



Lean White Belt Symposium

Module 5: Definitions and Concepts (Part Two)

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Ron is a graduate of the University of Pennsylvania, and received his Masters degree in Laboratory Animal Medicine, from Pennsylvania State University in 1991.

He was board-certified in Laboratory Animal Medicine by the American College of Laboratory Animal Medicine (ACLAM) in 1993.

Currently, he is Director of the Penn State Hershey Animal Resources Program and serves as Professor and Chair of the Department of Comparative Medicine at Penn State College of Medicine in Hershey, Pennsylvania

He is a member of the American College of Laboratory Animal Medicine (ACLAM), American Veterinary Medical Association, American Society of Laboratory Animal Practitioners (ASLAP), and International Veterinary Academy of Pain Management

He currently serves on the Board of Directors for both ACLAM and ASLAP

Ron has authored 33 publications, 45 abstracts and presentations. Co-editor, *The Rabbit, Guinea Pig, Hamster and Other Rodents*, published 2012.



inspired
together



A brief review ...

Module 1: History of Lean: Why?

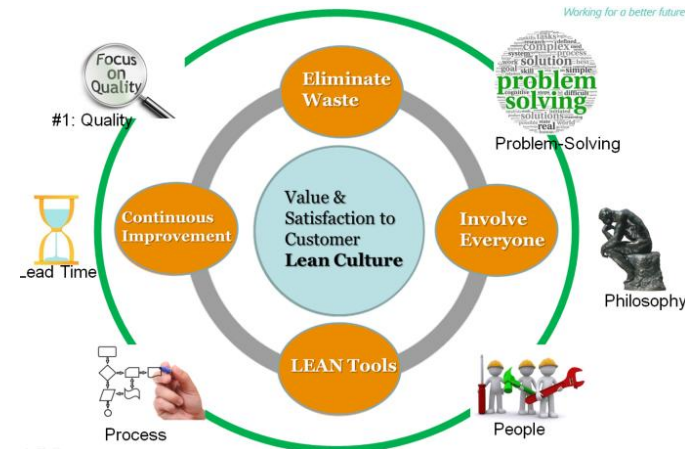
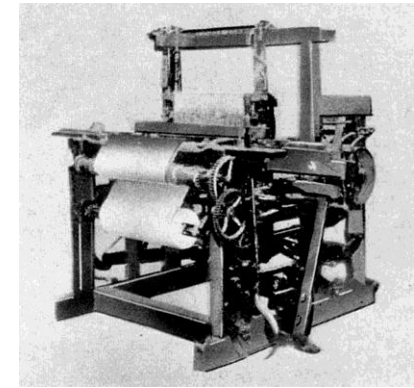
- Toyota roots: people are the greatest asset

Module 2: Goals: What?

- Eliminate Waste
- Involve Everyone, Every Day
- Continuous Improvement : many tiny steps
- Tools help us “see & think”

Module 3: Principles: How?

- Philosophy: long-term thinking
- People: appreciating asset
- Problem-Solving
- Process
- Lead Time
- Quality



A brief review ...

Module 4: Definitions and Concepts (Part 1)

- Voice of the Customer (VOC)
- Value added vs. non-value added work
- Value stream mapping
- Push vs. Pull Systems

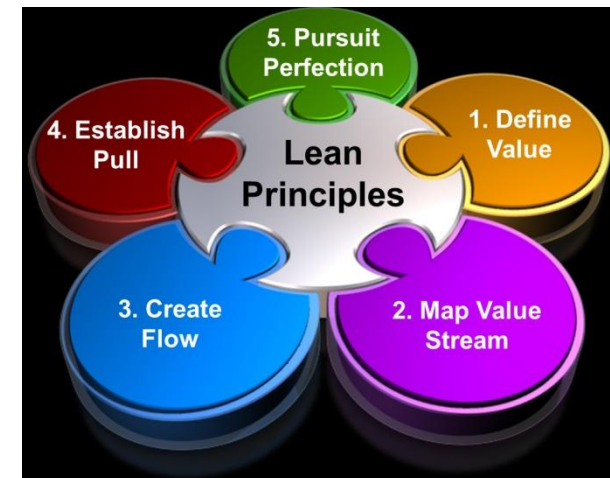


By now, you should be able to understand ...

