LEAN SOLUTIONS ACADEMY

Lean & Six Sigma Training

Green Belt Certification

brought to you by:

PATRICK ADAMS CONSULTING

CLASS SCHEDULE

Day 1

- Yellow Belt Class Refresh
- Introduction to DMAIC
- Project Management
  - Charters
  - SIPOC
  - Gantt Charts
- Structured Problem Solving (Steps 1-4)

DEFINE

MEASURE

ANALYZE

IMPROVE

Day 2

- Green Belt Project Review
  - Problem Statement
  - Measures of Success
  - Timeline
  - Help Needed?
- Structured Problem Solving (Steps 5-10)
- Value Stream Mapping
- Facilitating a Kaizen Event
- Impact/Effort Matrix (Affinity Diagram)

Day 3

- Green Belt Project Review
- Strategy Execution
- Hoshin Kanri
- Change Management
- Control and Sustainment

CONTROL

Day 4 (Six Sigma Green Belt Only)

- Six Sigma Statistics
- Measurement Systems Analysis
- Process Capability
- Correlation and Regression
- Introduction to DOE
- Hypothesis Testing

MEASURE

LEAN SOLUTIONS

PROJECT CHECK-IN'S

- What is your Problem Statement?
- What are your measures of success?
- What is your timeline? Milestones?
- Do you have any roadblocks?
- Do you need help with anything?
- What are your next steps?

REMINDER: ANALYZE PHASE

The Analyze Phase is for determining the ROOT CAUSE of the problem that we are trying to solve and the optimal settings for our input variable (X) to produce the optimal values of our outputs (Y).

10 STEP PROBLEM SOLVING METHOD

PLAN the product or process improvement:

1. Describe the problem
2. Understand needs & requirements
3. Use a team approach
4. Identify potential causes
5. Collect & analyze data (to verify root cause)
6. Identify alternatives & select solution
7. Prepare a plan of action
8. Get leadership approval & support

DO the improvement:

9. Implement the solution

CHECK the results:

10. Measure, monitor & control your results

ACT on the results: Review and recognition

STEP 5

COLLECT & ANALYZE DATA

QUALITY TOOLS

- Data Collection & Sampling
- Graphs
- Check Sheets
- Cause & Effect Diagrams
- Pareto Charts
- Histograms
- Control Charts
- Measurement Systems Analysis
- Failure Mode & Effects Analysis

MANAGEMENT BY FACT

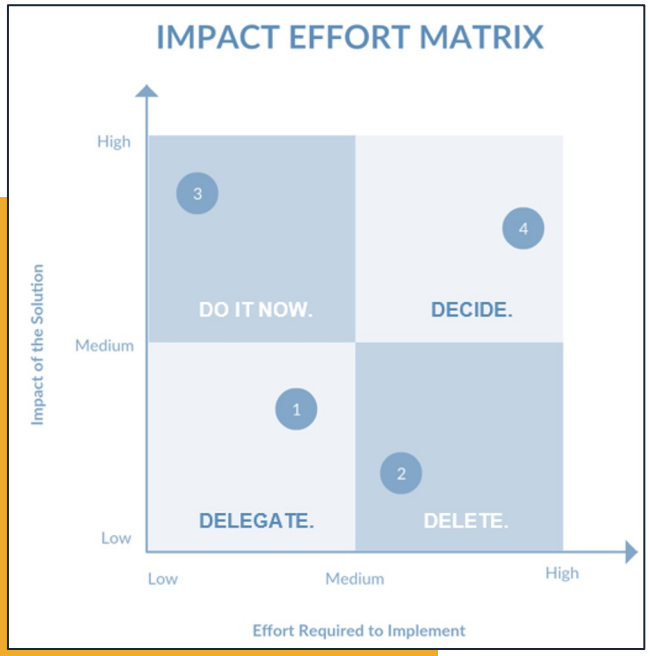
Carrying out work based on facts, rather than intuition or past experiences

Steps to gathering facts:

1. Observe thoroughly to understand facts (must go and see).
2. Decide which data should be taken.
3. Clarify how you are going to use the collected data.
4. Collect accurate data.
5. Analyze data with basic quality tools.
6. Examine the results to get correct information.

STEP 6

IDENTIFY ALTERNATIVE & SELECT SOLUTION



IMPACT
EFFORT MATRIX

- Brainstorm alternative solutions.
- Ensure that solutions address root causes.
- Impact / Effort matrix
- Perform trials or pilot tests.
- Don't get caught in "paralysis by analysis."


10
5
IMPACT
5
10
EFFORT
MOVE TO SINGLE OPERATION
Hire Testers
INTEGRATED PRODUCTION SYSTEM w/ SHOP VISIBILITY
Increase Maint. team from 30-40 people
Create Surplus material plan
Determine how to Machine Forge oversized out of Equip
Customer approval to Carry Safety Stock
Implement disciplined Order Entry System
DESIGNATED LAY DOWN AREA + id BLOCKS
SLICE 'N' BORE
Machines from Potential Stays Areas
finite Schedu Software
Maint. Machine Tuning/overhaul PM's
CONVERT FLIPPING FORKLIFT TO DEDICATED
WORK ORD PRIORITY TOOL
Hire dedicated forklift driver
PM for Forge Ops
Remove prelim SOLUTION TREAT
Fully Impl Forge Ship Training Matrix
Shot Blast to Brushing
IN LINE ROLLING TABLE
PM Audit For Plant
Train a new Op for Off-Shift Coring
Scrap
Stamping Capability
• REVISIT SHIP SCHEDULE APP
Report hours by tool (FIND IT / TIME)

STEP 7

PREPARE A PROJECT PLAN

PREPARE A PROJECT PLAN

A Project Plan should answer the following questions:

1. Who?
2. What?
3. When?
4. Where?
5. How?
6. How Much?

Make preparations to present it to the appropriate decision makers:

1. Project management tools
    1. Cost vs Benefits Analysis
    2. Milestone Charts

STEP 8

GET LEADERSHIP APPROVAL & SUPPORT

GET GUIDANCE & SUPPORT FROM

LEADER, PROCESS OWNER, CUSTOMER, &
OTHER STAKEHOLDERS. AVOID FALSE STARTS!

STEP 9

IMPLEMENT SOLUTION

IMPLEMENT SOLUTION

- Brief all people involved about the plan so that they have ownership in its success.
- Use a detailed action plan to list the specific tasks required, who's responsible, due dates, expected results, and how effectiveness will be verified.
- Remember that even a great plan will fail if not executed properly.
- Ask the leadership team to help remove roadblocks as needed.

Project Management Tools

1. Milestone Charts (High Level)
2. Task Lists (Detail Level)

STEP 10

MEASURE, MONITOR & CONTROL

MONITOR, MEASURE & CONTROL

- Remember that just because you have executed your plan does not mean that the problem is solved.
- You must verify your results and continually or periodically monitor results.
- If performance deteriorates, you must repeat the 10 steps.

Quality Tools

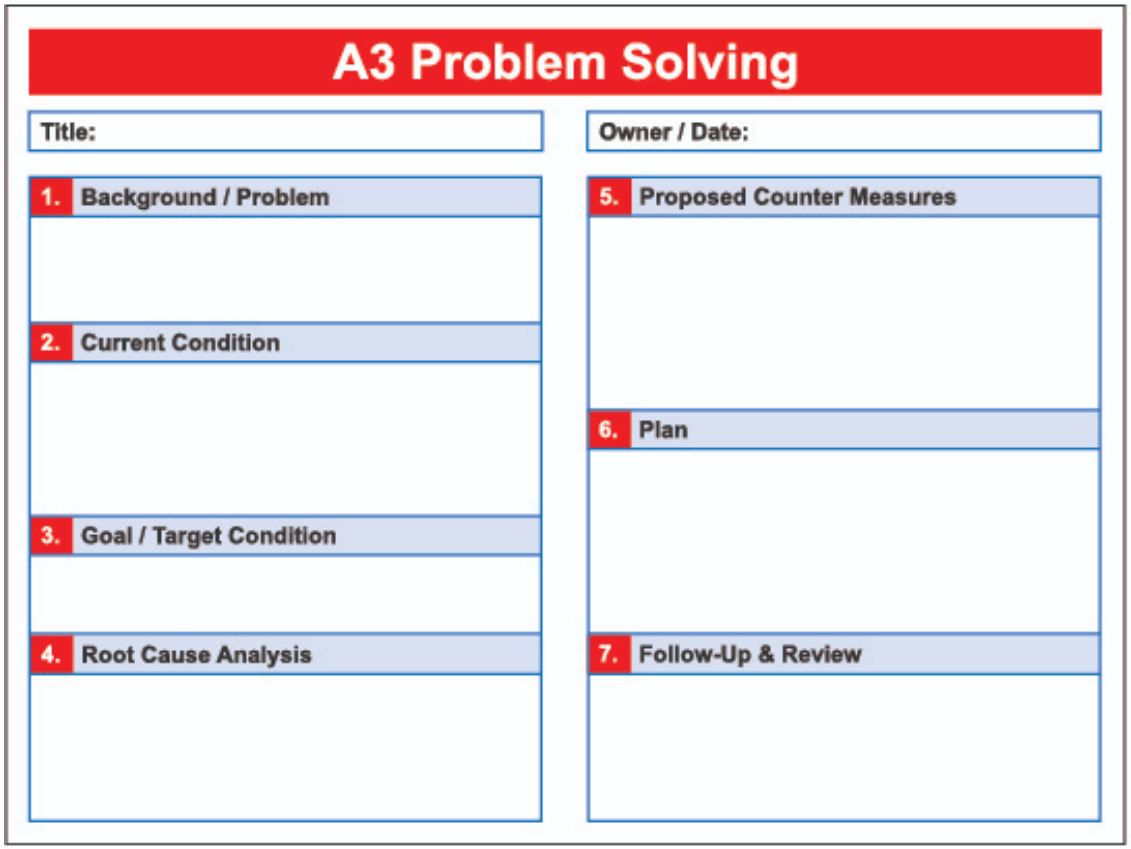
- Graphs
- Histograms
- Control Charts

DOCUMENTING ACTIVITIES/RESULTS

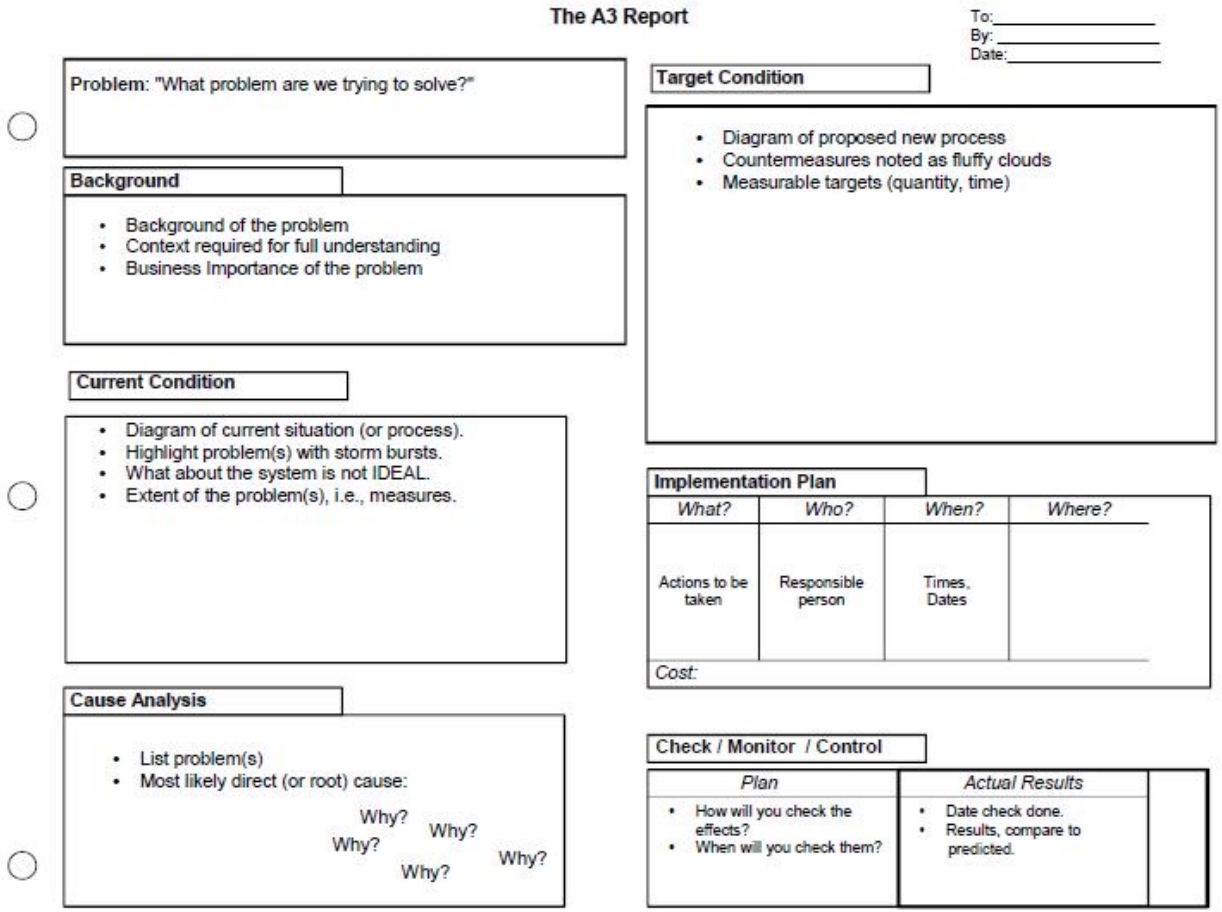
Useful forms of documenting problem solving efforts:

- **A3 Report** – Primarily used as an internal communication device amongst team members and management.
- **Corrective Action Report (CAR)** – Primarily used as an external device when required to communicate problem resolution to customers.
- **10-Step One Page Form** – 11x17

A3 REPORT


A3 Problem Solving
Title:
Owner / Date:
1. Background / Problem
2. Current Condition
3. Goal / Target Condition
4. Root Cause Analysis
5. Proposed Counter Measures
6. Plan
7. Follow-Up & Review

A3 REPORT



The A3 Report

To: _____
By: _____
Date: _____

Problem: "What problem are we trying to solve?"

Background

- Background of the problem
- Context required for full understanding
- Business Importance of the problem

Current Condition

- Diagram of current situation (or process).
- Highlight problem(s) with storm bursts.
- What about the system is not IDEAL.
- Extent of the problem(s), i.e., measures.

Cause Analysis

- List problem(s)
- Most likely direct (or root) cause:

Why? Why? Why? Why? Why? Why?

