



Lean Yellow Belt Certification

LEAN **LS**
SOLUTIONS

CLASS SCHEDULE

Session 1

- Roles and Responsibilities of Belts
- What is Lean & Six Sigma?
- 8 Wastes
- Voice of the Customer (VOC) and CTQs Process
- 5S
- Total Productive Maintenance
- Standard Work

Session 2

- PDCA
- Kaizen
- Continuous Flow
- Process Mapping
- Visual Management
- Jidoka/Poke Yoke
- SMED
- **YELLOW BELT EXAM**

QUIZ 1 REVIEW:

1. What was the name of the first company to use the name 'SIX SIGMA' to describe its Quality Management System?
 - MOTOROLA
2. What is the First Principle of Lean production ? What is the most important thing that a Lean process must produce?
 - VALUE (for the customer of the process)
3. Which Japanese company is considered as being the first to use true 'Lean Production "effectively and successfully"'?
 - TOYOTA
4. A basic principle of Six Sigma is to always find the true original source of a defect or problem. This is called _____?
 - ROOT CAUSE ANALYSIS
5. A "Six Sigma Process" is often described one that produces no more than 3.4 DPMO What does DPMO stand for?
 - DEFECTS PER MILLION OPPORTUNITES FOR DEFECTS

QUIZ 1 REVIEW:



6. What is the role of a Yellow Belt on a Lean Six Sigma project?
 - A YELLOW BELT IS A TEAM MEMBER WHO ASSISTS A GREEN OR BLACK BELT, USING THEIR KNOWLEDGE OF THE PROCESS THAT THEY CURRENTLY ARE WORKING WITHIN.
7. What is the role of a Green Belt in an organization ?
 - A GREEN BELT IS A PROJECT TEAM LEADER FOR SMALL AND MEDIUM SIZED PROCESS IMPROVEMENT PROJECTS.
8. What is the role of a Black Belt in an organization ?
 - A BLACK BELT IS A PROJECT TEAM LEADER FOR LARGE PROBLEM SOLVING / IMPROVEMENT PROJECTS or OVERSEES THE WORK OF GREEN BELTS FOR MULTIPLE PROJECTS. A BLACK BELT IS A FULL TIME PROBLEM SOLVER FOR THE ORGANISATION.

QUIZ 2 REVIEW:

1. All work shall be highly specified as to content, sequence, timing and _____.
 - **OUTCOME**
2. True or False? Standard work provides a routine for consistency of an operation.
 - **TRUE**
3. True or False? Standard work helps to hide problems.
 - **FALSE**
4. Discussion: Why is it so important to audit standard work?

QUIZ 2 :

1. Which of the traditional 8-Wastes of 'DOWNTIME' is concerned with reducing the complexity of processes and taking out unnecessary steps or activities ?
 - **NON-ESSENTIAL PROCESSING / OVER PROCESSING**
2. What is the name of the Waste of producing more than the customer demand can absorb ?
 - **OVER-PRODUCTION**
3. What is Waste called when an activity or step in process needs to be repeated because it was not done 'Right-First-Time' ?
 - **REWORK / DEFECTS**
4. What Waste results in Queues or Backlogs of materials or work ?
 - **WAITING (DUE TO A BOTTLE-NECK IN THE PROCESS)**
5. What is the Japanese word for 'Waste' ?
 - **MUDA**

QUIZ 3 REVIEW:

1. Which stage of the 5S method is used to ensure that the workers have the good habits and discipline to continue the other 4S tasks?
 - **SUSTAIN**

2. In 5S the action of removing unnecessary tools, equipment and materials from the workspace is called

 - **SORT**

3. Cleaning the workplace of dirt, dust and litter is called what in 5S ?
 - **SHINE**

4. Give one example of a 5S method used for **SET IN ORDER / STRAIGHTEN**
 - **SHADOW BOARDS**
 - **RACKS**
 - **COLORED LABELS**
 - **FLOOR MARKING etc**

QUIZ 4 REVIEW:

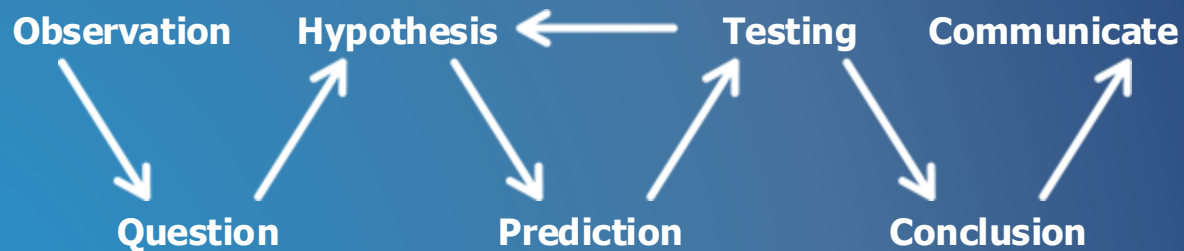
1. What Tool is used to understand what is Critical to Quality (CTQ) by Forming 3 categories: *threshold*, *performance*, and *excitement*?
 - **KANO ANALYSIS**
2. Splitting Customers into groups according to different needs or behaviours is called _____.
 - **SEGMENTING**
3. CTQs are also sometimes called CTCs or CTSs. What does CTS stand for?
 - **CRITICAL TO SATISFACTION**
4. Give one example of a method used to understand the **Voice of the Customer**?
 - **SURVEYS**
 - **FEEDBACK**
 - **FOCUS GROUPS**
 - **REPEAT SALE METRICS, etc**



PDCA



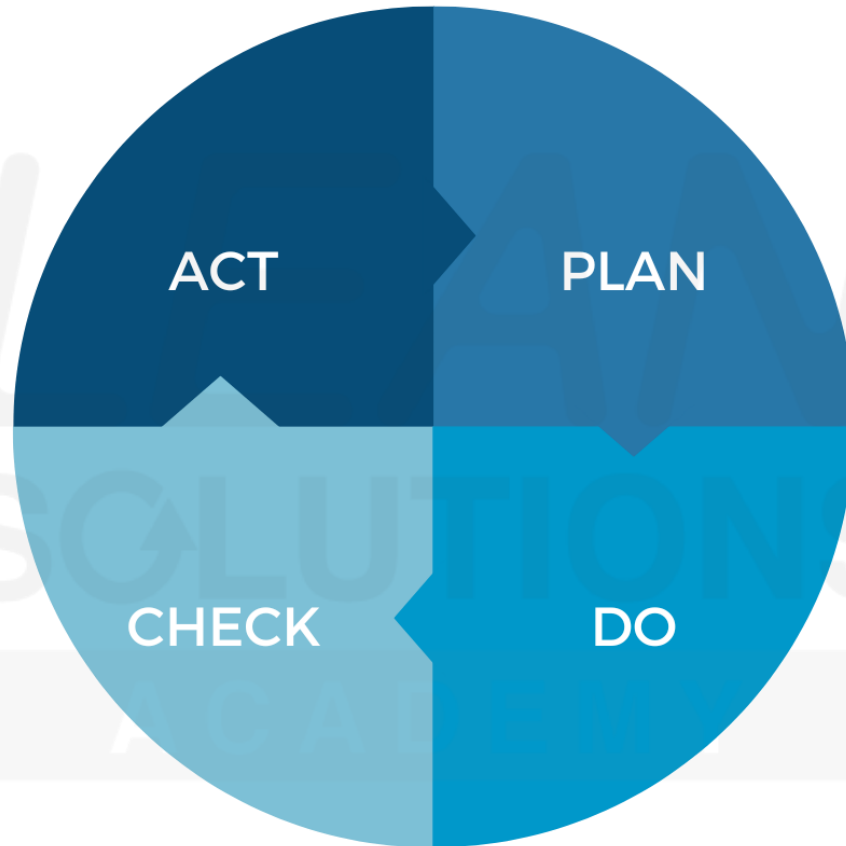
SCIENTIFIC METHOD



BALL TOSS ACTIVITY



PDCA cycle





KAIZEN

KAIZEN & CONTINUOUS IMPROVEMENT

LEAN
SOLUTIONS

Plan	Do
改	善
Change	Good

WHAT IS KAIZEN?