- *How Toyota became so successful focusing first on **QUALITY** to the customer*
- *Who is your “customer” and why they are important?*
- *The concept of “Value-added” as opposed to...*
 - The idea of “Waste”
 - How “Pull” is a good thing and
 - Why “Push” creates problems

You will learn today how

- *Working and thinking in **Teams** leads to success*
- *How **workplace organization** helps me (5S)*
- *How the **visual workplace** helps everyone*
- *Teams develop **Kanban signals** that communicate what is needed when it is needed*
- *How **Kaizen events** create rapid, positive improvement*



Working and thinking as a team leads to success

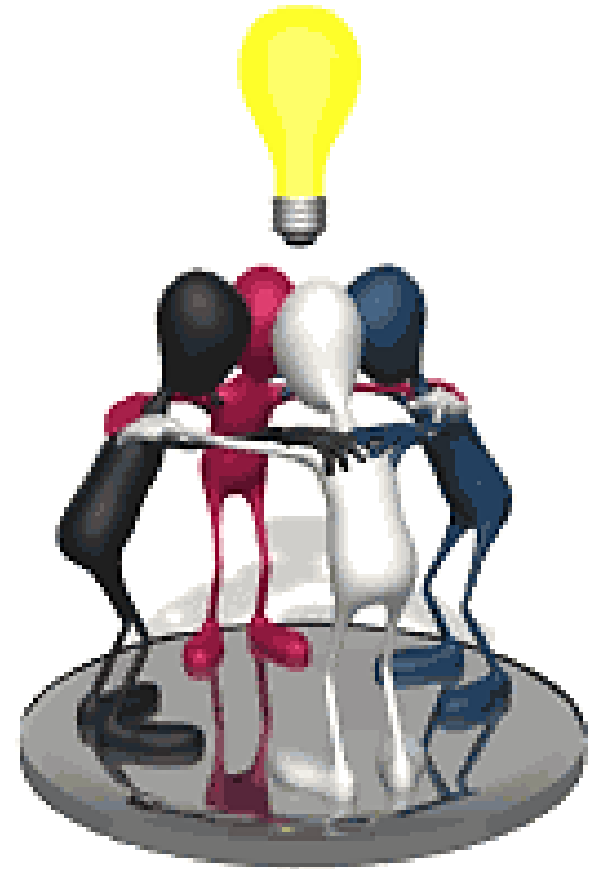
“None of us knows more than all of us”

Individuals ...

- Detailed work
- Produce the product

Teams ...

- Coordinate the work
- Motivate each other
- Learn from each other
- Suggest innovative ideas
- Troubleshoot



High performing teams develop over time

Stage 1 – Orientation

Stage 2 – Dissatisfaction

Stage 3 – Integration

Stage 4 - Production

Teams can be ...