Target Condition

- Diagram of proposed new process
- Countermeasures noted as fluffy clouds
- Measurable targets (quantity, time)

Implementation Plan

What?	*Who?*	*When?*	*Where?*
Actions to be taken	Responsible person	Times, Dates	

Cost:

Check / Monitor / Control

Plan	*Actual Results*	
• How will you check the effects? • When will you check them?	• Date check done. • Results, compare to predicted.	

QUIZ 3:

1. What is the purpose of the MEASURE Phase in DMAIC?
   - **TO UNDERSTAND THE CURRENT STATE (AS-IS) OF THE PROCESS THAT CONTAINS THE PROBLEM.**

2. Detailed Process Understanding is required in the Measure Phase ? Who are the People to involve to gain a better understanding of the process and problems ?
   - **THE PEOPLE WHO WORK ON THE PROCESS. THE WORKERS AT THE GEMBA**

3. Another name for an Ishikawa diagram is the _____ diagram.
   - **FISH BONE**

4. To ask your team '***Why does this happen ?***' more than once in order to understand the Root Cause is called the _____ method.
   - **5 WHYS**

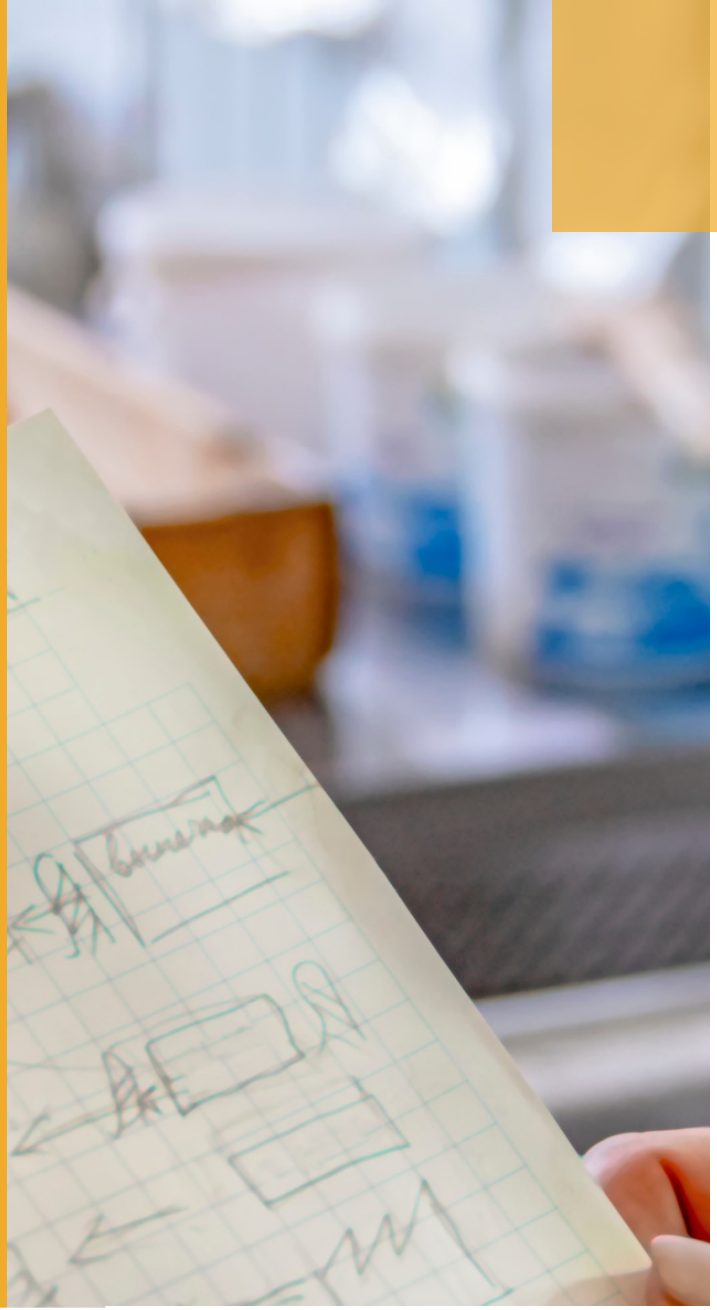
5. What is another name for the 80/20 Principle ?
   - **PARETO PRINCIPLE**

LEAN SOLUTIONS

VALUE STREAM MAPPING

DEEPER DIVE!

DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL



INTRODUCTION

Definition: All the actions (both value added and non-value added) currently required to bring a product from raw material to customer.

- Shows the “Big Picture”.
- Documents the path from customer to supplier and back.

WHY IS THIS
AN ESSENTIAL TOOL?

- Helps you “see” the flow
- Identify the waste and its source
- Provides a common language
- Decisions about the flow become apparent
- Linkage between information flow and material flow

REDUCE
LEAD TIME

- Lead time is measured from the point where flow is initiated or triggered in a process until the product or service reaches the customer
- The aim is to reduce this timeframe by only producing in response to a pull from the customer (or the next process as customer) and eliminating the things that waste time and resources.
- LT reduction is often accomplished by eliminating queue times between processes

"All we're trying to do is shorten the time line..."

Taiichi Ohno

CURRENT STATE VS MAP STEPS

- **Step 1:** Identify customer requirements and calculate takt time
  - Our customer is sometimes internal or external
  - Our customer is also the shareholder

- **Step 2:** (DATA BLOCKS) Identify Main Processes In Order
  - Each one will be different and unique to the area you are working with.
  - A data block is created when a person or area passes a product or service to the next step.

CURRENT STATE VS MAP STEPS

- **Step 3:** Add arrows for the Flow of Information.
  - Straight arrows
  - Right Angles (NO diagonals)
  - Information flow arrows
- **Step 4:** Walk the Value Stream: Add inventory / delay queues. Note movement and inventory
  - What will be considered the WIP? What is considered inventory?
  - Inventory triangles should be noted between process blocks.
  - Stay customer centric here. A customer doesn't care if you have a price on a line item if they are waiting for a package…

CURRENT STATE VS MAP STEPS

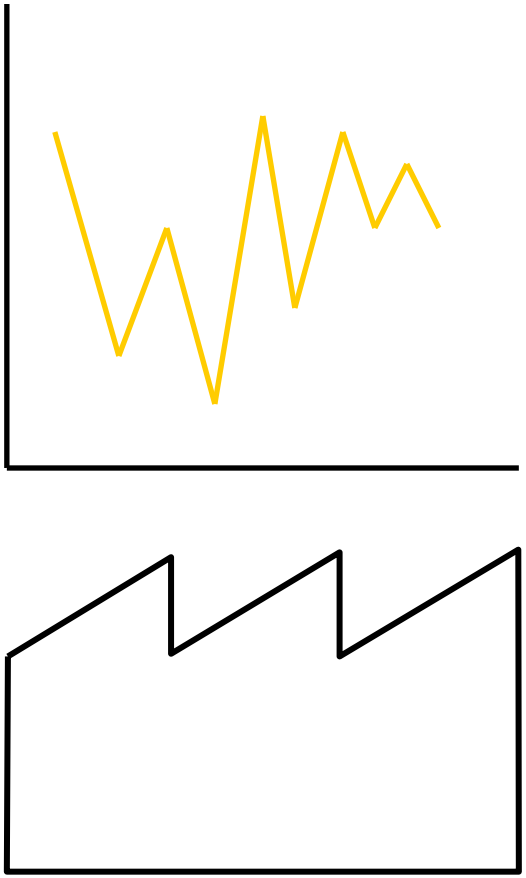
- **Step 5:** Walk the Value Stream - Populate the Data Boxes with Metrics
  - Identify Key Performance Indicators for the Value Stream.
  - For today => See Data Box
- **Step 6:** Summarize Value Stream Metrics - Calculate Lead Time Ladder
  - Lead time complete = lead time PLUS Inventory

DATA INTEGRITY

There are four scenarios for data collection.

- Data exists
- Data can be gathered through observation of work
- Data can be collected through simulation of activities
- If you cannot observe or simulate the activity you may have to make an educated "estimate"

CREATING THE CURRENT STATE VALUE STREAM MAP



Always Start With the Customer

- What capability /service do you provide?
- What are the boundaries of your map?
- What is the demand profile?

TAKT TIME

Takt Time – The available production time divided by customer demand.

The first step in Standard Work development is understanding the customer requirements.

- Defining the "right goods or services", is done in the design and development process.
- The steps to transform the raw material or data to the customer defined value are captured as the work elements.
- To provide goods and services "in the right quantity, at the right time", customer demand (takt time) must be understood.

TAKT TIME EXAMPLE

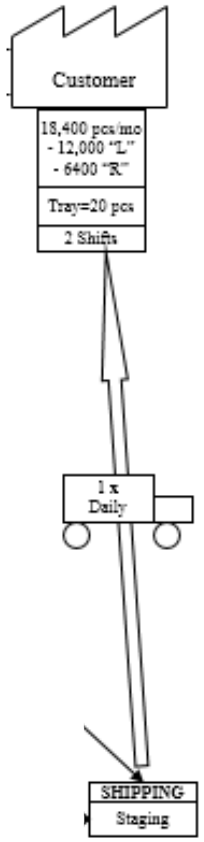
Takt Time = Demand Rate

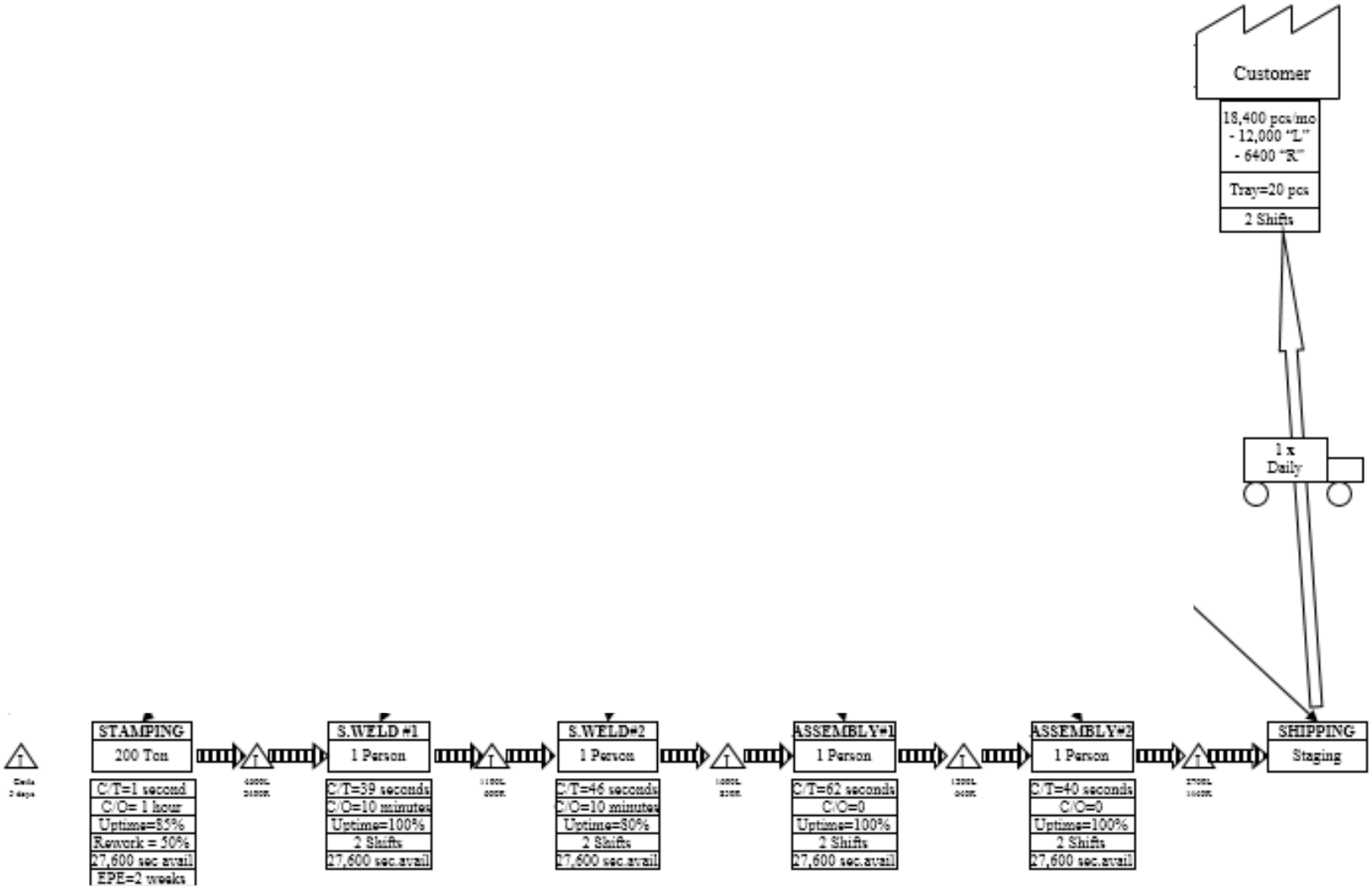
- Synchronizes pace of processing to match pace of customer need.

$$\text{Takt Time} = \frac{\text{Effective working time per time period}}{\text{Customer requirement during the time period}}$$

$$= \frac{460 \text{ minutes / day}}{46 \text{ quotes}} = 10 \text{ minutes per quote}$$