- Kaizen is a Japanese word made up of two distinct characters:
- Small changes for the better = Continuous Improvement
- Managing daily improvement (part of Lean Management System)
- Continuous Improvement Projects

WHAT IS A KAIZEN EVENT?

A Kaizen Event (different than Kaizen as a mindset) is a focused team activity with a specific, aggressive breakthrough objective aimed toward solving a well-defined problem.

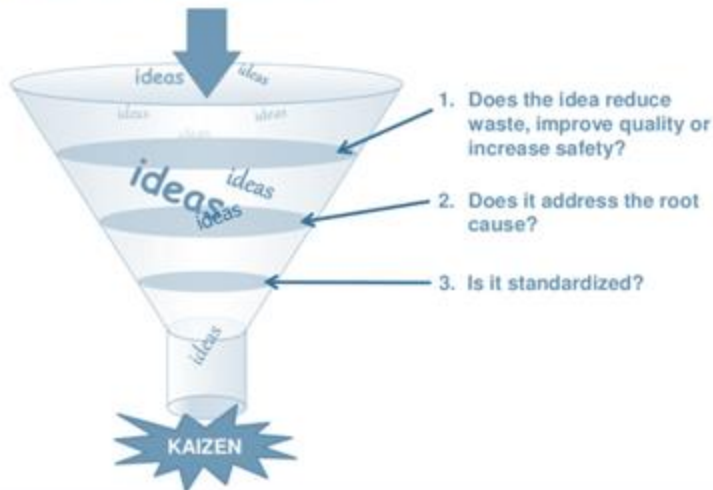
You can expect to accomplish huge results in a very short time frame (usually 2-5 days).



Huge results
In a
Short time
frame

KAIZEN IS A CONTINUOUS PROCESS

3 Criteria of Kaizen





VARIETIES OF KAIZEN METHODS

Individual (1-2 people) Versus Teamed (5-9)

Day-to-Day (2 second- improvements) Versus Special Event

Limit the hours spent on the project

The project scope must be considered when limiting available time



Kaizen	Innovation
Un-dramatic	Dramatic
Low Cost	High Cost
Low Risk	High Risk
Human Effort	Technology
No Brainer	More Thought

BENEFITS OF KAIZEN



Empowers employees, enriches the work experience & brings out the best in everyone



Promotes the growth of the Employee & the Company

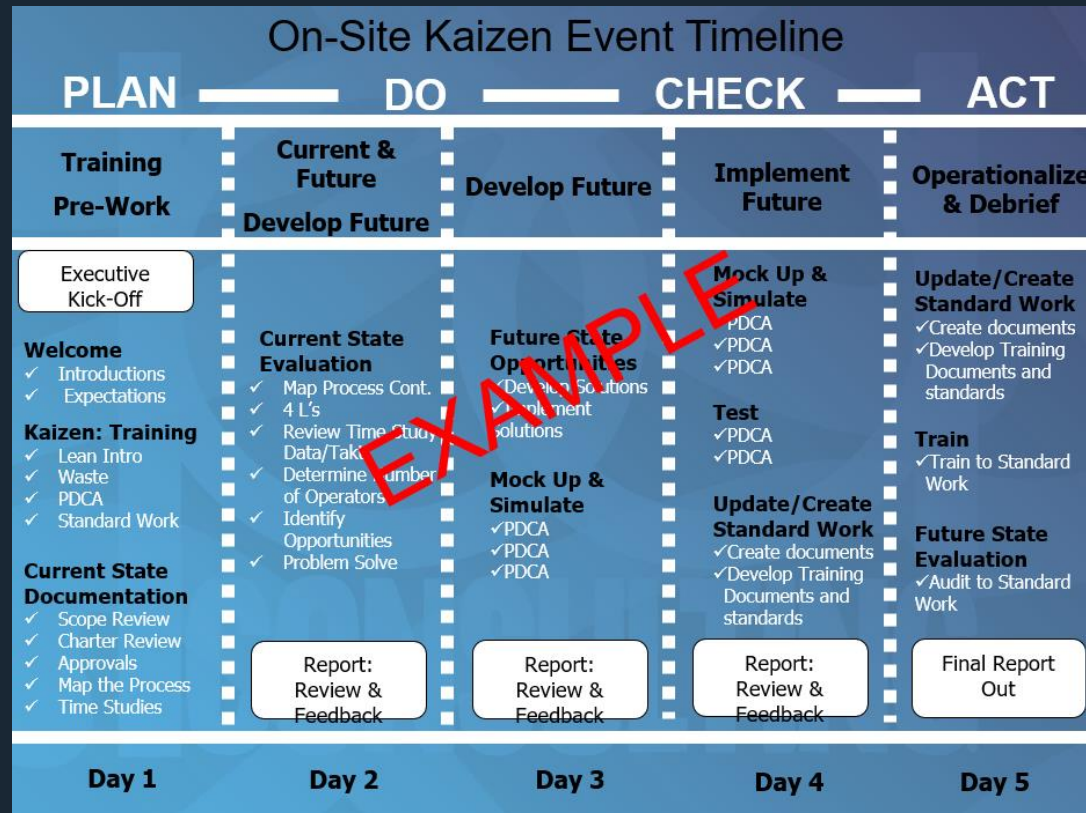


Improves quality, safety, cost, delivery, environments, throughput & customer service/satisfaction

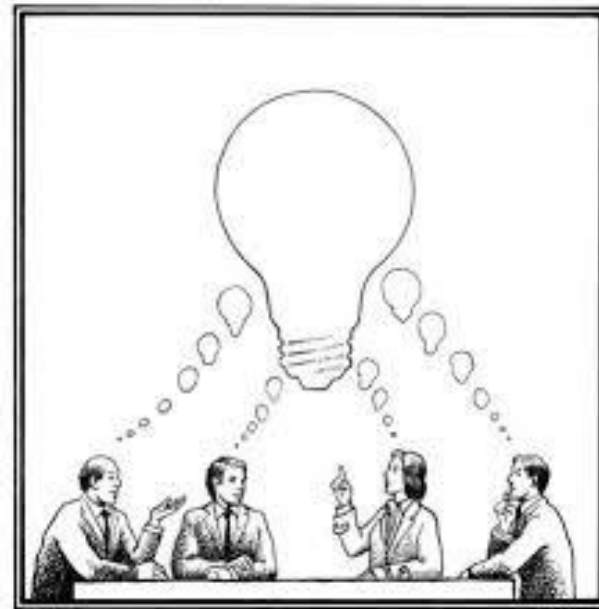


Provides guidance from employees & serves as a barometer for leadership

WHAT'S IN A WEEK – A LOT



WHAT CAN WE DO DIFFERENTLY?



SUGGESTED KAIZEN PROCESS

1. Employee identifies a problem and writes it down
2. Idea is written up on a simple form
3. Discuss the idea with his or her supervisor
4. Supervisor reviews the idea within 24 hours
5. If possible the employee implements the idea
6. Supervisor posts the form to share with everyone

CAPTURE THE IDEAS

Continuous Improvement Idea			
Name:	Shift:	Dp #: 3016-	Date:
Which of the seven wastes does this idea reduce? (Circle One) Over-Production Transportation Motion Waiting Inventory Defects Over-Processing			
Which measure does this impact on the team board? (Circle One) Safety Quality Schedule Cost Culture Environment			
Continuous Improvement Idea <i>(Attach additional information, as required.)</i> 			
Improvement Results <i>(Attach additional information, as required.)</i> 			
Reviewed	Accepted	Not Accepted	Implemented Complete <input style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;" type="checkbox"/> <input style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;" type="checkbox"/> Implemented = Completed by ~~mbc~~ Complete = Recognized by ~~ment~~
			Award given/amount: Date:
Date: 02/11/2019 WHITE: HMS YELLOW: Team Leader/Supv. PINK: Member			



GEMBA WALKS

LEAN
SOLUTIONS



WHAT IS A GEMBA WALK?

The Gemba walk is an essential part of the Lean management philosophy.

- Its purpose is to allow managers and leaders to observe the actual work process, engage with employees, gain knowledge about the work process and explore opportunities for continuous improvement.
- A Gemba Walk is also an opportunity for managers and leaders to coach and receive coaching.