Work groups

Assembled for specific projects or tasks

- 5S projects
- Visual work place
- Kanban signals
- Kaizen events

REVISED AND UPDATED EDITION

The  **One
Minute
Manager**
**Builds High
Performing
Teams**

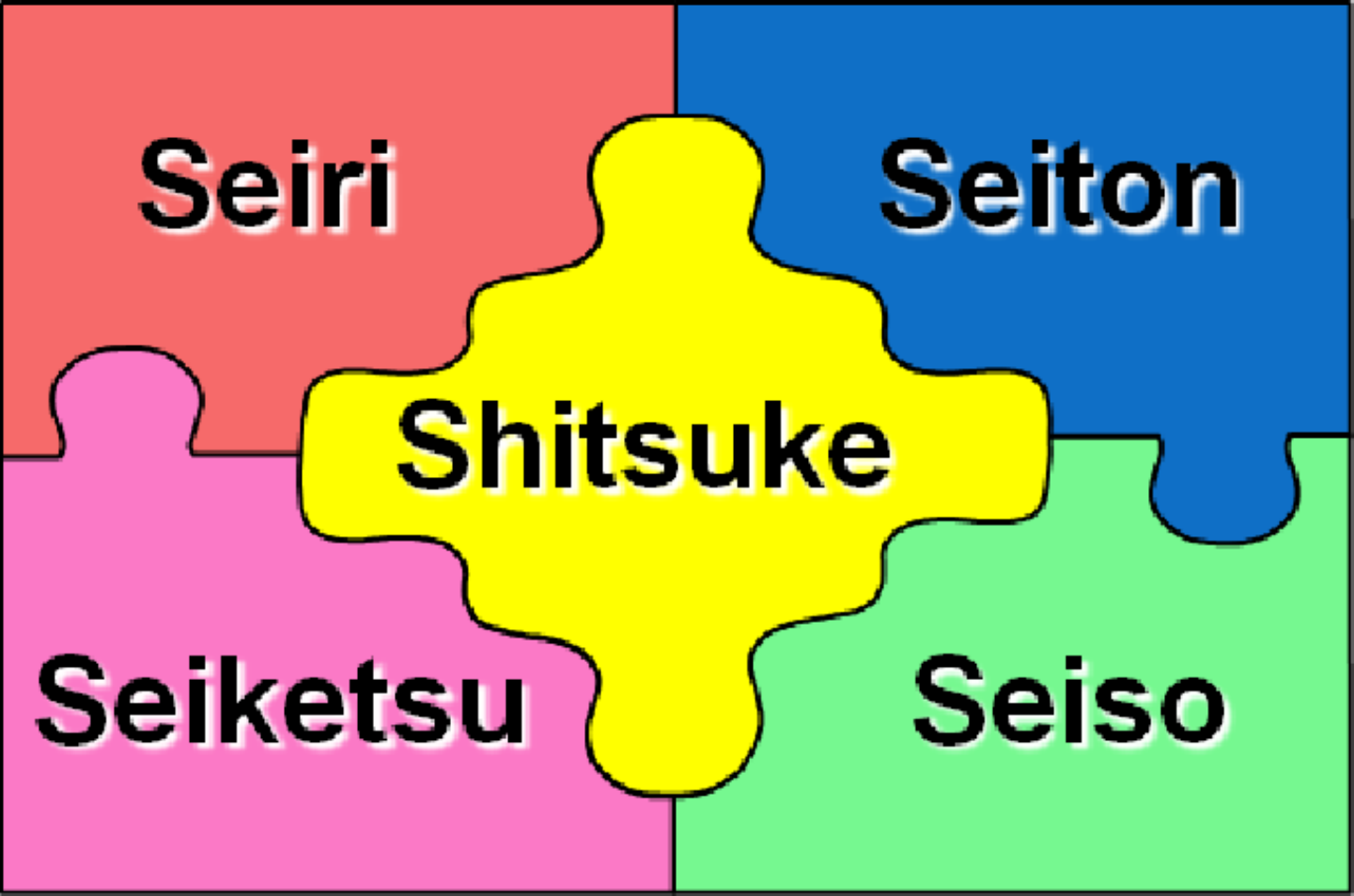
EXCELLENCE THROUGH TEAM BUILDING

Ken Blanchard

#1 New York Times Bestselling Coauthor of *The One Minute Manager*

**Donald Carew &
Eunice Parisi-Carew**

A team activity – creating the organized workplace with 5S



How does 5S help you?



Before 5S



After 5S

Less time and frustration finding supplies

1st S: Sort through and sort out (Seire)

Eliminate all unnecessary tools, supplies, materials, equipment

Keep the essential; eliminate what is not needed

Prioritize the quantity of things as they are required

- Establish maximums and minimums

Make everything easily accessible



2nd S: Set things in order and set limits (Seiton)

A home for all items should be clearly marked

Appropriate containers

The status should be clearly communicated

Eliminate time wasted looking for things



“A place for everything and everything in its place” Benj. Franklin

3rd S: Shine and inspect through cleaning (Seiso)

Use cleaning as a daily inspection for leaks, damage, safety, repairs, spills



Clean as the work is performed; make it a daily routine



Create a sense of ownership and pride in the workplace



4th S: Standardize (Seiketsu)



Standard, documented processes and procedures(SOPs)

All work stations for a particular job should be identical.



Employee flexibility and ease of cross training

The benefits of standard work include ...