Ideally, one quote every 10 minutes must be processed


Customer
18,400 pcs/mo
- 12,000 "L"
- 6400 "R"
Tray=20 pcs
2 Shifts
1 x
Daily
SHIPPING
Staging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Tray=20 pcs
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1 x
Daily
STAMPING
200 Ton
C/T=1 second
C/O= 1 hour
Uptime=85%
Rework = 50%
27,600 sec avail
EPE=2 weeks
S.WELD #1
1 Person
C/T=39 seconds
C/O=10 minutes
Uptime=100%
2 Shifts
27,600 sec avail
S.WELD#2
1 Person
C/T=46 seconds
C/O=10 minutes
Uptime=80%
2 Shifts
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ASSEMBLY#1
1 Person
C/T=62 seconds
C/O=0
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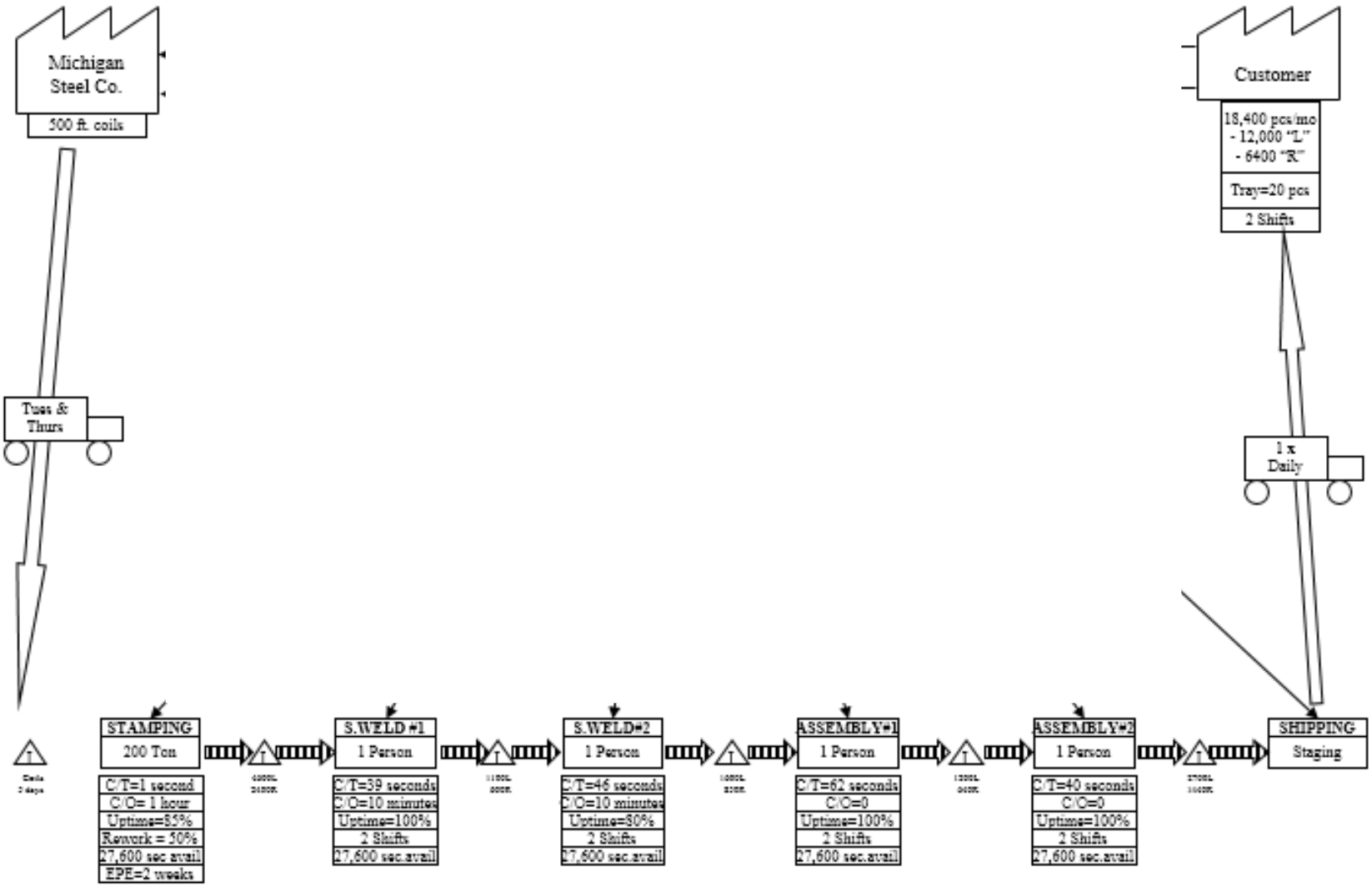
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500 ft. coils
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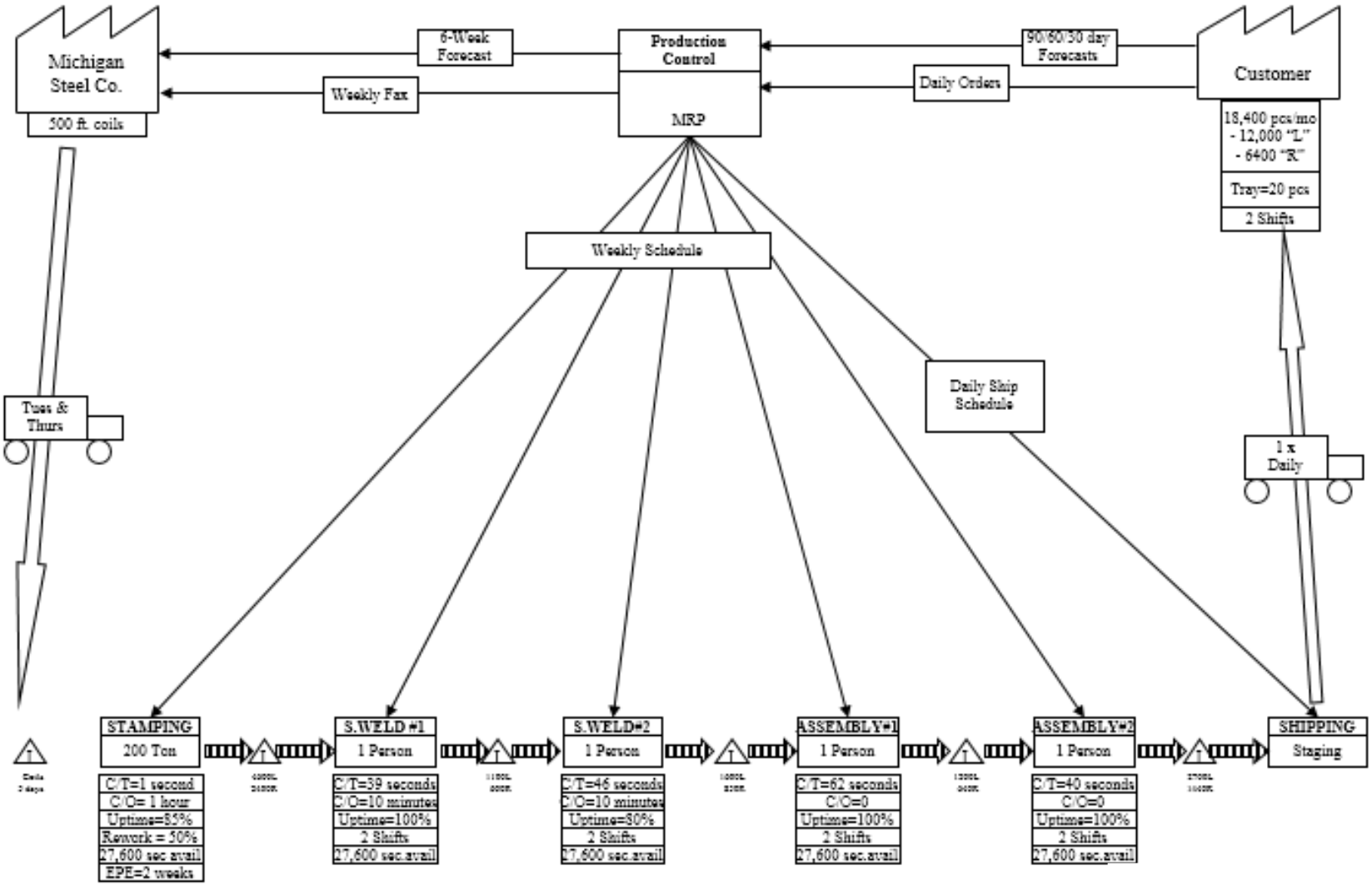
Michigan Steel Co.
500 ft. coils
6-Week Forecast
Weekly Fax
Production Control
MRP
90/60/30 day Forecasts
Daily Orders
Customer
18,400 pcs/mo
- 12,000 "L"
- 6400 "R"
Tray=20 pcs
2 Shifts
Weekly Schedule
Daily Ship Schedule
Tues & Thurs
1 x Daily
STAMPING
200 Ton
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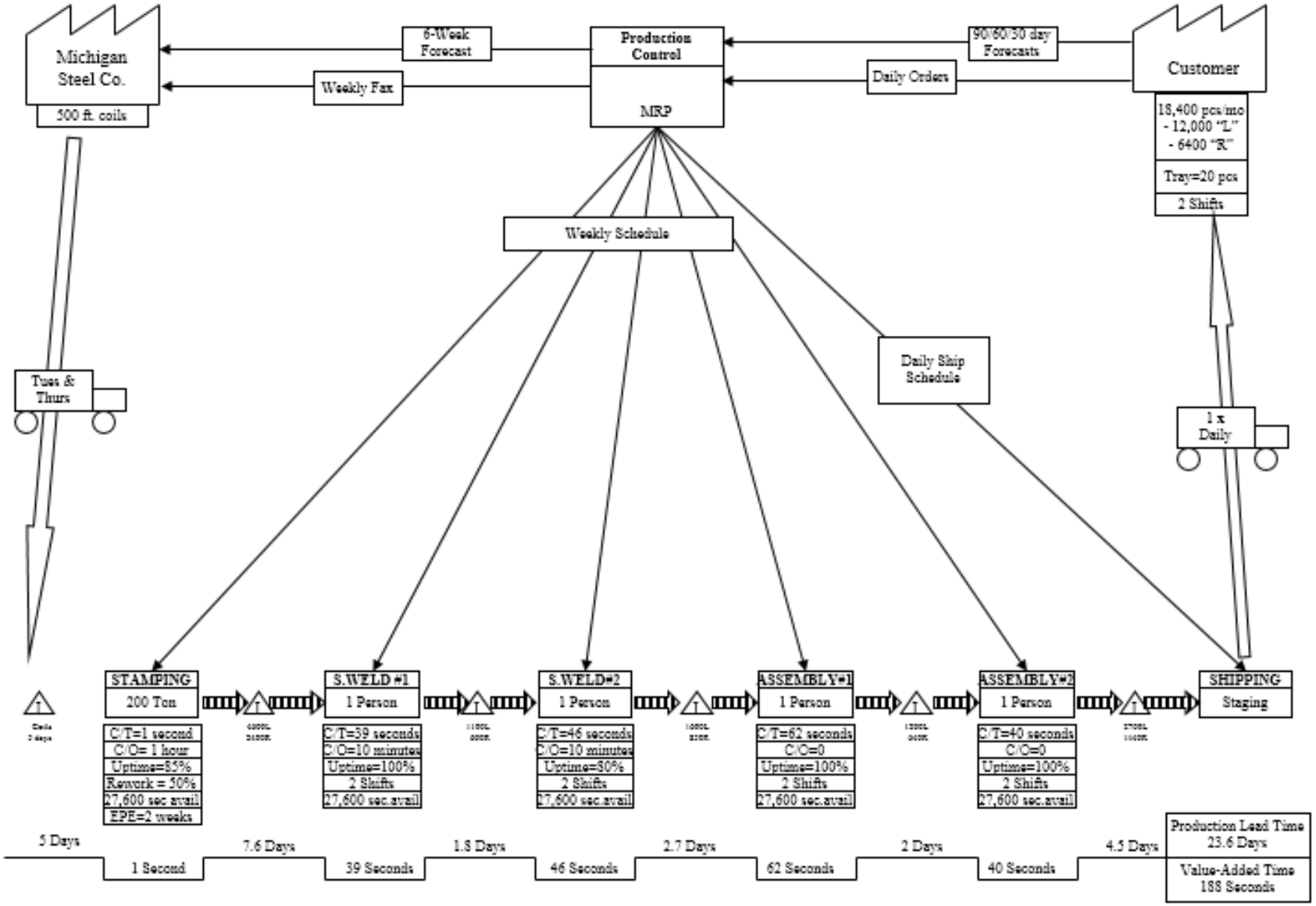
SHIPPING
Staging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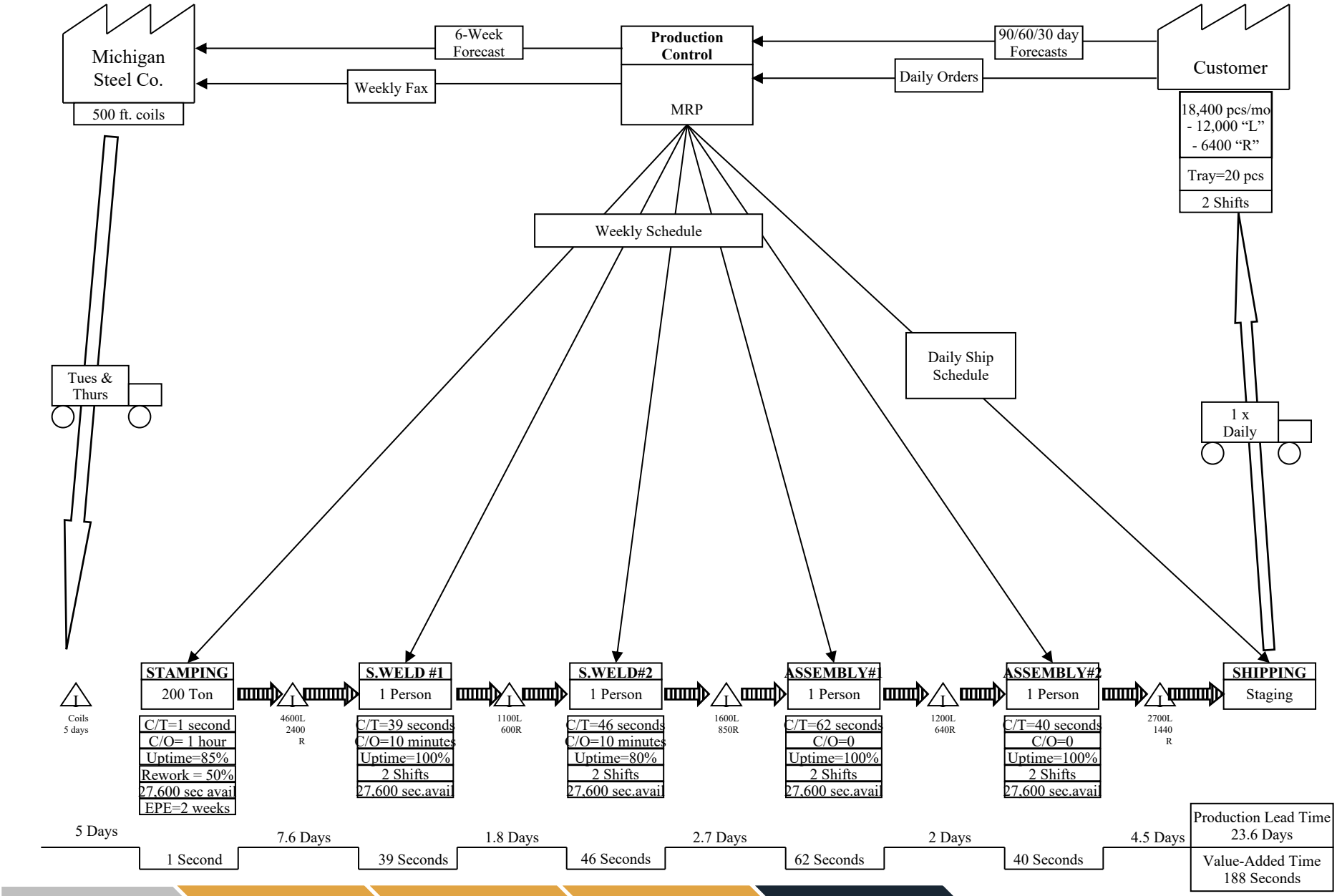
C/O=0
Uptime=100%
2 Shifts
27,600 sec.avail
SHIPPING
Staging
5 Days
1 Second
7.6 Days
39 Seconds
1.8 Days
46 Seconds
2.7 Days
62 Seconds
2 Days
40 Seconds
4.5 Days
Production Lead Time
23.6 Days
Value-Added Time
188 Seconds