GEMBA WALKS

ARE NOT DONE ALONE

Gemba walks are meant to be coaching opportunities.

Use your LSW to establish a day/time and stick to your schedule. Make it routine!

Traditional Management
Style: "Do It My Way"



Lean Leadership Style:
"Follow Me, and We'll
Figure This Out Together"



LEAN
SOLUTIONS

DEFINE THE PURPOSE

Define 'purpose' for walk – why doing it?

Define scope for walk – where headed?

Coach appropriate behaviors to participants:

- One conversation at a time.
- Show respect. Listen more than you talk.
- Make no on the spot judgements, seek to understand.

TYPES OF GEMBA WALKS

-  Safety
-  5S
-  Waste – Waste Walk
-  Process Focus –
Never Focus on
Individuals
-  Walk the Value
Stream of a
Product





WHAT TO DO ON A GEMBA WALK

- If with another leader, ask to SEE their leader standard work
- Review Hr x Hr and Tier Boards
- Review corrective actions / plans for top issues
- Discuss team board problem solving process
- Review training matrix and ensure plans are in place
- Pay attention to Lean waste and review plans

TIPS & POINTS TO REMEMBER

- Gemba walks are a crucial observational method
- Checklists are an easy, quick tool for adding structure
- Stick to your plan

QUESTIONS TO ASK

Simple 3 Question Summary:

1. What is Working?
2. What Is NOT Working?
3. Given That, What Will You Do Differently Going Forward?

GEMBA CHECKLIST



What are you currently working on?



Is there an established process for this type of work?



Do you have any problems with the established processes?



Why is there a problem? How can you fix the problem?



What do you do to recognize root cause of the problem?



Who do you speak with if there's a certain problem?

QUIZ:

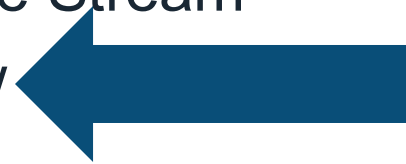


1. What does kaizen stand for?
 - **SMALL CHANGE FOR THE BETTER / CONTINUOUS IMPROVEMENT**
2. What are the three criteria of kaizen?
 - **DOES THE IDEA REDUCE WASTE, IMPROVE QUALITY, AND/OR INCREASE SAFETY?**
 - **DOES THE IDEA ADDRESS THE ROOT CAUSE?**
 - **IS IT STANDARDIZED?**
3. What are the different types of Gemba walks?
 - **SAFETY, 5S, WASTE, VALUE STREAM WALK**



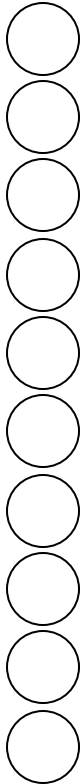
6 FUNDAMENTALS OF LEAN

- Value
- Value Stream
- Flow
- Pull
- Perfection



BATCH & QUEUE

Process A



Process B

Process C

End User

**Elapsed Time:
33 seconds**

SINGLE PIECE FLOW

Process A



Process B

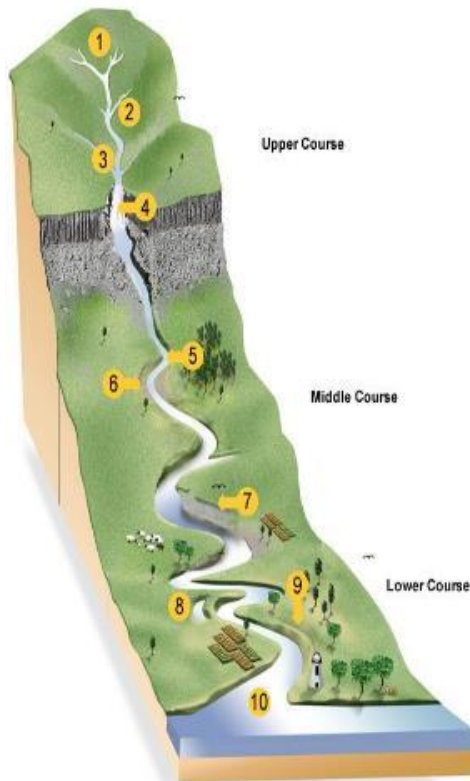
Process C

End User

Elapsed time:
15 seconds!

A blue cloud-shaped callout box with a drop shadow, containing the text 'Elapsed time: 15 seconds!' in yellow.

Upstream (suppliers)



"The ideal arrangement for Flow production should resemble a watershed: the river being the main assembly track, fed by tributaries in the shape of sub-assembly lines which, in turn, would be supplied by streams representing the machine lines fed by brooks typifying the material conveyors. Each part should flow continuously forward ... ultimately to the sea - the customers."

Frank Woollard, *Principles of Mass and Flow Production*, 1954

Downstream (customers)

FLOW & PULL

Enablers for Flow

1. Use Single Piece Flow or Smaller Batches
2. Total Productive Maintenance (TPM)
3. Line Balancing (Cycle Times and Takt Times)
4. Theory of Constraints
5. Mistake Proofing (Poka Yoke)
6. Jidoka
7. SMED (Quick Change Over)

BATCH VS SINGLE PIECE FLOW



https://www.youtube.com/watch?v=cu9CVFEHee4&list=PLGvZFHf27rGzmn1iFmj8v_3rCn07ytlmO

LINE BALANCING



Understand the TAKT TIME and CYCLE TIMES of the operations in your process and BALANCE your line. The goal is :

$$\text{CYCLE TIMES} = \text{TAKT TIME}$$

Definitions:

TAKT TIME = Demand Time = Time needed to produce each unit of product or service in order to keep up with customer demand

CYCLE TIME = Actual time taken for production of each unit or service

Note: Always be aware for the specific definition of Cycle Time in your work or business because there can be subtle differences between companies

LINE BALANCING EXAMPLE



Demand is 4,800 units per month. Assuming 30 days per month and 8 hours per day.

Therefore TAKT TIME in minutes is:

Total time period in minutes ÷ total number units demanded

$$(30 \times 8 \times 60) \div 4800 = 3 \text{ minutes}$$

QUIZ 6:

1. What is the Japanese name used for 'Mistake Proofing' of a process step ?
 - **POKA YOKE**
2. FLOW is critical to any process. What needs to Flow in an Airport or Hospital ?
 - **PEOPLE, INFORMATION, LUGGAGE, EQUIPMENT**
3. **SMED** is an acronym used in Lean Manufacturing. What is another name for SMED?
 - **QUICK CHANGE OVER**
4. A fundamental concept of any Lean Process is that it has no delays, constraints, waiting or bottlenecks. This Lean concept is called _____.
 - **FLOW**



6 FUNDAMENTALS OF LEAN

- Value
- Value Stream
- Flow
- Pull
- Perfection





Pull

Downstream Demand
Driven Production





Pull is Sometimes Referred to as
‘Just-In-Time Production’



JUST IN TIME

“PULL” and “KANBAN” are fundamental for...a JUST-IN-TIME process

- **WHAT** is needed
- **HOW MUCH** is needed
- **WHERE** it is needed
- (**WHEN** it is needed)

Note: ‘**WHEN**’ is usually not necessary because it is assumed it is needed **ASAP**

KANBAN



Kanban is the Japanese word for 'card' or 'ticket'

The Kanban card was an authorization for materials to be moved from an Upstream location to a Downstream location. The card had printed on it What was needed How much was needed and Where it is needed.