Documentation of the process

- What “should” happen

Reduction in variability

- What is happening

Easier training of new employees

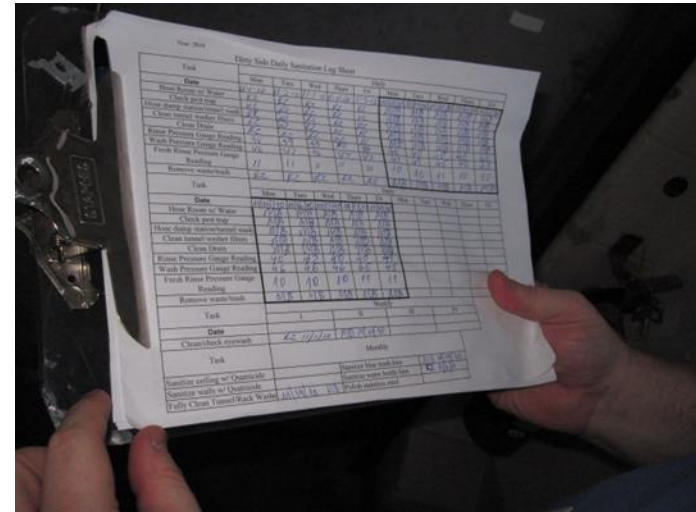
- 30% decrease in on-boarding time

Reduction in stress, injuries

- Standard ergonomics



Some examples of standard work



5th S: Sustain through inspection and feedback (Shitsuke)

Enforce and inspect to the standard work

**Maintain and review work standards
(audits)**

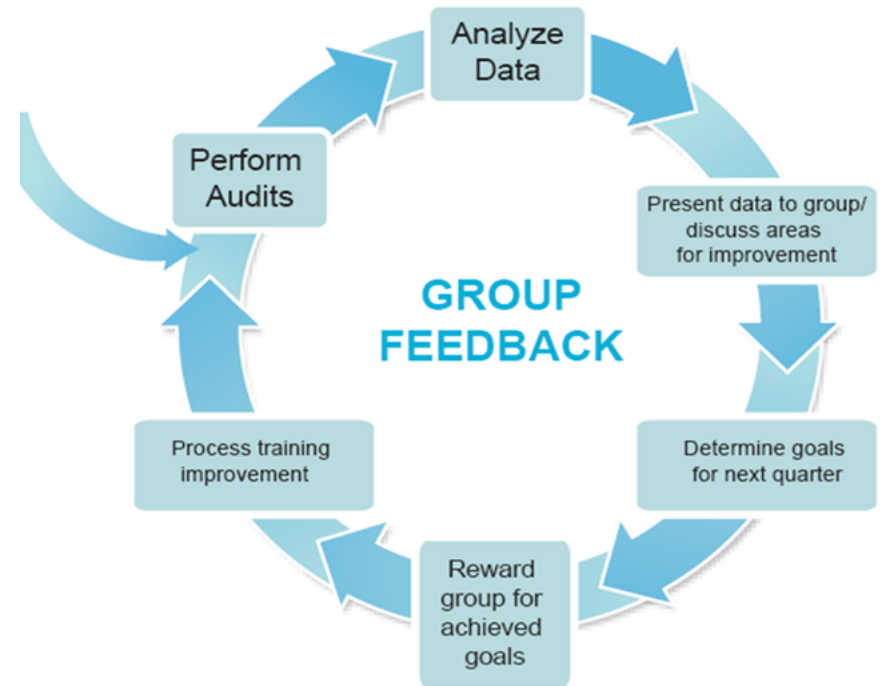
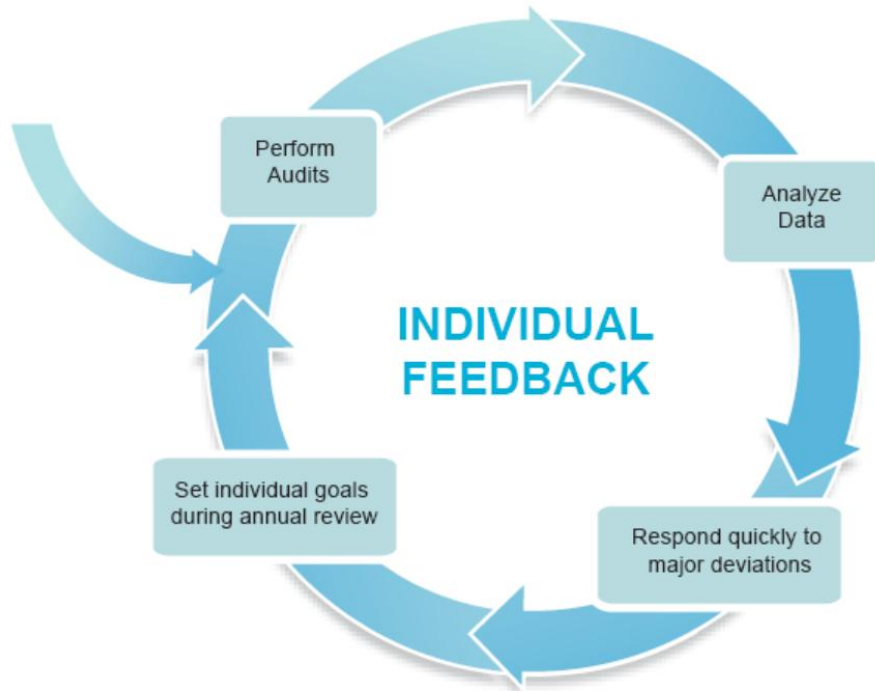
- Identify “creep” or backsliding
- Analyze variation to work standards