CURRENT STATE MAP



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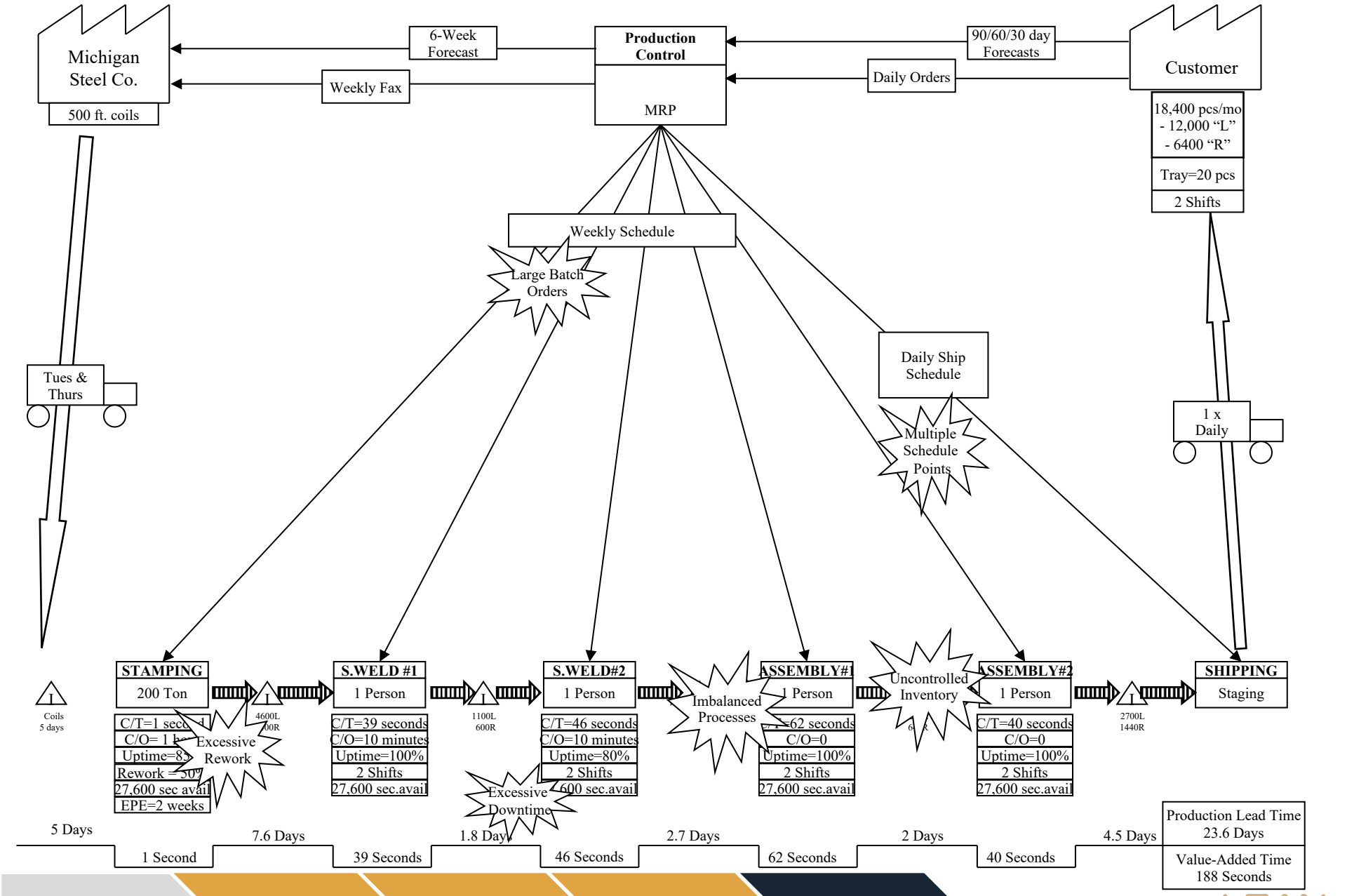
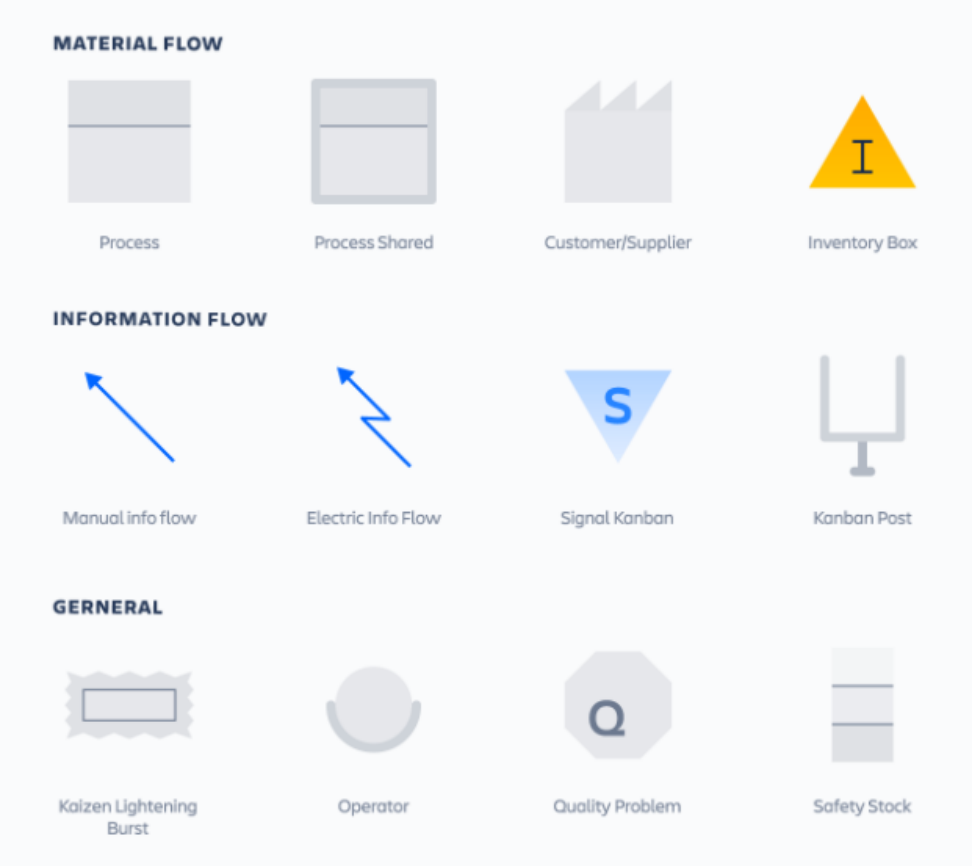


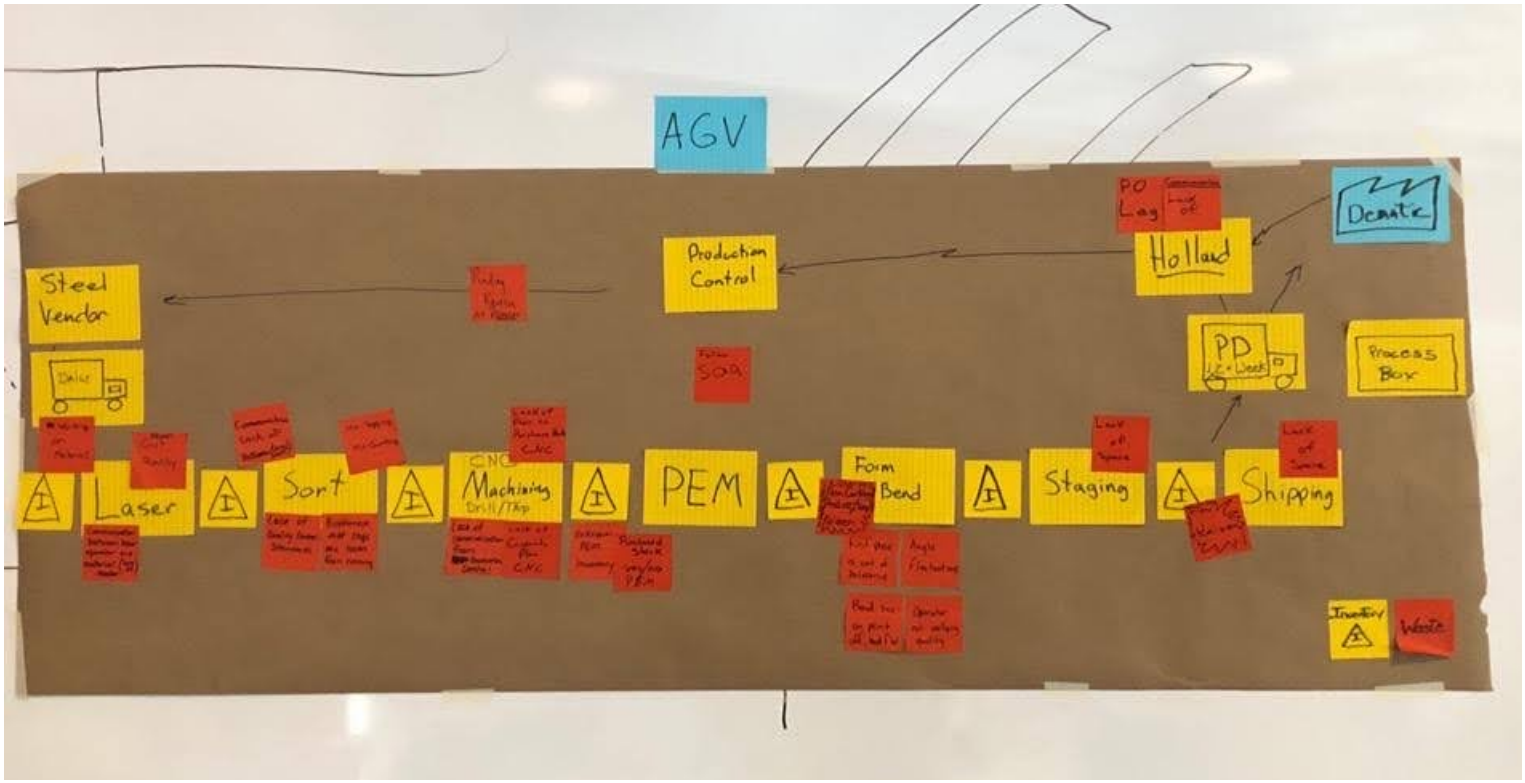
DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

LEAN SOLUTIONS

VALUE STREAM SYMBOLS



VALUE STREAM MAP EXAMPLE



VALUE STREAM MAP EXAMPLE

DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

LEAN SOLUTIONS

VALUE STREAM MAP EXAMPLE

LET’S CREATE ONE TOGETHER!

FACILITATING A KAIZEN EVENT

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?

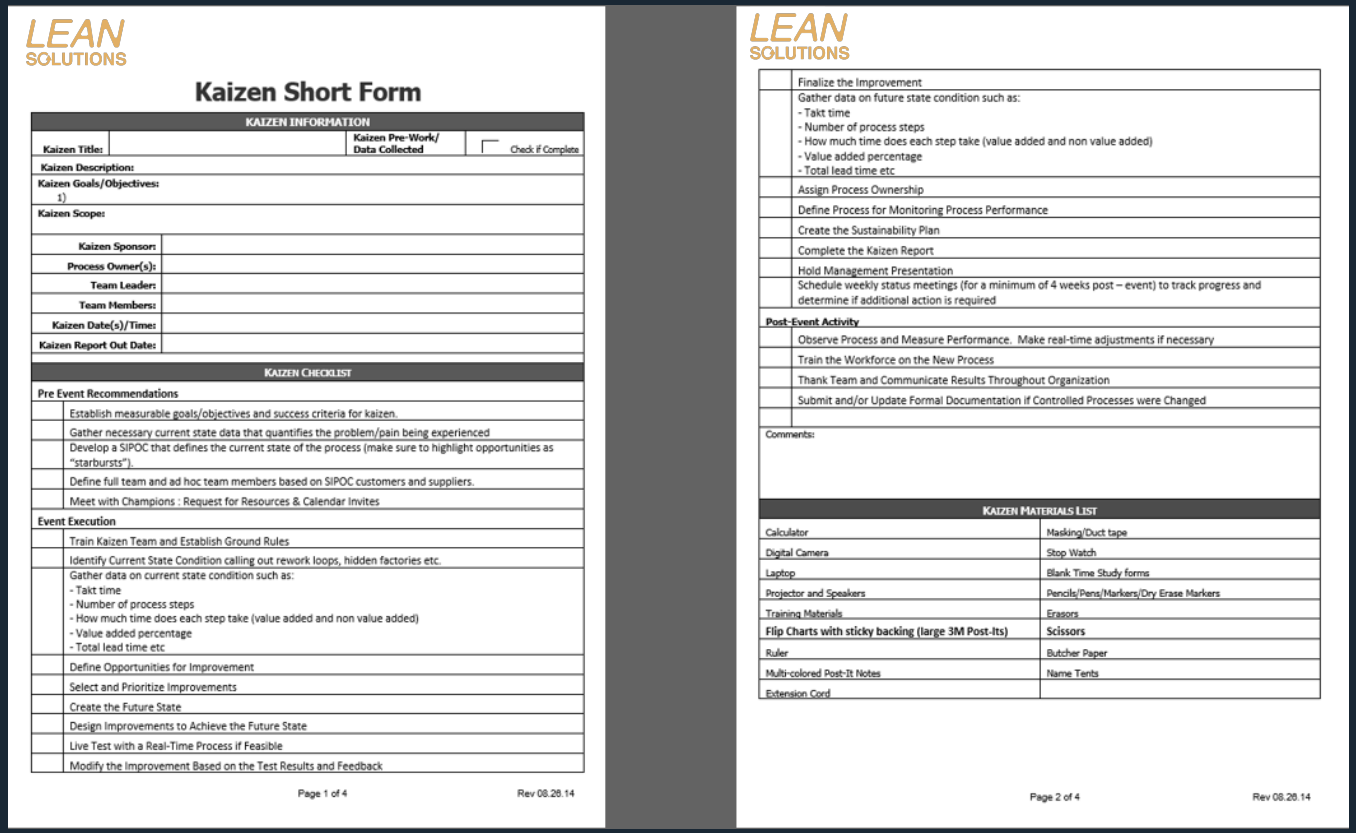
A Kaizen Event (different than Kaizen as a mindset) is a focused team activity with a specific, aggressive breakthrough objective aimed toward solving a well-defined problem.