A sequence of Kanbans pulls material through the process

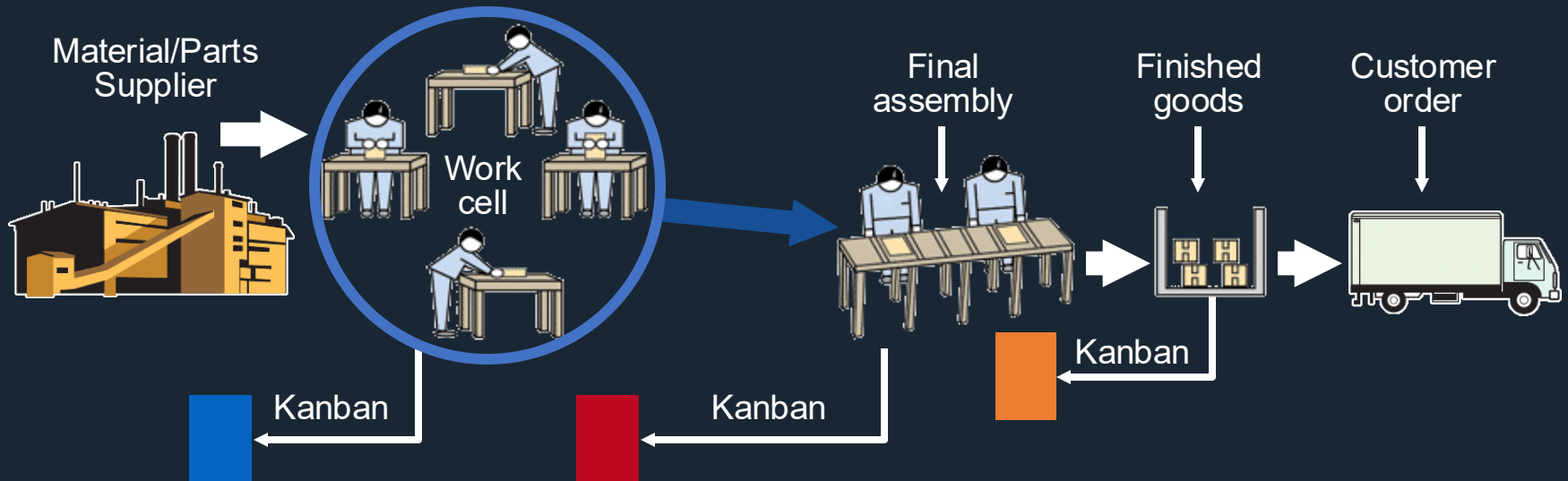
Electronic signals are generally used today, but the system is still called a Kanban

KANBAN CARD EXAMPLE

Supplier: PU1 Description: Production Unit 1 Kanbans: 9	Customer: PU2 Location: Loc02 Container: Box 1 Qty: 100
created: 10/12/2013 22:33:00 printed: 11/12/2013 12:10:11  INTEGRATED KANBAN SYSTEM Item ID: 012345	Description: Item 012345 Kanban ID:  1090

KANBAN

Good Kanban Systems Help to Minimize Inventory & WIP



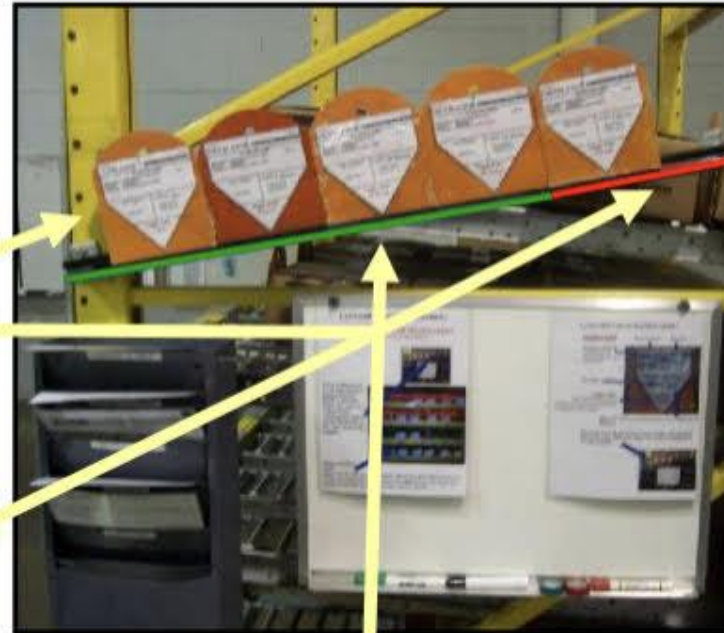
KANBAN BOARD EXAMPLES



KANBAN BOARD EXAMPLES



Returned Kanban



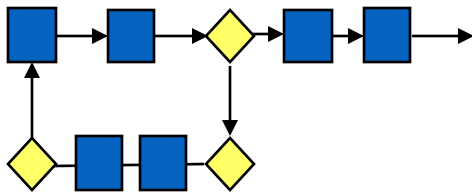
Reaction Triggers

PROCESS MAPPING

There are usually 3 view of a process:

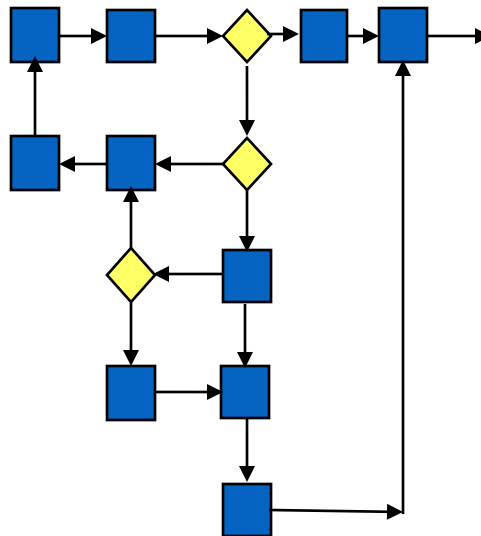
1

What people *THINK* it is..



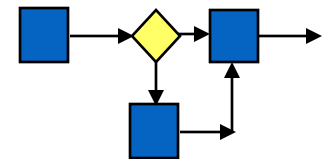
2

What it *ACTUALLY* is..



3

What it *SHOULD* be..



STANDARD PROCESS MAPPING SYMBOLS

Standard symbols for Process Mapping:

(available in Microsoft Office™, Visio™, iGrafx™, SigmaFlow™ and other products)



A **RECTANGLE** indicates an activity. Statements within the rectangle should begin with a verb



A **PARALLELAGRAM** shows that there are data



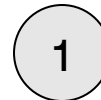
A **DIAMOND** signifies a decision point. Only two paths emerge from a decision point: No and Yes



An **ELLIPSE** shows the start and end of the process



An **ARROW** shows the connection and direction of flow



A **CIRCLE WITH A LETTER OR NUMBER INSIDE** symbolizes the continuation of a flowchart to another page

PROCESS MAPPING:

COFFEE ACTIVITY





VISUAL MANAGEMENT

LEAN
SOLUTIONS

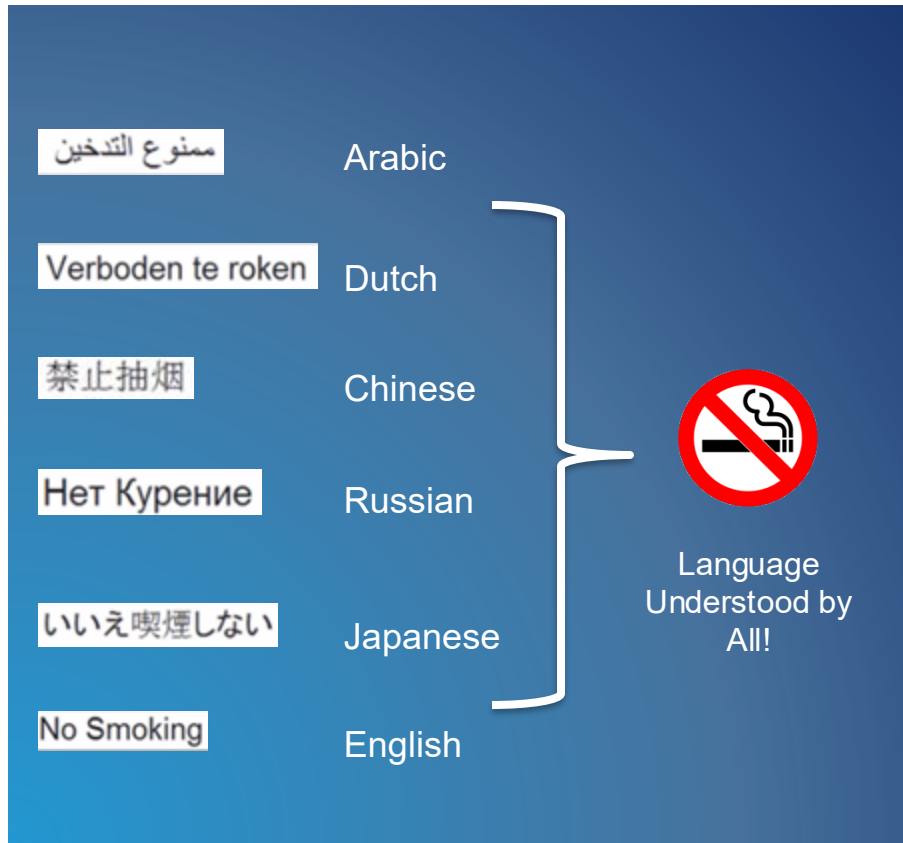


LEARNING OBJECTIVES

- Understand what is Visual Management
- Understanding why Visual Management is important in a Lean Environment
- Learn how to implement Visual Management that fits in your organization



What is Visual Management?