**Create an environment to encourage
FEEDBACK**

- No feedback is a big problem
- Recognize and reward adherence to the standard



Frequent inspection and feedback is essential to maintaining standards



Prep Room Storage

- Problem - Lack of organization resulted in time and motion waste
- Solution
 - Got rid of excess inventory and large wire rack
 - Created designated storage areas for anesthesia machines
 - Consolidated like inventory
 - Labeled new locations
 - Taped off designated rack area



Prep Room Storage – 5S



5S Process:

Step 1 Sort

Step 2 Set in Order

Step 3 Shine

Step 4 Standardize

Step 5 Sustain

Reflection ...

What are the benefits of an organized workplace?

Why should 5S organization be a team activity?

What areas of the vivarium are prime areas for organization?



The Visual Workplace



www.kulula.com/brand/flying101

The visual workplace enables us to quickly “see” what is expected

Explains itself to everyone

“I need a pallet truck, where do I find it?”



Translates critical information into simple, logical and reliable visual devices

Must be continuously improved to reflect changes in processes



You can easily determine what to wear in this dirty cage wash



Head Cover

**Goggles, PAPP or Face
Shield with Safety Glasses**

N95 Mask

Tyvek Jumpsuit

Double Gloves

Safety Shoes

Slip Resistant Shoe Covers











Carcass and Trash Disposal

This posting provides the procedure for proper disposal of carcasses and soiled trash in this carcass cooler. All disposal bins must be lined with the appropriate trash bag. All carcasses must be placed into a primary bag prior to placement into the designated disposal bin. All items are located inside of this carcass cooler. Sharp devices or implants must be removed and placed into a sharps container prior to carcass disposal. Please follow the diagram below.

❖ Ensure that the disposal bin is lined with a trash bag prior to carcass disposal



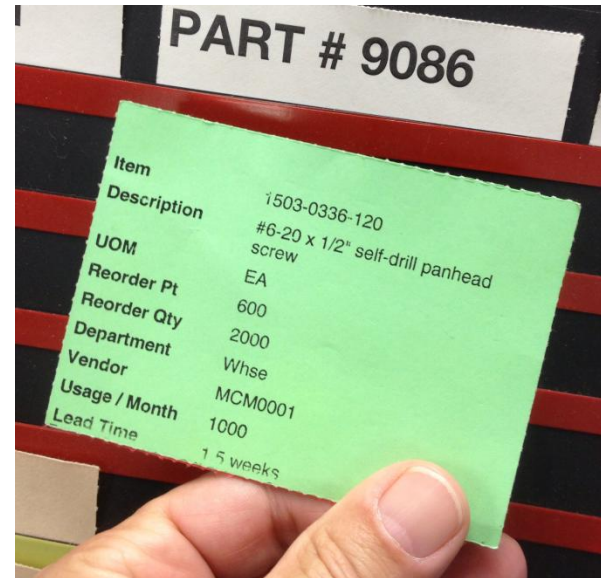
❖ Follow this diagram to dispose of carcasses or soiled trash

1. What do you have?	Non-biohazard rodent carcass	Biohazard rodent carcass	Multiple carcasses weighing > 15 lbs	Items soiled in blood or bodily wastes
2. Carcass must be placed into:	Carcass bag 	Biohazard carcass bag 	 OR  *Place carcass bag into a second bag.	
3. Place carcass bag in this bin:				