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

Huge results
In a
Short time
frame

PRE KAIZEN WORK

KAIZEN SHORT FORM & CHECKLIST



LEAN SOLUTIONS

Kaizen Short Form

KAIZEN INFORMATION			
Kaizen Title:		**Kaizen Pre-Work/ Data Collected**	☐ Check if Complete
Kaizen Description:			
Kaizen Goals/Objectives: 1)			
Kaizen Scope:			
Kaizen Sponsor:			
Process Owner(s):			
Team Leader:			
Team Members:			
Kaizen Date(s)/Time:			
Kaizen Report Out Date:			

KAIZEN CHECKLIST	
Pre Event Recommendations	
	Establish measurable goals/objectives and success criteria for kaizen.
	Gather necessary current state data that quantifies the problem/pain being experienced
	Develop a SIPOC that defines the current state of the process (make sure to highlight opportunities as "starbursts").
	Define full team and ad hoc team members based on SIPOC customers and suppliers.
	Meet with Champions : Request for Resources & Calendar Invites
Event Execution	
	Train Kaizen Team and Establish Ground Rules
	Identify Current State Condition calling out rework loops, hidden factories etc.
	Gather data on current state condition such as: - Takt time - Number of process steps - How much time does each step take (value added and non value added) - Value added percentage - Total lead time etc
	Define Opportunities for Improvement
	Select and Prioritize Improvements
	Create the Future State
	Design Improvements to Achieve the Future State
	Live Test with a Real-Time Process if Feasible
	Modify the Improvement Based on the Test Results and Feedback

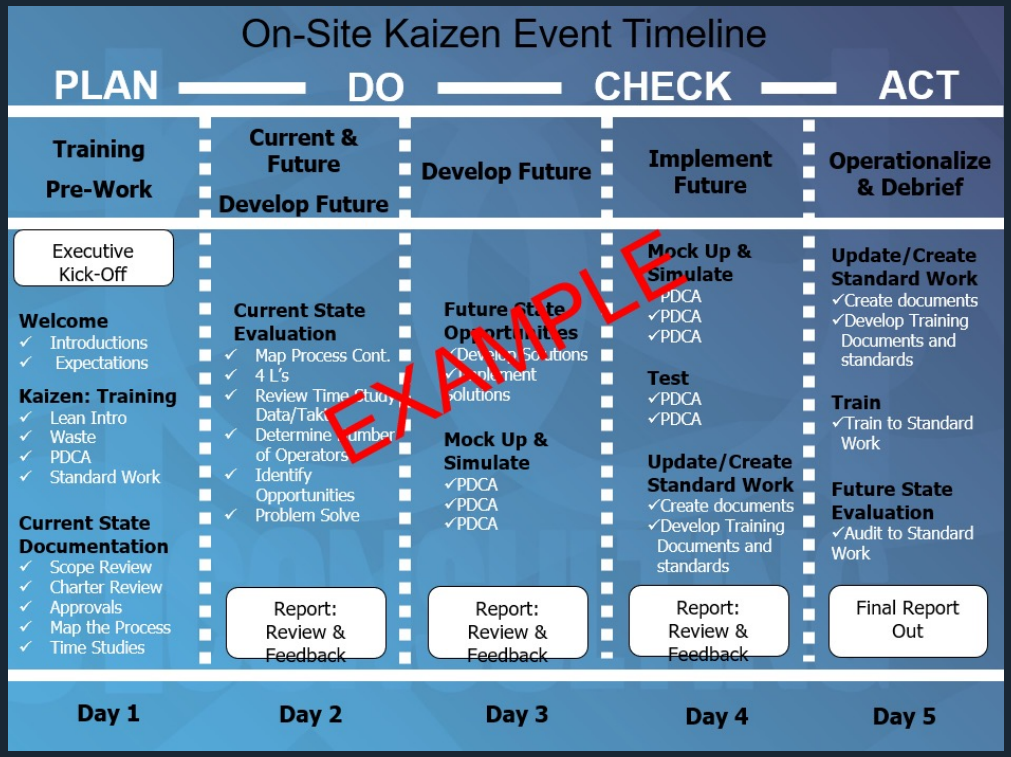
LEAN SOLUTIONS

	Finalize the Improvement
	Gather data on future state condition such as: - Takt time - Number of process steps - How much time does each step take (value added and non value added) - Value added percentage - Total lead time etc
	Assign Process Ownership
	Define Process for Monitoring Process Performance
	Create the Sustainability Plan
	Complete the Kaizen Report
	Hold Management Presentation
	Schedule weekly status meetings (for a minimum of 4 weeks post – event) to track progress and determine if additional action is required
Post-Event Activity	
	Observe Process and Measure Performance. Make real-time adjustments if necessary
	Train the Workforce on the New Process
	Thank Team and Communicate Results Throughout Organization
	Submit and/or Update Formal Documentation if Controlled Processes were Changed

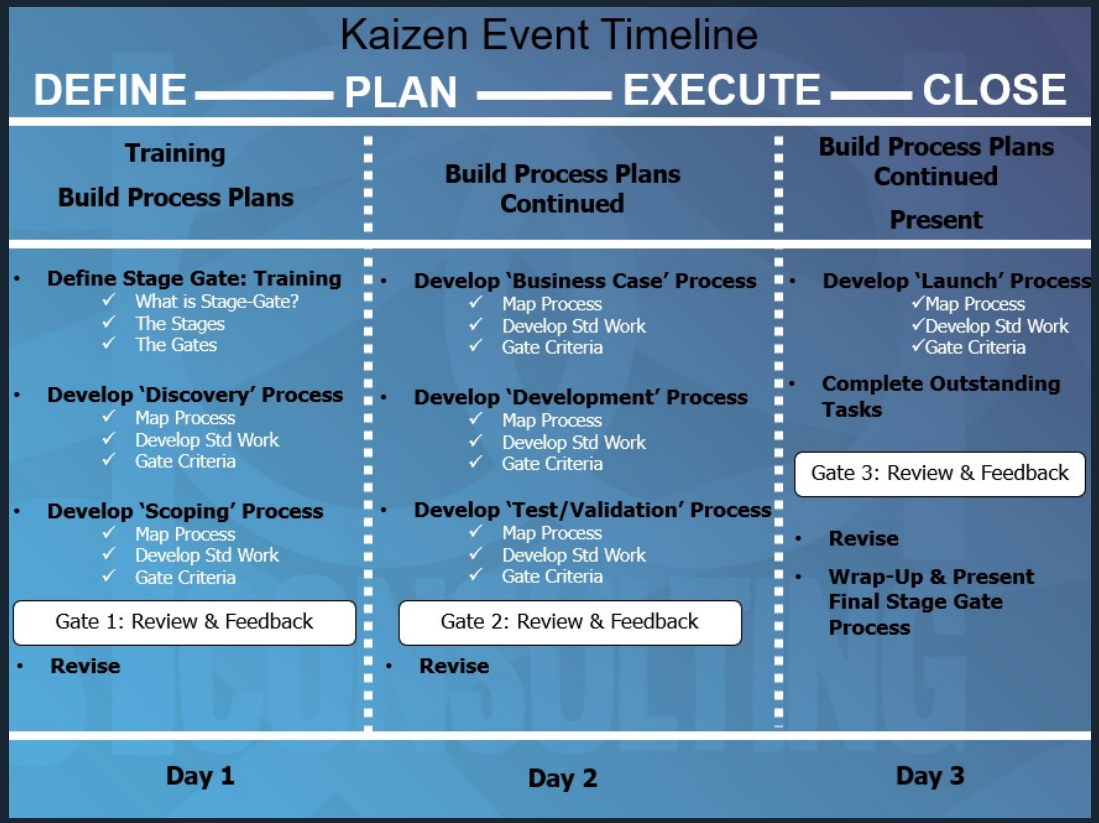
Comments:

KAIZEN MATERIALS LIST	
Calculator	Masking/Duct tape
Digital Camera	Stop Watch
Laptop	Blank Time Study forms
Projector and Speakers	Pencils/Pens/Markers/Dry Erase Markers
Training Materials	Erasors
Flip Charts with sticky backing (large 3M Post-Its)	**Scissors**
Ruler	Butcher Paper
Multi-colored Post-It Notes	Name Tents
Extension Cord	

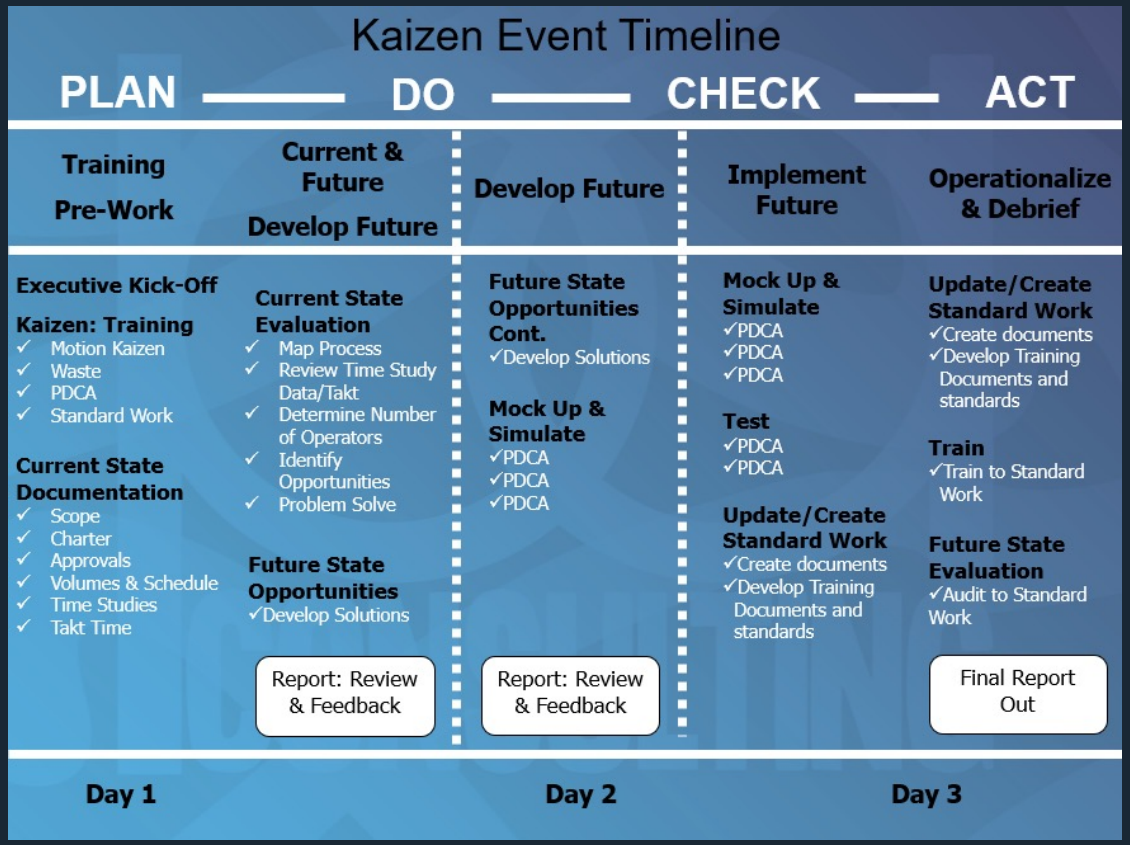
WHAT'S IN A WEEK?



WHAT'S IN A WEEK?



WHAT'S IN A WEEK?



METHODS USED

TO SCOPE THE EVENT

- Charter
- SIPOC
- Time Studies
- Videos

CONTINUOUS IMPROVEMENT EVENT CHARTER

Event Description:
- Stainless Steel Double Operation Fluid End Flow Path

Event Dates:
- 12/5/22 – 12/9/22

Team Area: Shop Conf Room

Event Boundaries - Starting point, ending point, any exclusions:
- From Ingot receipt for forging to shipping blocks to customer machine shops
- Target customer Best Flow & FTSI
- All processes in the flow path from forge shop to shipment of blocks in scope

Sponsor: Dave

Team Leader: Jay
Facilitator:
Team Members:
Jay, Sam, Liz, Rob, Greg, Marcus, James
Resources:
Engineering Team, Maintenance Team, & Production Teams

Preliminary Objectives:
- The current fluid end demand is greater than we can supply at current lead times.
- With limited furnace capacity in the forge shop, and lead times extending to 18 weeks, our customers are developing alternative suppliers, limiting our opportunity to grow our volume of this business.

- SMART Targets
- Reduce the double op flow path from 18 weeks to 14 weeks, delivering 54 blocks per week in 5 days per operation.

Customer Requirements (TAKT Time):
Takt Time = (24 hrs*5 days)/(54 blocks/week) = 2hrs 12mins per block

Process Information- Special considerations:
All data collection and process steps, cycle times, and throughput volumes to be collected during event

Current Situation – Problem or issue motivating event:
- Current final completed throughput ranges from 30 – 45 blocks per week. Not consistent, throughput surges up and down weekly
- Coordinating material movement by heat per heat treat load contributes to throughput inconsistency.

LEAN SOLUTIONS

Project Charter

PROJECT INFORMATION			
Project Title:		Project Initiation Date:	

Problem Statement:	
Project Goals:	
In Scope (Inclusions):	Out of Scope (Exclusions):
Project Champion:	
Process Owner(s):	
Project Manager:	
Core Team Members:	
Target Completion Date:	

PROJECT OBJECTIVES		
Objective	Baseline	Target
Objective #1		
Objective #2		
Objective #3		

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KAIZEN TOOLS

Kaizen Pre-Event Planning

Goals/Objectives

Examples:
Weak Goals: Map future state, improve current state, improve data, and reduce cost
Strong Goals: Reduce labor time by X%, reduce data/document errors by X%, reduce lead time by X%, improve product quality by X%, reduce lead time by X%, and reduce cost by X%.