VISUAL MANAGEMENT

Can you understand what
is show on the left?



WHAT IS VISUAL MANAGEMENT?

- The ability to manage everything in your business visually
- Managing visually is the ability of a system to quickly show the current status to anyone that stands and observes, within 30 seconds.
- EVERYONE in your business understands and knows how to respond if something is wrong.



WHAT IS VISUAL MANAGEMENT?

- Visual Management helps us become more effective problem-solvers by helping us with problem detection, since it helps us identify abnormalities quickly and easily.
- Visual Management helps us manage with our eyes. Done correctly, it helps us see at a glance how we're doing without having to read through reports, look up data, or wait for a briefing.

4 COMMON TYPES



VISUAL SIGNALS



Visual Instructions



Visual Measurements



Visual Representations

4 COMMON TYPES

- Visual Signals
- VISUAL
INSTRUCTIONS**
- Visual Measurements
- Visual Representations



4 COMMON TYPES



Visual Signals



Visual Instructions



**VISUAL
MEASUREMENTS**



Visual Representations



4 COMMON TYPES

- Visual Signals
- Visual Instructions
- Visual Measurements
- VISUAL
REPRESENTATIONS**



LEAN
SOLUTIONS



WHY

VISUAL MANAGEMENT

Provide Real Time Information

Reduce Waste and Poor Quality

Empowerment and Ownership

Drive Accountability

Faster Response Time to Problems

WHY VISUAL MANAGEMENT

Easy to See Processes

Workflow is Clear

Inexperienced Can

Understand

Easier to Manage





WHY

VISUAL MANAGEMENT

Develop a Routine

Daily, Weekly, Monthly

Show All Areas of the
Organization

Should be a Display of
Plant Performance



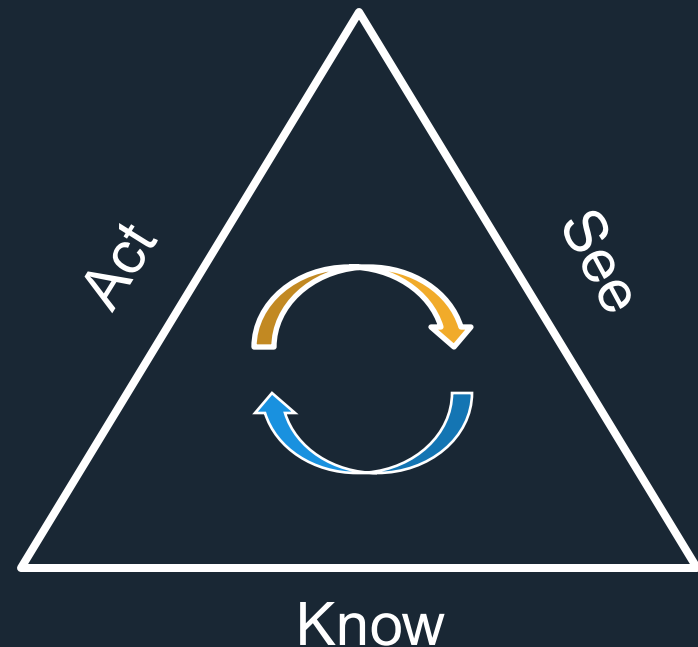
THE VISUAL OFFICE

Make problems visible

Communicate status

Improve productivity

Improve confidence



**VISUAL
MANAGEMENT CYCLE**



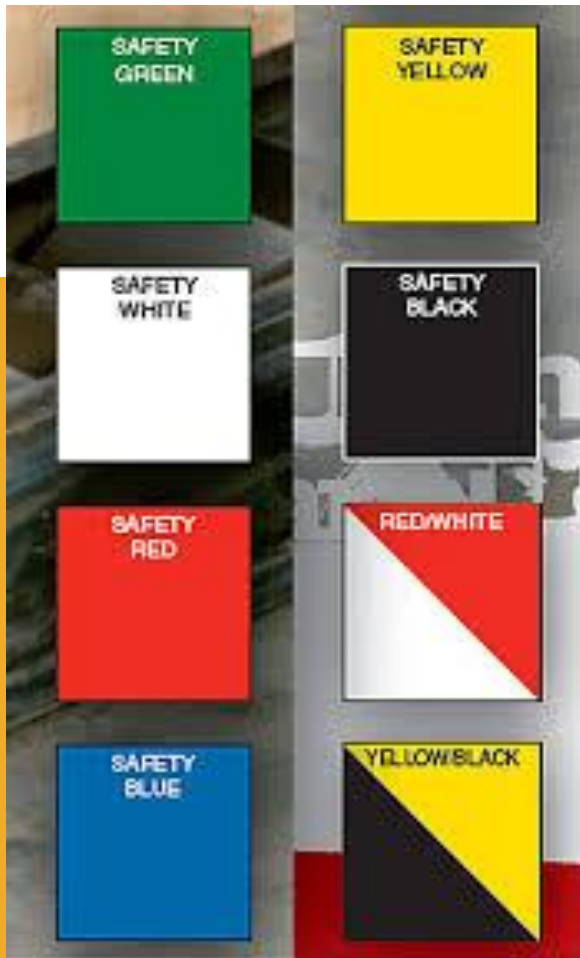
How do we Implement Visual Management?



SAFETY

AND SIMPLE IDENTIFICATION

Fire Dangers
Fire Extinguishers
Chemical Dangers
Storm Shelters
Emergency Shut Off's
Electrical Box
Clearance
High Voltage
Notification
Evacuation



COMMON COLORS

DANGER

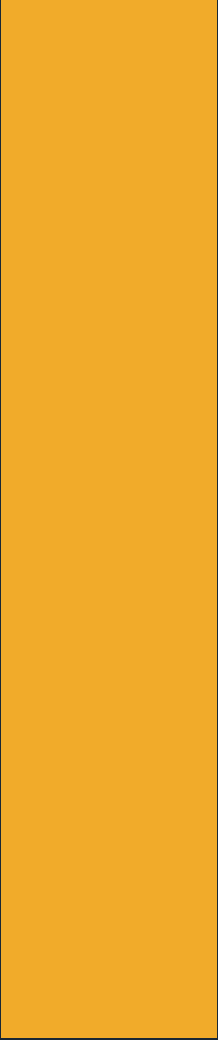
WARNING

CAUTION

NOTICE

VISUAL MANAGEMENT AND 5S





DESIGNING VISUAL SYSTEMS

- Who is your audience
- Using the right media
- Don't overdo it

LEADING CHARACTERISTICS

- Clear and easy to understand
- Team ownership
- Promote team ownership
- Close to the process
- Limit the data displayed

VISUAL MANAGEMENT

BOARD EXAMPLES



Safety Cross



QDPI Indicators
with Safety 1st

HOW TO START YOUR VM JOURNEY

- Go See
- Brainstorming—What problems are you trying to solve?
- Team members understand why VMS are beneficial
- Discuss VMS components
- Create board using the VM board elements
- Try it out! Check and adjust as needed



POINTS TO REVIEW

- Keep it Clear and Concise
- Who, What, Where
- Basic Markings First
- Understandable for All

QUIZ:

1. What is a 'Gemba Walk' ?
 - **Going to see for yourself what is happening where the real work is done**
2. What is the benefit of having a Visual Work Place ?
 - **All team members can see the status of work and operations easily and at the same time.**
3. Give one example of a Visual Management tool or technique ?
 - **Color Coding, Notice Boards, Graphs and Charts, Good Labelling**
4. A fundamental concept of any Lean Process is that it has well defined and repeatable actions by workers. This concept is call _____work
 - **STANDARDIZED**

Poka Yoke & Jidoka



POKA YOKE & JIDOKA PREVENT DEFECTS

- Create no defects / errors
- Accept no defects / errors
- Pass no defects / errors

JIDOKA

- **Work** stops immediately when a problem first is detected.
- The **Root Cause** of the defect is discovered and corrected before work continues
- This prevents defects being passed on downstream
- This short term disruption to FLOW will improve both FLOW and QUALITY in the long term



POKA YOKE

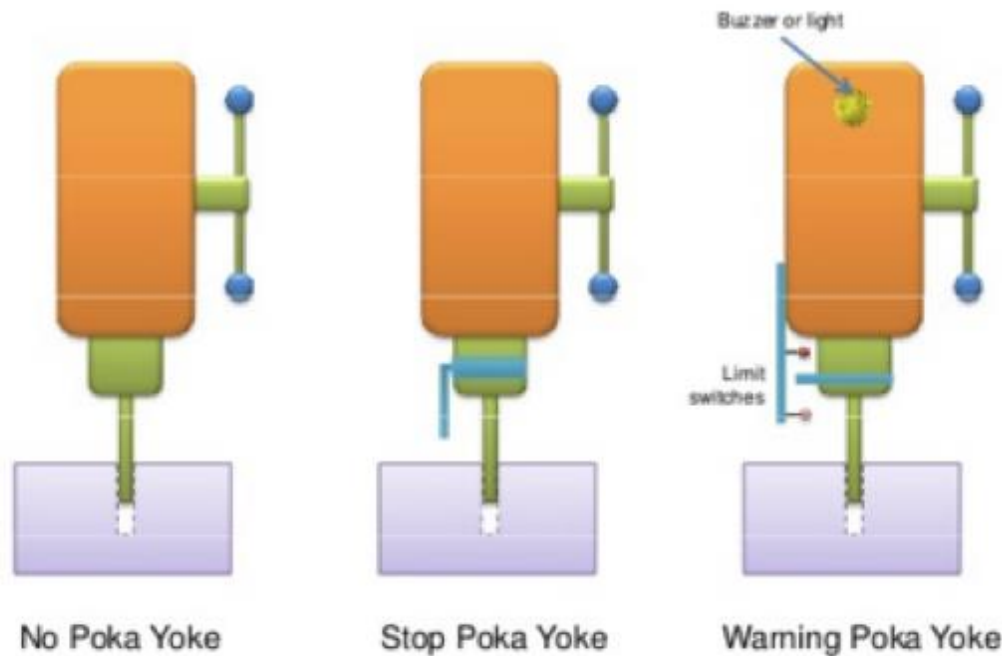
Originally called Baka Yoke (Idiot Proofing) it was changed to Poka Yoke (mistake proofing) by Toyota in 1960's so as not to dishonor anyone to be labeled as an "Idiot".

Poka Yoke = Mistake Proofing

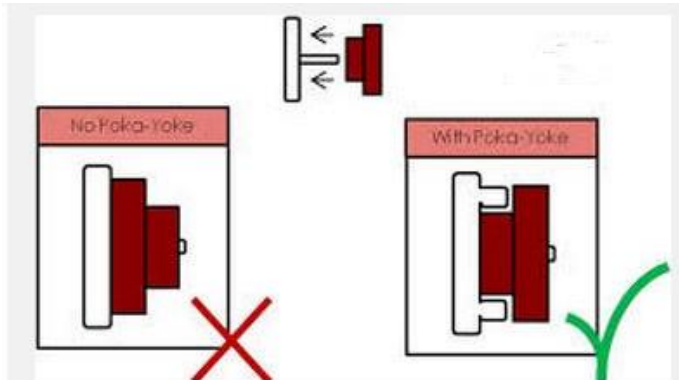
Prevent mistakes rather than correct mistakes
Prevent defects rather than correct defects

POKA YOKE EXAMPLES

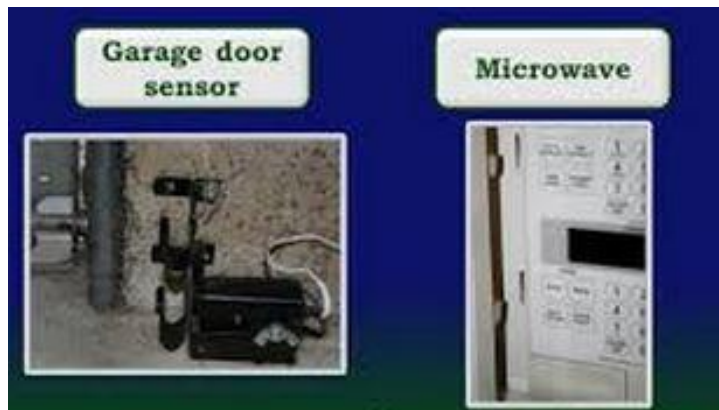
Drill Poka Yoke



POKA YOKE EXAMPLES



Andon Boards (Screens)



POKA YOKE OFFICE EXAMPLES

Your Google Account is more than just Gmail.

Talk, chat, share, schedule, store, organize, collaborate, discover, and create. Use Google products from Gmail to Google+ to YouTube, view your search history, all with one username and password, all backed up all the time and easy to find at (you guess).

Password strength: Too short

Use at least 8 characters. Don't use a password from another site, or something too obvious like your pet's name. [Why?](#)

Take it all with you.

Name

First Last

Choose your username

firstlasttst100 @gmail.com

Create a password

.....

Short passwords are easy to guess. Try one with at least 8 characters.

Confirm your password

SoftwareTestingHelp.com

Google

softwar testing

software testing

software testing certification

software testing life cycle

software testing jobs

Showing results for software testing

Search instead for softwar testing

The page at https://mail.google.com says:

It seems like you forgot to attach a file.

You wrote "see attached" in your message, but there are no files attached. Send anyway?

OK Cancel

QUALITY AT SOURCE (UPSTREAM QUALITY)

- Quality means meeting requirements of the customer (or next step in the process) and not creating defects.
- We can use tools such as poka yoke (mistake-proofing) and visual control to prevent errors

POKA YOKE

EXAMPLES IN THE OFFICE

What are some of the common mistake proofing devices on automobiles?

What are the current mistake proofing devices at your company?

Where might you be able to implement mistake proofing at your company?



LEAN
SOLUTIONS
ACADEMY

A background image showing a diverse group of five business professionals (three men and two women) in a modern office setting. They are all smiling and looking down at a laptop screen, with their hands resting on the keyboard, suggesting a collaborative work environment. The image is partially covered by blue geometric overlays.

Changeover Reduction **SMED**

brought to you by:



**PATRICK
ADAMS**
CONSULTING



WHAT IS

QUICK CHANGEOVER?

A process for dramatically reducing setup time...

Also Known as:

- Single Minute Exchange of Dies (SMED)
- Setup Reduction



<https://youtu.be/UlIGl3laGAo>

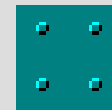
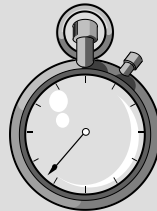
SET UP DEFINITION

During this time the equipment is
idle and not producing parts.

The length of time it takes to changeover a machine from the last good part of a production run to the first good part of the next production run.

