Results for Customers



Lean is a way of leading and working, built on respect and humility, that uses continuous improvement to produce great results for customers.

Take Action!





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