Current State Data

Data should be quantifiable and depict the pain being felt. There should be a clear correlation between the data gathered and the kaizen goals. This data should be used as a gauge to test the effectiveness of the improvements made during the kaizen.

Process/Project Name:

Date:

SIPOC WORKSHEET

Prepared By:

Notes:

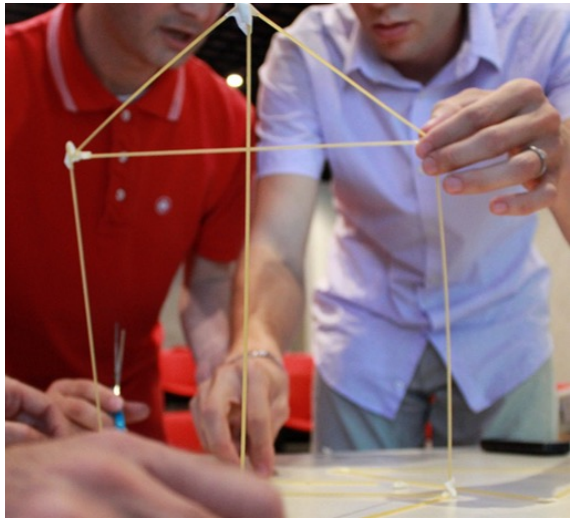
SUPPLIERS	INPUTS	PROCESSES	OUTPUTS	CUSTOMERS
Who supplies the process inputs?	What inputs are required?	What are the major steps in the process?	What are the process outputs?	Who receives the outputs?

DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

TRAIN ON LEAN & SIX SIGMA TOOLS

MARSHMALLOW CHALLENGE

BE HONEST, HOW WELL DID YOU WORK AS A TEAM?



The Challenge

Build the Tallest Free-Standing Structure

20 Sticks of spaghetti

⊕

1 yard tape

⊕

1 yard string

⊕

One marshmallow

BALL TOSS

LEAN SOLUTIONS

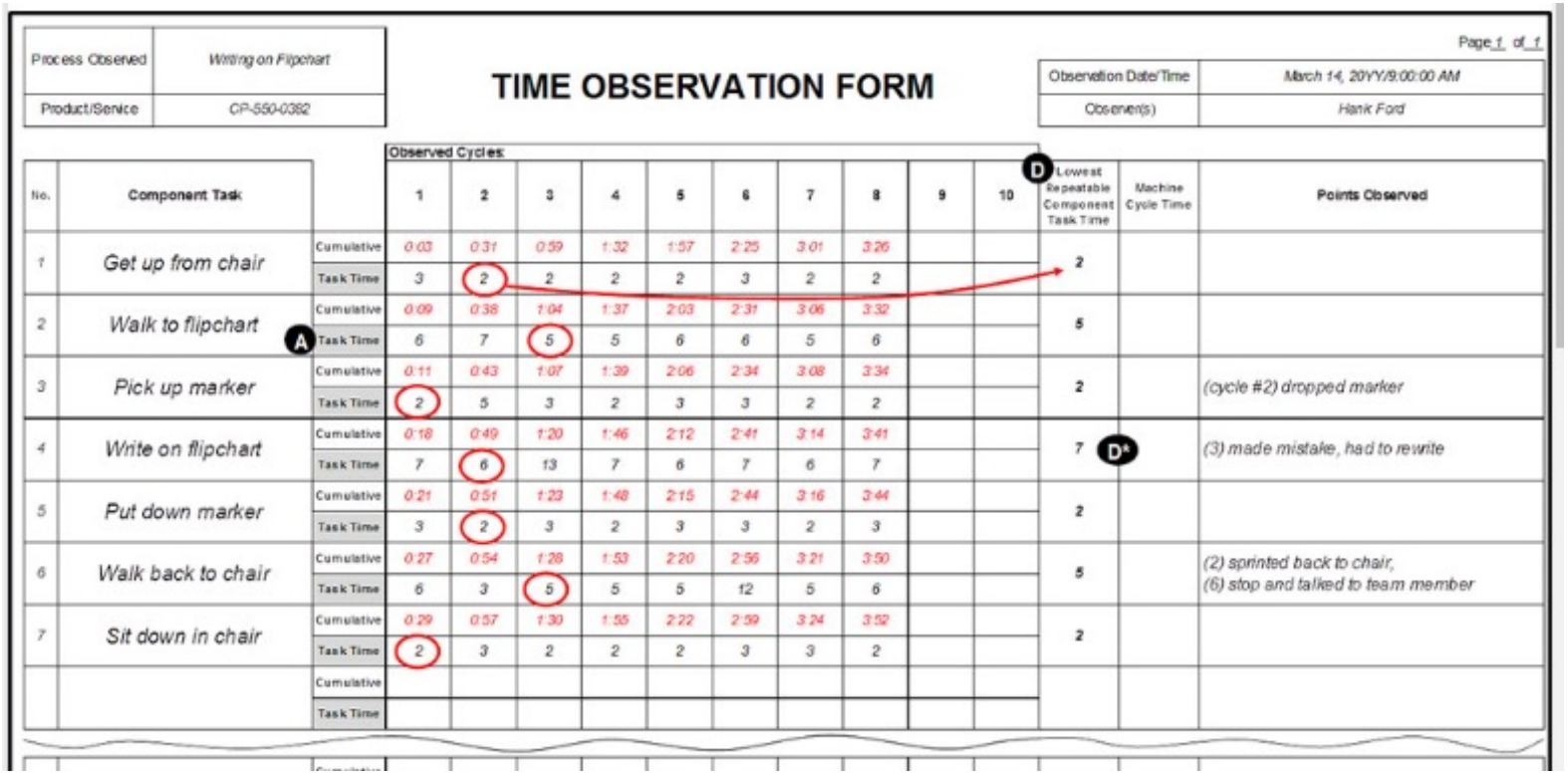
METHODS USED

TO OBSERVE & GATHER DATA

- Time Studies
- Process Mapping or Flow Chart, Value Stream Mapping, Current State
- Gemba Walks, The 8 Wastes and Waste Walks
- Videos

TIME
STUDIES

- Establishes a Baseline
- Measure's Improvements
- Internal/External Customers
- Break Down Each Component



Page 1 of 1

TIME OBSERVATION FORM

Process Observed	Writing on Flipchart
Product/Service	CP-550-0382

Observation Date/Time	March 14, 20YY/9:00:00 AM
Observer(s)	Hank Ford

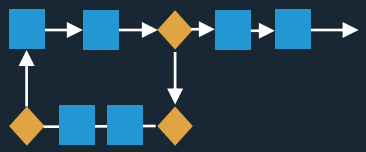
No.	Component Task		Observed Cycles: 1	2	3	4	5	6	7	8	9	10	D Lowest Repeatable Component Task Time	Machine Cycle Time	Points Observed
1	Get up from chair	Cumulative	0:03	0:31	0:59	1:32	1:57	2:25	3:01	3:26			2		
		Task Time	3	2	2	2	2	3	2	2					
2	Walk to flipchart	Cumulative	0:09	0:38	1:04	1:37	2:03	2:31	3:06	3:32			5		
	A	Task Time	6	7	5	5	6	6	5	6					
3	Pick up marker	Cumulative	0:11	0:43	1:07	1:39	2:06	2:34	3:08	3:34			2		(cycle #2) dropped marker
		Task Time	2	5	3	2	3	3	2	2					
4	Write on flipchart	Cumulative	0:18	0:49	1:20	1:46	2:12	2:41	3:14	3:41			7 D*		(3) made mistake, had to rewrite
		Task Time	7	6	13	7	6	7	6	7					
5	Put down marker	Cumulative	0:21	0:51	1:23	1:48	2:15	2:44	3:16	3:44			2		
		Task Time	3	2	3	2	3	3	2	3					
6	Walk back to chair	Cumulative	0:27	0:54	1:28	1:53	2:20	2:56	3:21	3:50			5		(2) sprinted back to chair, (6) stop and talked to team member
		Task Time	6	3	5	5	5	12	5	6					
7	Sit down in chair	Cumulative	0:29	0:57	1:30	1:55	2:22	2:59	3:24	3:52			2		
		Task Time	2	3	2	2	2	3	3	2					
		Cumulative													
		Task Time													

PROCESS MAPPING

There are usually three views of a process:

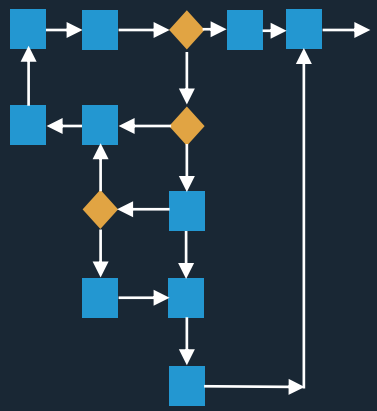
1

What people *THINK* it is..



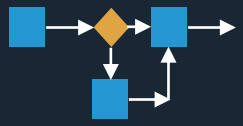
2

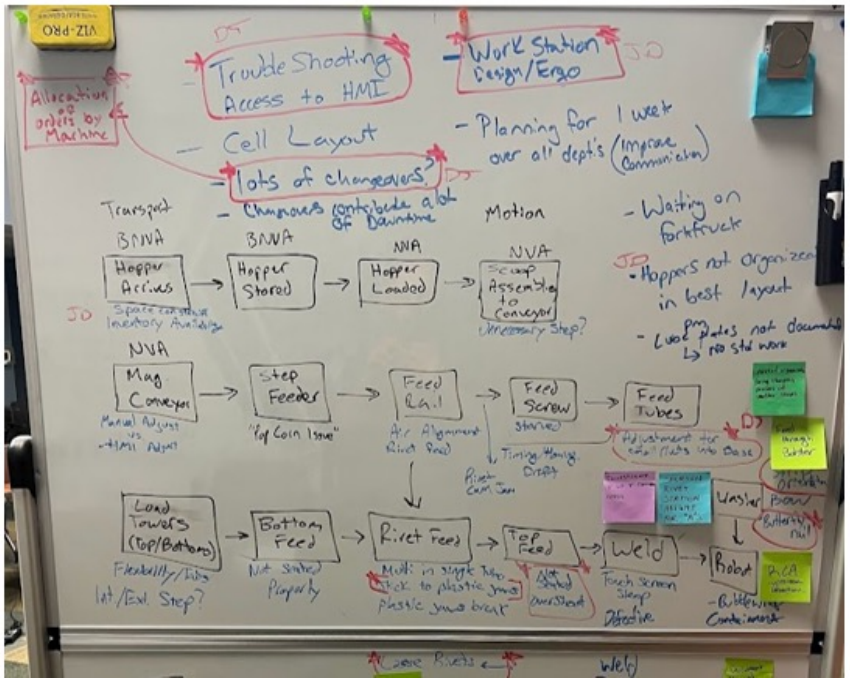
What it *ACTUALLY* is..



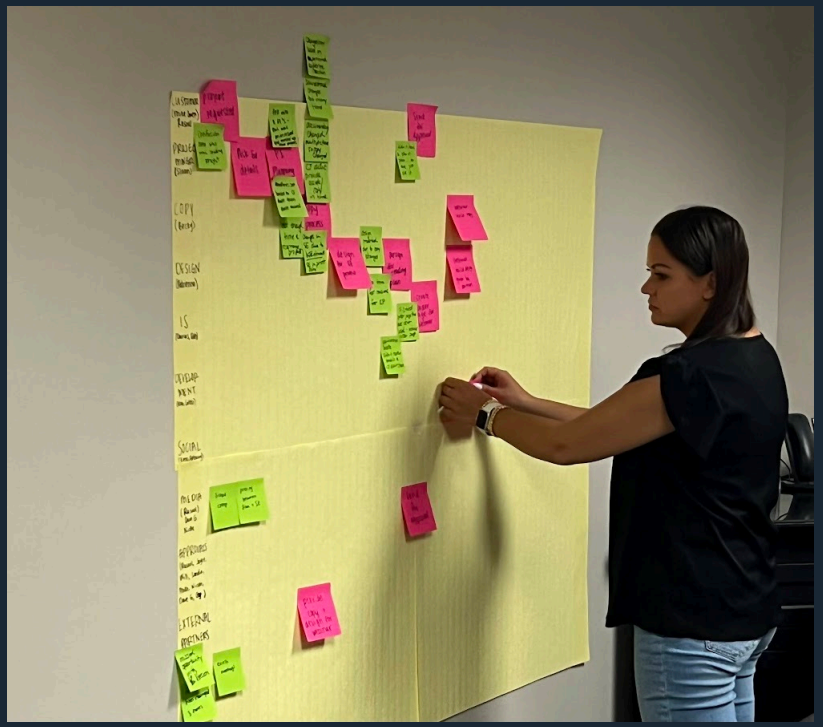
3

What it *SHOULD* be..




Trouble Shooting Access to HMI
Work Station Design/Ergo
Allocation of orders by Machine
Cell Layout
Planning for 1 week over all dept's (Improve Communication)
Lots of changeovers
Changeovers contributes a lot of Downtime
Transport
Motion
Waiting on forktruck
Hoppers not organized in best layout
BNVA
Hopper Arrives
BNVA
Hopper Stored
NVA
Hopper Loaded
NVA
Scrap Assembly to Conveyor
Unnecessary Step?
NVA
Mag Conveyor
Manual Adjust vs HMI Adjust
Step Feeder
"Top Coin Issue"
Feed Rail
Air Alignment
Rivet Feed
Feed Screw
Started
Feed Tubes
Timing Homing Drift
Load Towers (Top/Bottom)
Flexibility/Tube lot/Ext. Step?
Bottom Feed
Not Started Properly
Rivet Feed
Multi in style tube stick to plastic jams
Plastic jams break
Top Feed
Not Started Overstarved
Weld
Touch Screen Sleep
Effective
Robot
Weld


COLLATED RIVET



DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

LEAN SOLUTIONS

METHODS USED

TO GATHER IDEAS & SUGGESTIONS

- Brainstorming
- Post-It Notes
- Fishbone, Cause and Effect, or Ishikawa Diagram
- 5 Whys

TRADITIONAL KAIZEN

One Week Commitment

Lots Of Prep Work

Lots Of Ideas & Actions

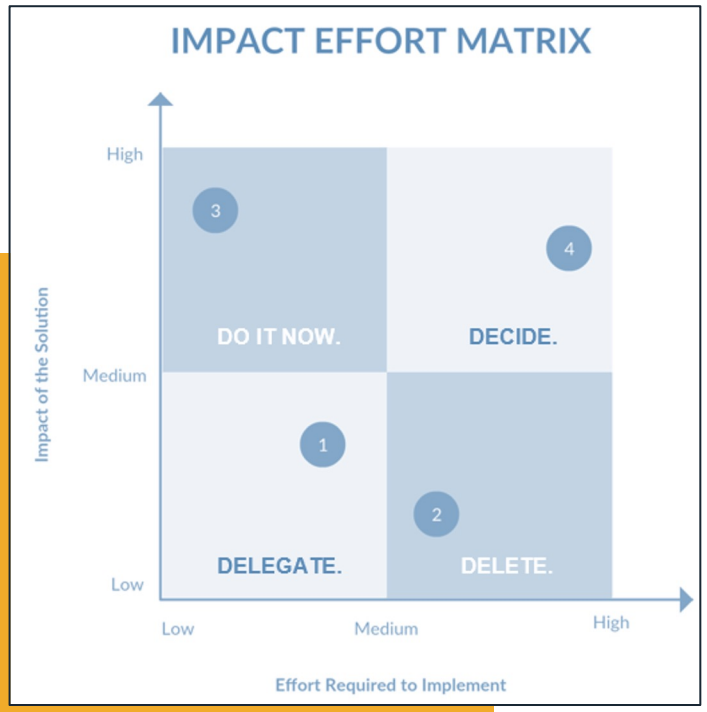
METHODS USED

TO ANALYZE THE DATA

- Clustering, N/3
- Impact Effort Matrix
- A-3, Corrective Action Report (CAR), 10-Step Prob Solve
- Auditing Standard Work

CLUSTERING

THE DATA & N/3



IMPACT
EFFORT MATRIX

- Brainstorm alternative solutions.
- Ensure that solutions address root causes.
- Impact / Effort matrix
- Perform trials or pilot tests.
- Don't get caught in "paralysis by analysis."