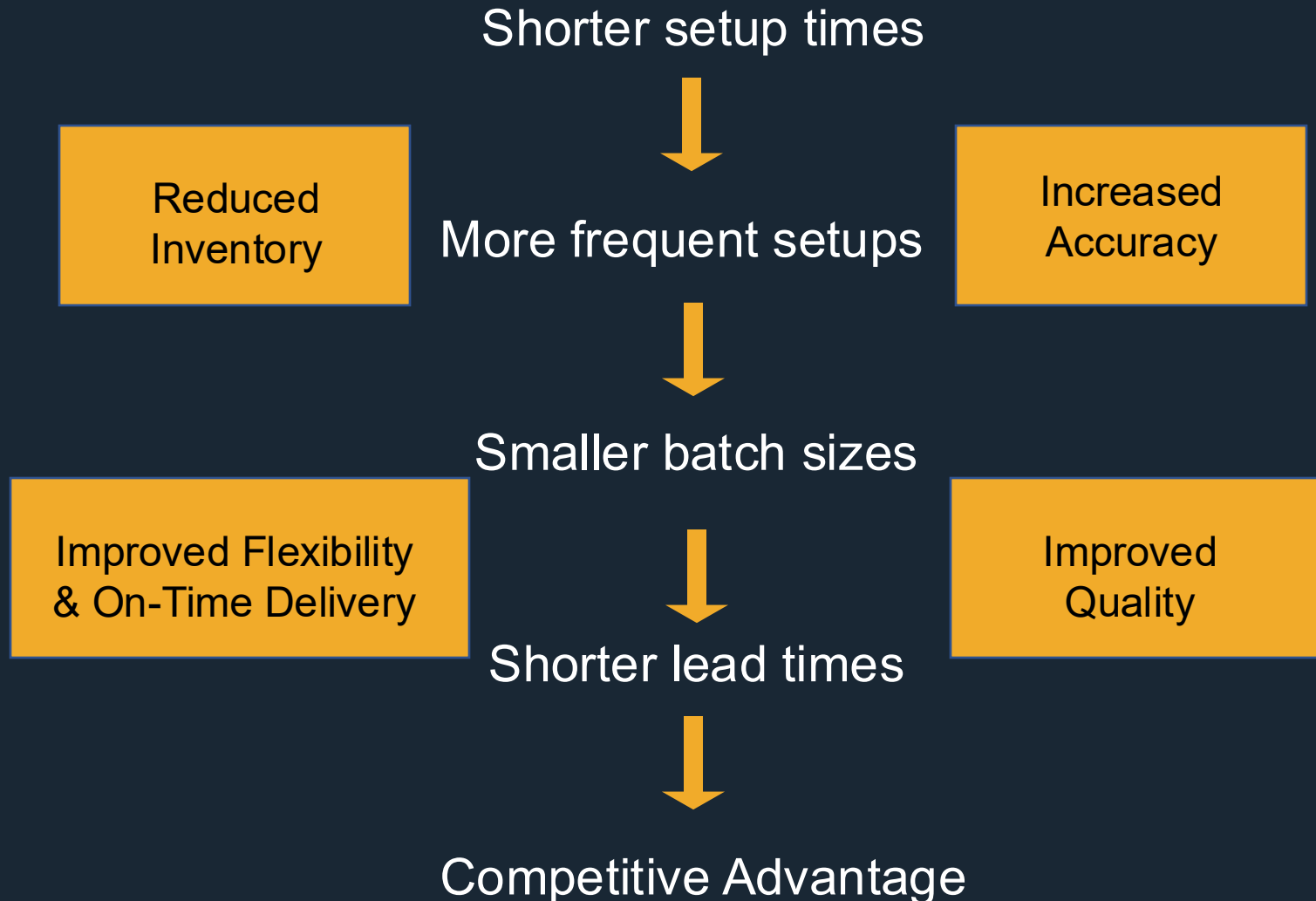


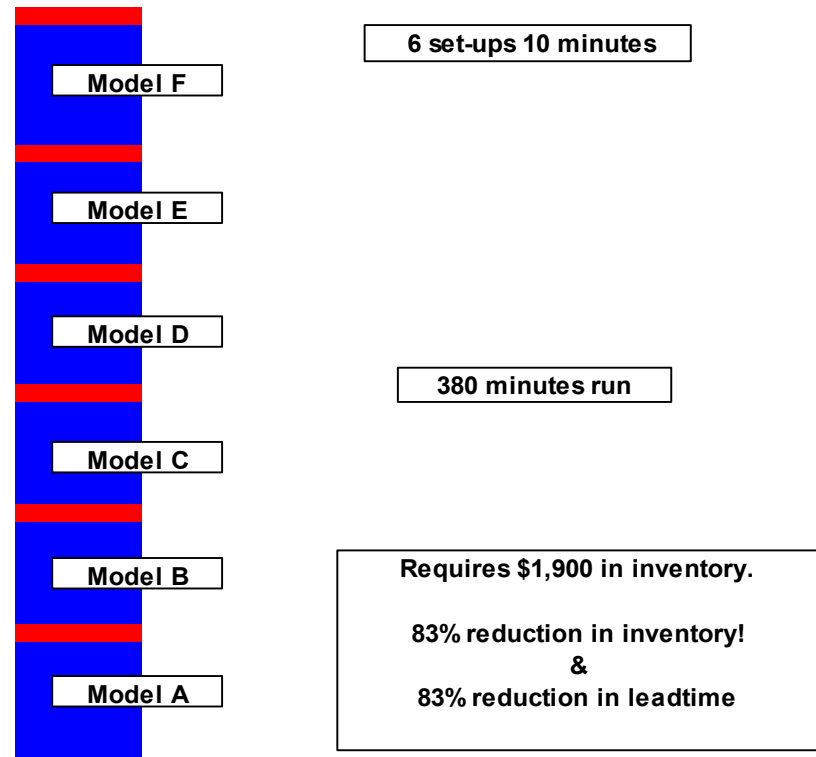
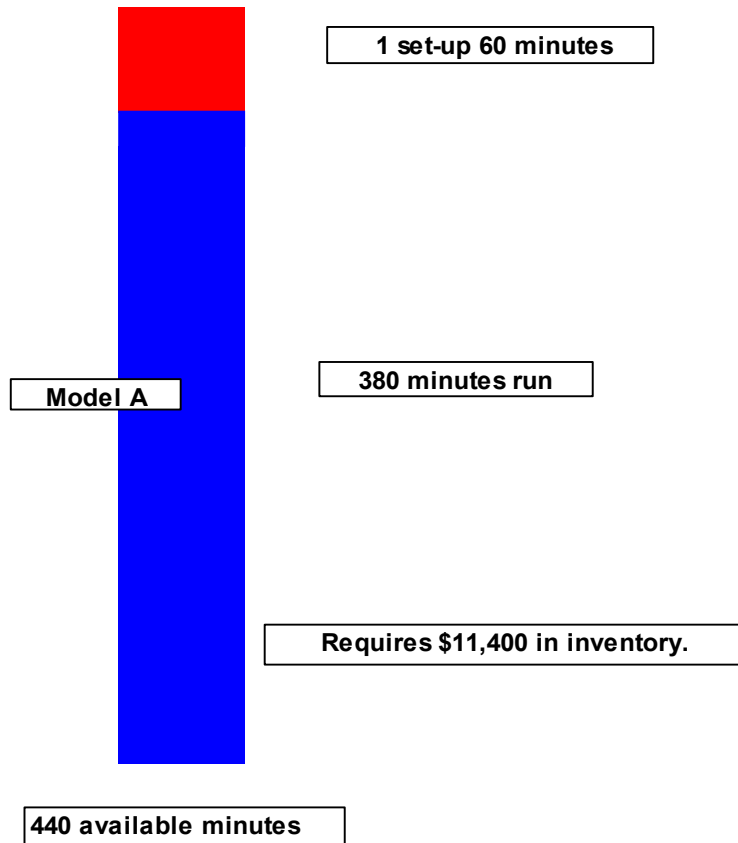
last good part



next good part

WHY IMPLEMENT QUICK CHANGEOVER





6 different models produced.
1900 parts required per day.
Cycle Time = 12 seconds
1900 parts /12 seconds each =
380 minutes required per day.

It will take 6 days to cycle thru all models requiring inventory of at least 6 days of each model. That is 11,400 pieces total, if each costs \$1 there is \$11,400 because of set-up.