Visual signals indicate the need for action at a specified time (Kanban)

A card or visual indicator communicates precisely what is required at the specified time

JIT

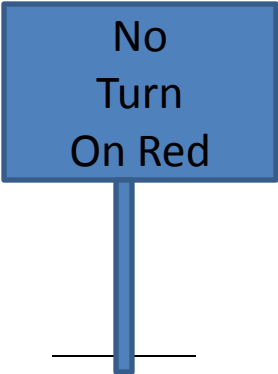


Material replenishment system (MRS)

Some examples of kanban



Kanban gone wild



Reflection ...

What visual signals do you use at your facility?



Identifying and eliminating waste increases productivity

Defects/Correction

Overproduction

Waiting

Neglected Employee Creativity

Transportation

Inventory

Motion

Extra Processing



More on identifying Waste in Module 6

Kaizen is synonymous with continuous improvement and respect for people

Kai

The image shows the Japanese kanji character for 'change' or 'to alter', which is '改' (kai). It is written in a bold, black, calligraphic style.

Change

Kai = "take apart"

Zen

The image shows the Japanese kanji character for 'good' or 'virtue', which is '善' (zen). It is written in a bold, black, calligraphic style.

Good

Zen = "make good"

Rapid improvement (kaizen) events result in radical changes to current processes



Creates a culture of continuous learning and improvement

Engages the employee in arriving at solutions

Does not result in loss of positions

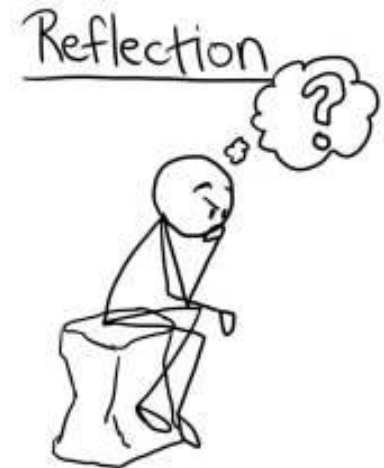


DOWNTIME

No.	Role/Dept	Critical Pain Points/Barriers/Wastes	D	O	W	N	T	I	M	E	Com
1		Unused Materials (clean side)			*			*		*	
2		Communication Barrier between clean and dirty side			*		*		*	*	
3		Changing Dumpster					*		*	*	
4		Get Rabbit cages (w alking)					*		*		
5		Duties outside scope of washing					*		*	*	
6		Delivery of Supplies				*	*				
7		Height issues (reaching)	*						*		
8		loading the hopper (30 lb bags)	*		*		*	*	*		
9		Flipping of pans	*		*			*	*	*	
10		Floor Drains (w water pooling)	*	*		*			*	*	
11		Extra Cleaning needed for Bio Bag cages			*		*		*	*	
12		No wrapping standard for bio bags	*			*	*			*	
13		No standard for rackers (barrier)	*						*	*	
14		PPE Problems	*		*	*					
15		Supply variation (cage/bottle, etc)	*		*						
16		Stoppers sticking/melted	*		*		*		*	*	
17		Malfunction rack/cages/trays/door hinges	*		*		*		*	*	
18		Faulty/unreliable temperature strips	*		*				*	*	
19		Nesting sheets								*	
20		inconsistent demand			*			*			
21		equipment mechanical issues	X		X						
22		dumping of water off clean racks	X						X	X	
23		belt interruptin	X		X	X			X	X	
24		staffing issues			X	X	X		X		

Reflection ...

What examples of “waste” can you think of at your facility?



The result of a team-based culture is increased efficiency

REDUCING

- Obstacles
- Interruptions
- Defects
- Accidents
- Time wasted searching
- Machine failures

INCREASING

- Employee engagement and morale
- Employee learning and problem-solving



Improve worker efficiency by 30%

Homework

- 1) Go to the VOE-Network Website.
- 2) Go to the FORUM
- 3) If you have not already done so, post your example of NVA to the “Process” folder
- 4) Review your fellow student’s posts in the FORUM from last week.
- 5) Ask 2 students questions about what they posted to illustrate “non-value added” or make comments on how your team may have addressed the issue.



Questions?