METHODS USED
TO IMPLEMENT CHANGES

- Project Plan
- Brief Everyone
- Action Plan (Detail Level)
- Milestone Charts (High Level)

PREPARE A PROJECT PLAN

A Project Plan should answer the following questions:

1. Who?
2. What?
3. When?
4. Where?
5. How?
6. How Much?

Make preparations to present it to the appropriate decision makers:

1. Project management tools
    1. Cost vs Benefits Analysis
    2. Milestone Charts

IMPLEMENT SOLUTION

- Brief all people involved about the plan so that they have ownership in its success.
- Use a detailed action plan to list the specific tasks required, who's responsible, due dates, expected results, and how effectiveness will be verified.
- Remember that even a great plan will fail if not executed properly.
- Ask the leadership team to help remove roadblocks as needed.

Project Management Tools

1. Milestone Charts (High Level)
2. Task Lists (Detail Level)

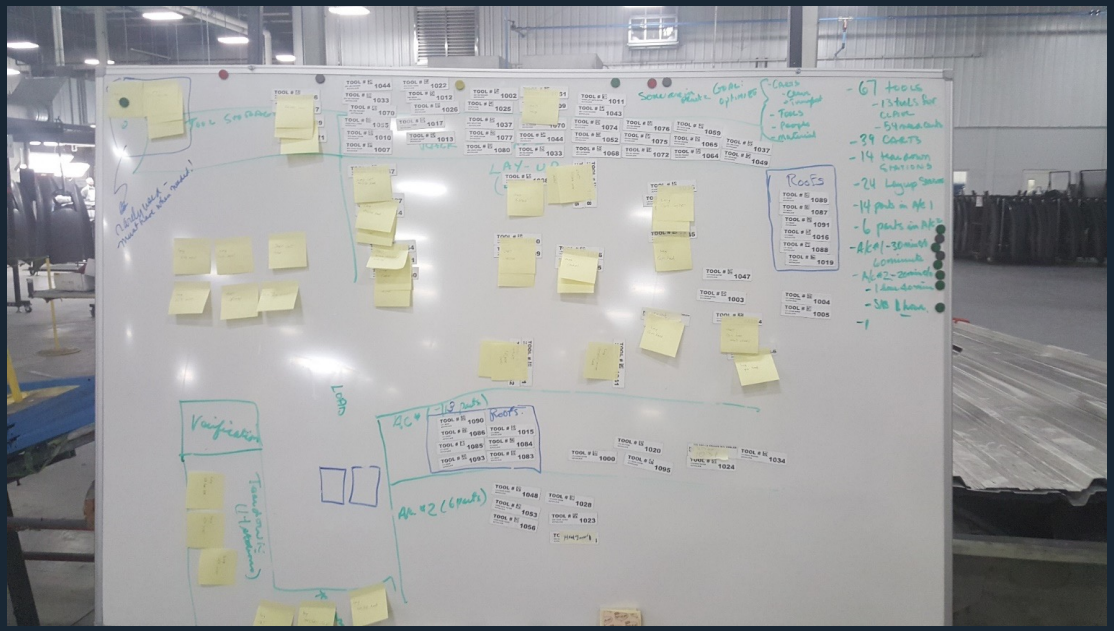
DIFFERENT TYPES
OF KAIZENS

- 5 Hour Kaizen
- Rapid Improvement Event
- Two Second Kaizen
- Virtual Kaizen

TAKE IT TO THE GEMBA

TAKIN IT TO THE ~~STREETS~~ OR GEMBA

AUTO CLAVE QUICK KAIZEN



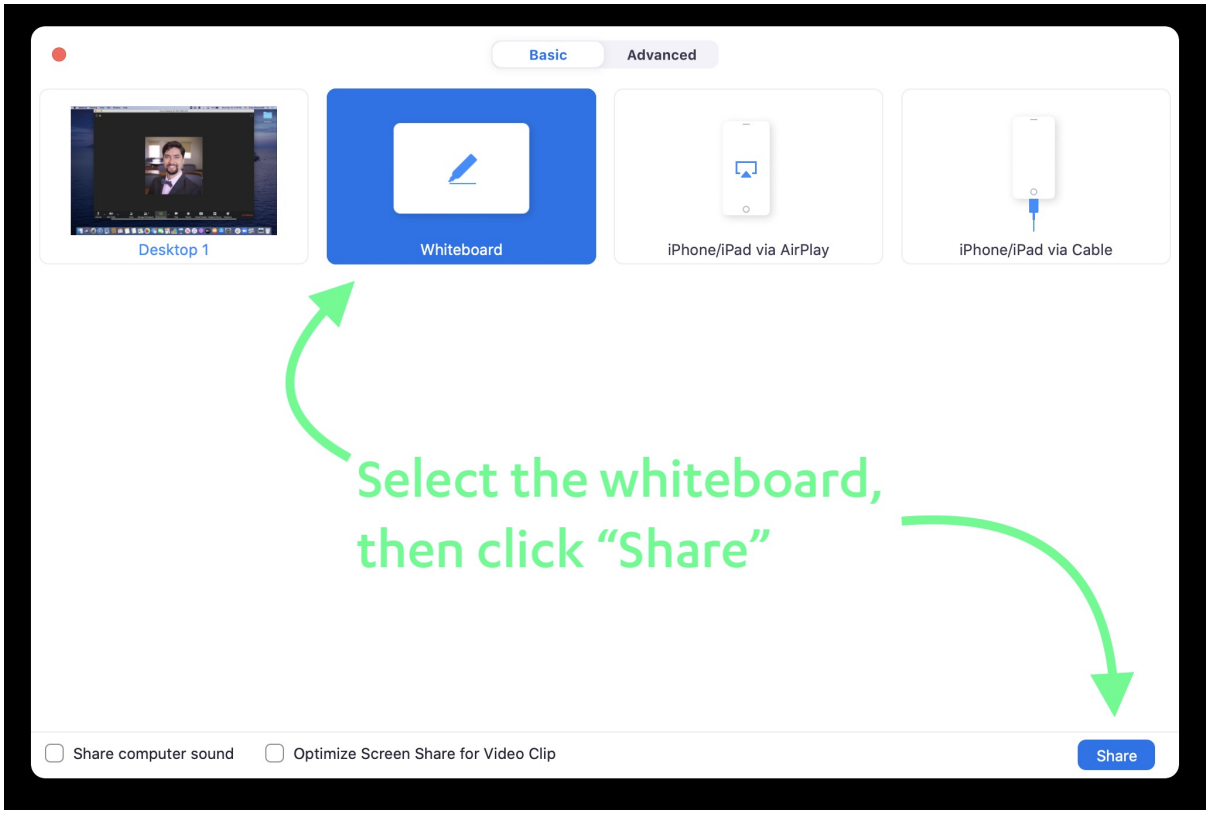
DEPLOYMENT CHAMPION - SUPERVISOR

METHODS USED
FOR A VIRTUAL KAIZEN

- Virtual Facilitation Dos & Don'ts
- Virtual vs. In-Person Facilitation
- Engagement Tools & Techniques
- Virtual Simulation Experience

RULES & EXPECTATION

VIRTUAL DO'S & DON'T'S

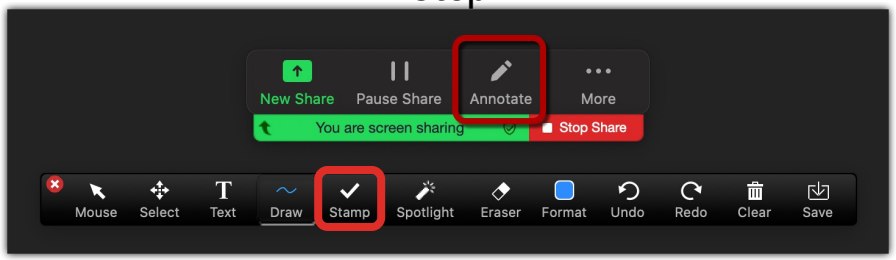

Basic
Advanced
Desktop 1
Whiteboard
iPhone/iPad via AirPlay
iPhone/iPad via Cable
Select the whiteboard,
then click “Share”
Share computer sound
Optimize Screen Share for Video Clip
Share

LIGHTING & BACKGROUND

FUN INTERACTIVE ICEBREAKERS

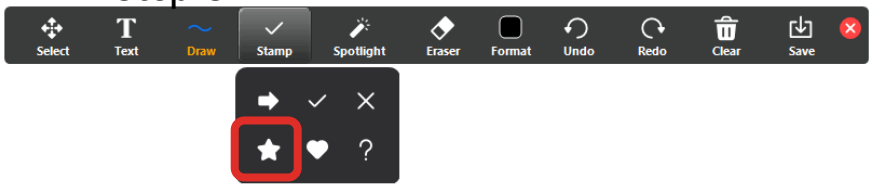
- Creative Costumes
- Create a Team Name – T-Shirts
- How are you today?
- Two Truths and a Lie
- Fun Videos

Step 1



Step 2

Step 3



Step 4

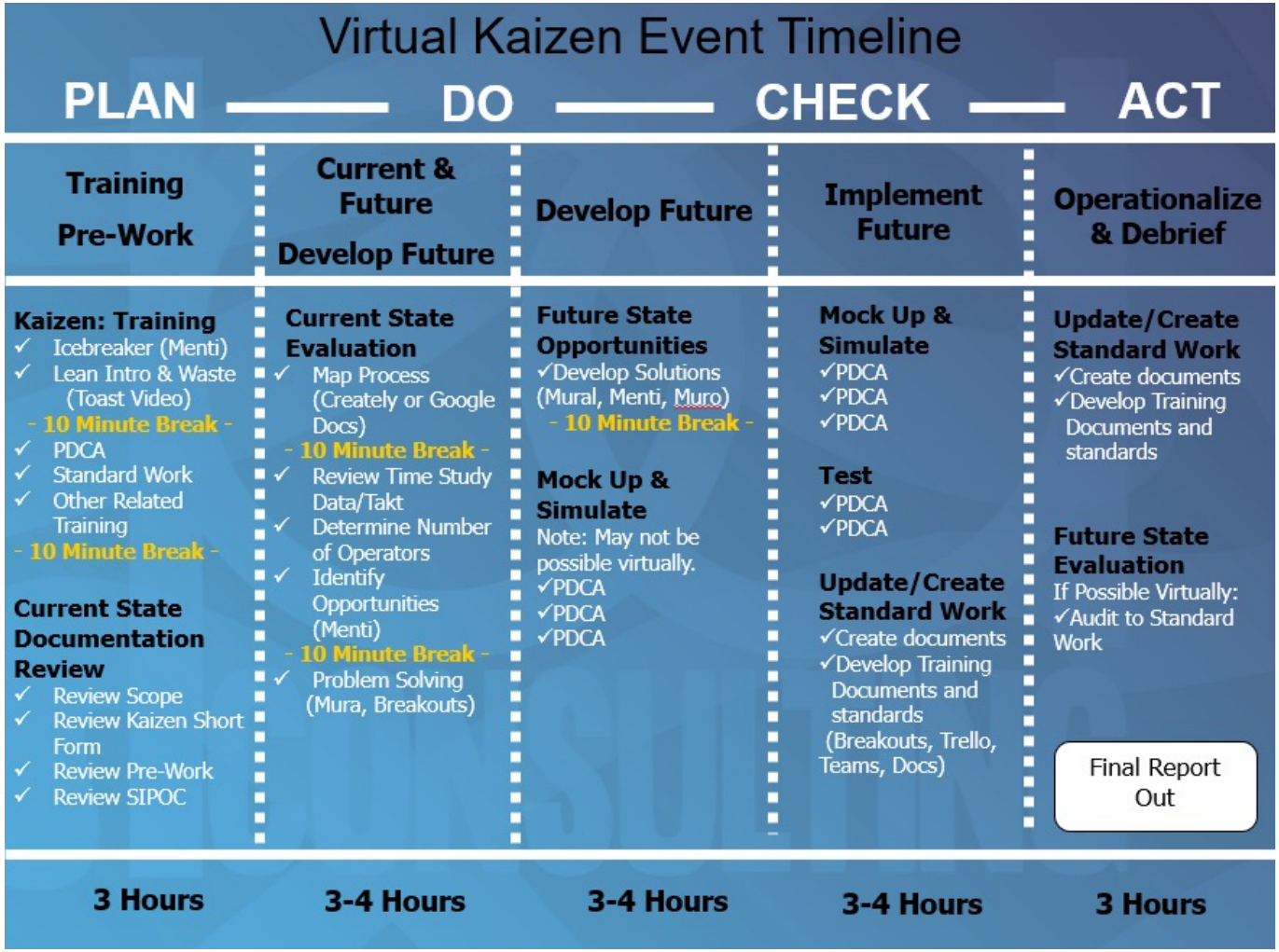
Dream Vacation Spot

Where do You Live?