QUICK CHANGEOVER: DEFINITION

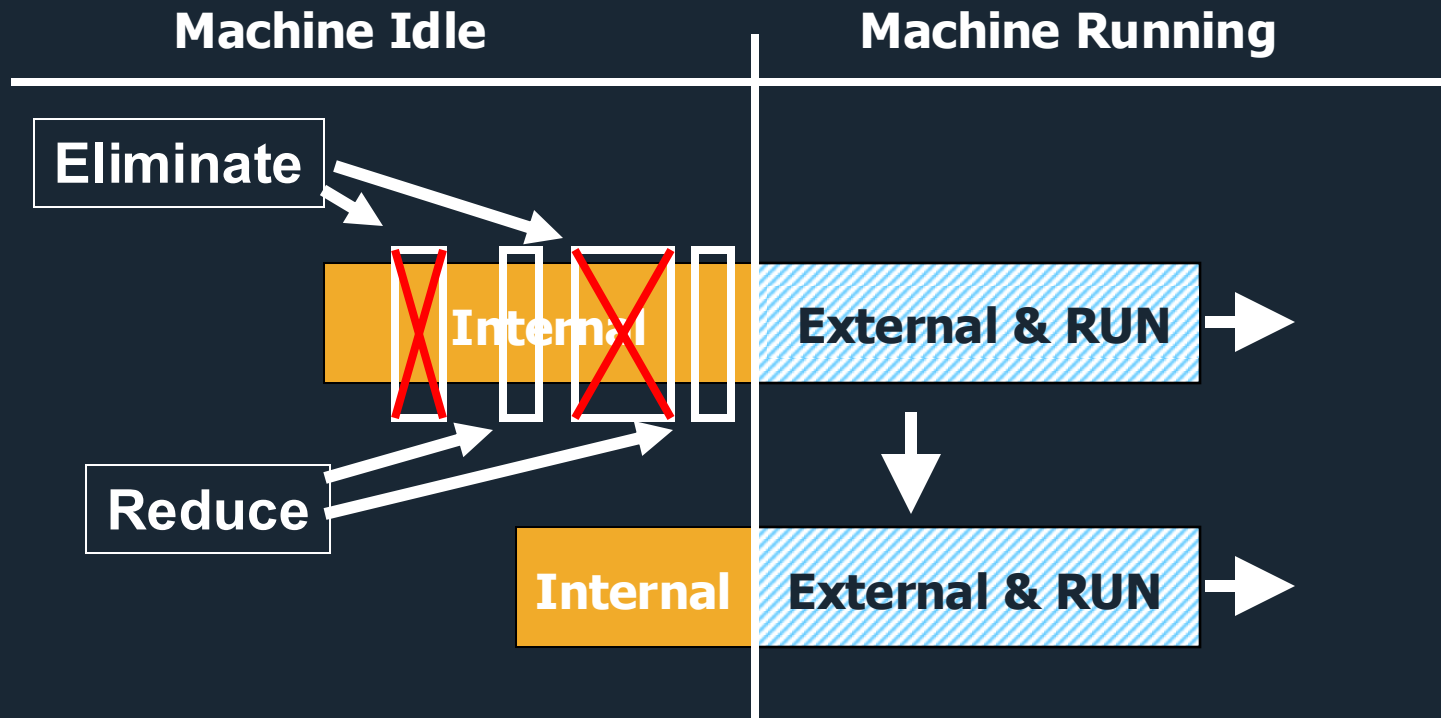
Internal Set-Up Activities

- An activity or task that can only be performed while the machine is stopped. (Stopping the machine to change a tool)

External Set-Up Activities

- An activity or task that can be performed while the machine is running (Prepare tools, tooling, and required paperwork, while the machine is running)

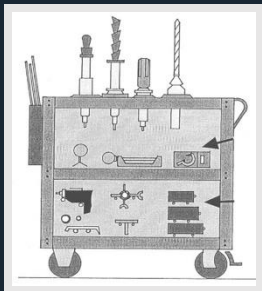
Steps			Pre-Work	
1.	Measure total changeover time, study current conditions. "Document Reality." (Video)			60 Minutes
2.	Identify internal vs. external steps and calculate individual times.			5 5 3 5 3 8 6 11 3 11 E I E I E I E I E I
3.	Strip out external steps and pull them forward before previous part run ends.	20 Min.	E	I
4.	Reduce and eliminate the internal setup, adjustments, etc.	20 Min.	E	I 20 Minutes
5.	Reduce the external elements.	10 Minutes	E	I 20 Minutes
6.	Identify parallel tasks. Two people working in harmony with one another, rather than one.	10 Minutes	E	I 10 Minutes
7.	Practicing the new and improved changeover method	8 Minutes	E	I 8 Minutes
8.	Standardize and improve the new changeover procedure over time.	8 Minutes	E	I 8 Minutes



REDUCE/ELIMINATE INTERNAL STEPS

LEAN
SOLUTIONS

- Implement good 5S
- Standardize spacer & fixture heights
- Pre-set stops, gauges, limit switches, and tools
- Add center lines and reference planes
- Use of Changeover Carts
- Preset locations to eliminate measurement
- Numerical Settings vs. “feel”
- Gauges used so that adjustment can be preset without producing any defective parts
- Color-coding setup locations per part numbers
- V-notch and pin locators for dies
- Quick Release Clamps (one-turn / one-motion)



REDUCE/ELIMINATE INTERNAL STEPS

Pre-Plan Meeting & Checklist

LINE 9 CHANGEOVER PRE-PLAN and TRACKING	
C/O PRE-PLAN (Prepared 24 Hours Prior)	
Date: _____	
Initial or NAP all boxes	
☐	Full Line or Partial Line? (Check One) ☐ Pull Line ☐ Bulk Pack
☐	Product Ready, BP #: _____, BP Name: _____
☐	If not ready, who was called? _____
☐	If Hot Fill or Tempered Fill, product verified at temperature. If not, action taken? _____
☐	BP Supply Method Verified (Check One)
☐	By 2nd Floor ☐ By Barrels
☐	Packet Ready
☐	Centerline Sheets Printed and in Color?
☐	External Parts and Equipment Staged. If not, why not? _____
☐	Wet Parts: ☐ Pulled ☐ Sanitized ☐ Assembled
☐	Pucks Cleaned and Ready
ACTUAL CHANGEOVER	
Completed SKU: _____, Going To SKU: _____	
C/O Team Goals: ☐ 3 C/O Hours ☐ 70 Ramp-Up %	
C/O Start Time: _____, C/O Completion Time (1st Good Case Off): _____	
Set-up Crewleader, Groupleader or Changeover Point Person formally checks C/O progress at the 1-hr and 2-hr mark and initials off. If 30 minutes or more behind as compared to Playbook timeline, check roadblocks and take appropriate action.	
☐	One Hour C/O Progress Check
☐	Two Hour C/O Progress Check
WITH CHANGEOVER TEAM INPUT OR FOR CHANGEOVER TEAM TO RECORD	
"Roadblocks" that extended Changeover or Ramp-ups: (ex: not full c/o team, wrong change parts pulled, line not ready, centerline adjustments needed, mechanical breakdown, component issues, bad seals, etc.):	
Initials: _____	

Ramp Up Roadblocks: (Only document startup issues after the line is called "Up and Running")	

POST-CHANGEOVER REVIEW	
Actual C/O Time: _____ Hours Actual Ramp-up % _____	
1) Roadblocks captured on electronic Roadblocks sheet ("S:" Drive)	
2) Action Items created and assigned, with owner and due date (unless resolved on shift)	
Rev. 10/6/14	

Set-up #1: _____			
Set-up #2: _____			
Set-up #3: _____			
Set-up #4: _____			
C/O Point Person: _____			
External C/O Tasks Checklist			
☐	Prep & Sanitize Tools for Filler	☐	Sanitize Sheets Filled Out
☐	Place Ladder in position	☐	Verify Sanitization Window
☐	Get Cleaning Supplies	☐	Wet Parts Sanitized and Assembled
☐	Paperwork/Centerline	☐	Barrel Pump Sanitized and Assembled
☐	Stage Parts Cart	☐	Verify Parts pulled/Initialed to Centerline Sheet
☐	Filler Codes Set For Next Run	☐	Take EOR Settings Before Run Is Complete

STANDARDIZE/IMPROVE THE PROCEDURE OVER TIME





HOMEWORK REVIEW

(Open Computers and Log into your Portal)





CONGRATULATIONS!

You have completed the Lean Yellow Belt Section.

Good Luck in your Exam!

Note: Homework and Exam must be completed in 14 days.

office@findleansolutions.com



Facebook.com/findingleansolutions

LEAN
SOLUTIONS