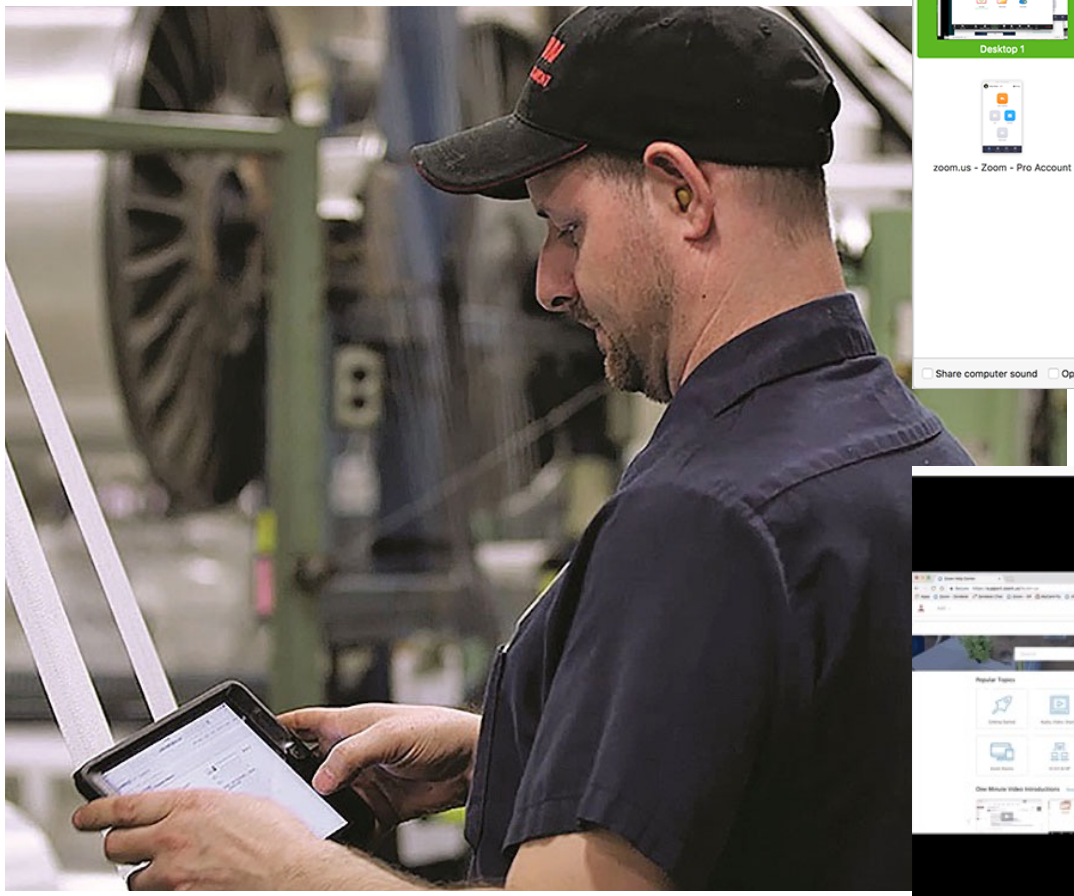
DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

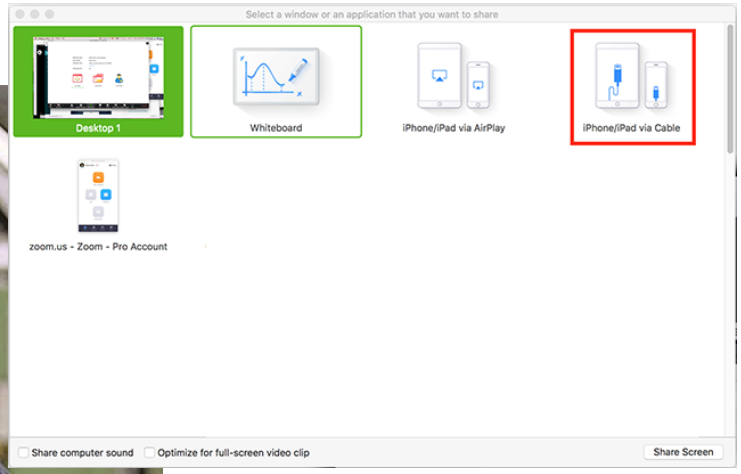
LEAN SOLUTIONS

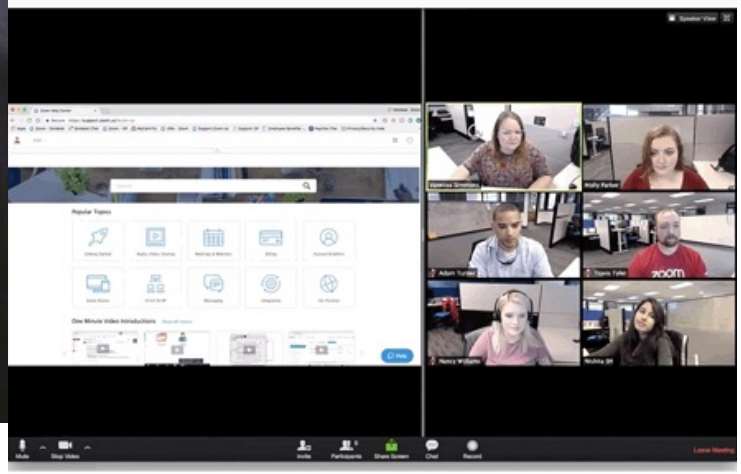
Virtual Kaizen Event Timeline



GEMBA



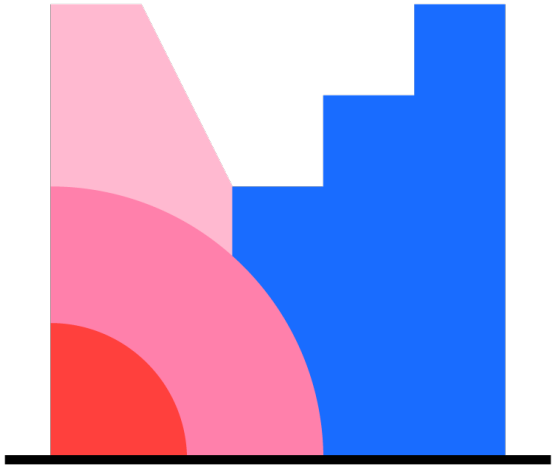




DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

LEAN SOLUTIONS

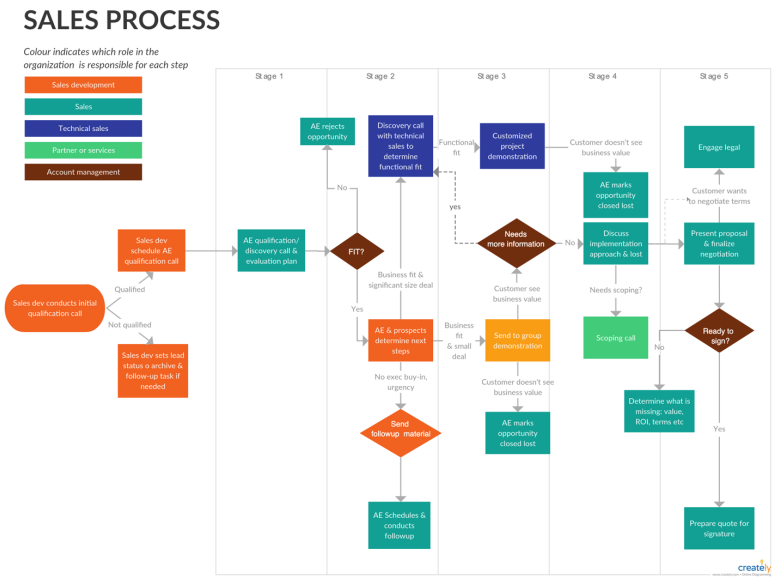
Google Docs

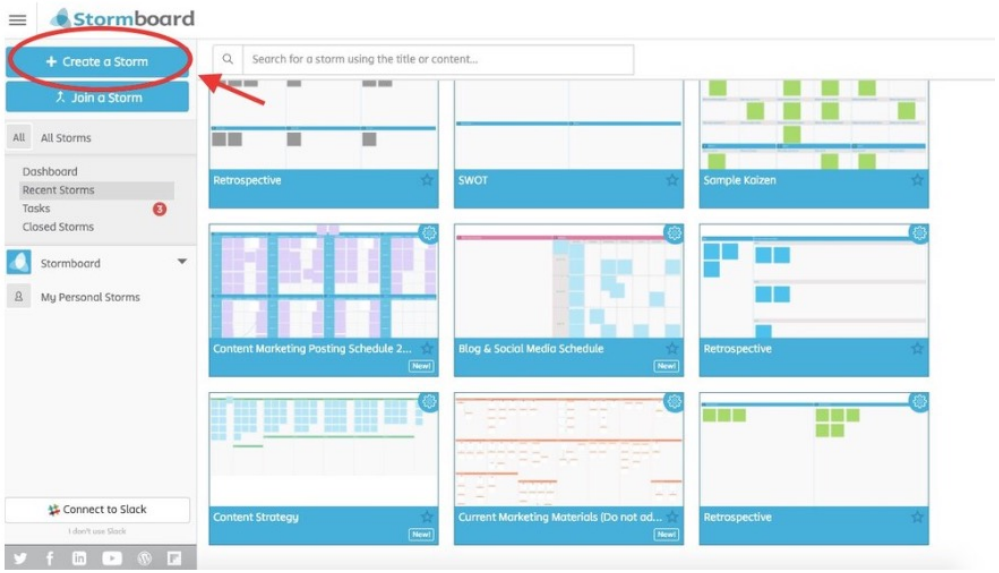


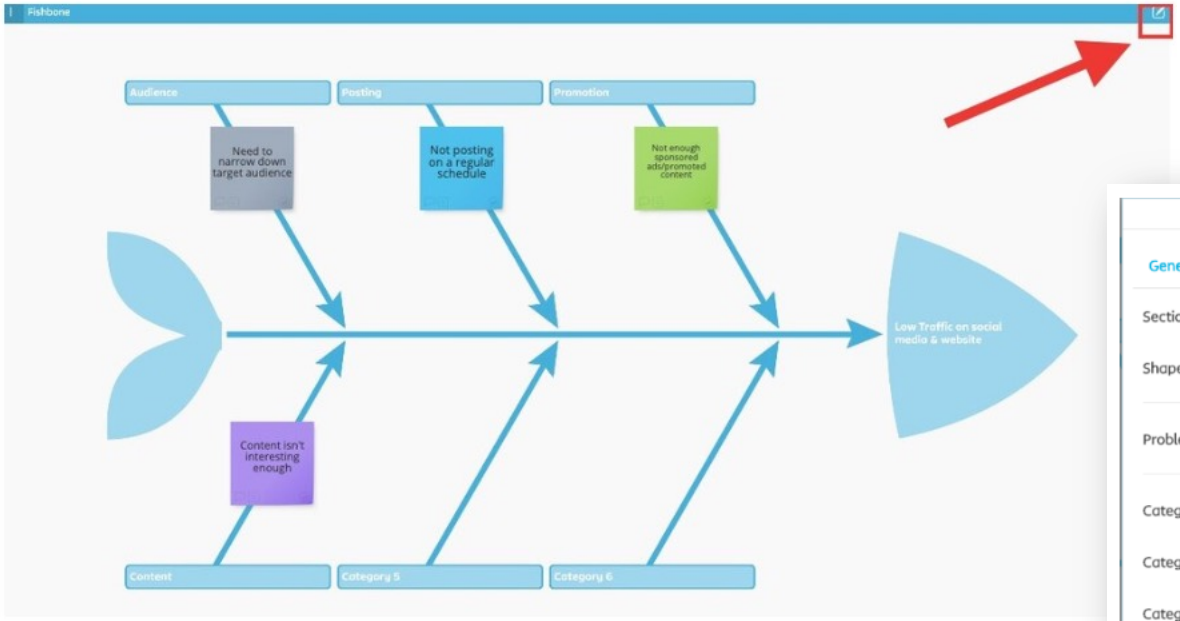
Mentimeter

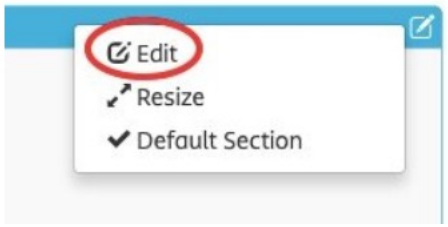
miro

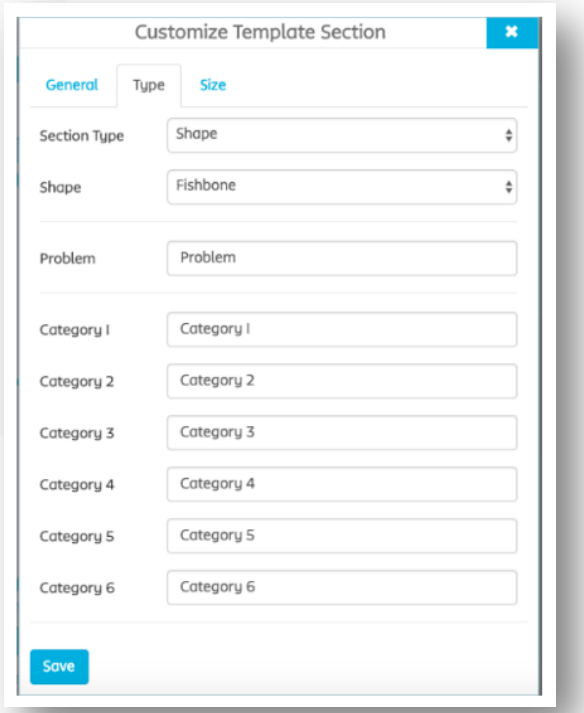
SALES PROCESS






Fishbone
Audience
Posting
Promotion
Need to narrow down target audience
Not posting on a regular schedule
Not enough sponsored ads/promoted content
Low Traffic on social media & website
Content isn't interesting enough
Content
Category 5
Category 6


Edit
Resize
Default Section


Customize Template Section
General
Type
Size
Section Type
Shape
Shape
Fishbone
Problem
Problem
Category I
Category I
Category 2
Category 2
Category 3
Category 3
Category 4
Category 4
Category 5
Category 5
Category 6
Category 6
Save

Affinity: Electronic Sticky Notes

Step 1: Collected Ideas Using Electronic Sticky Notes

Step 2: Used Affinity to Organize

Multi Voting: Using Chat and Emoji Icons

Step 3: Enter sticky notes from Affinity exercise into Chat function (MS Teams). Created Voting Rules. Silently voted using emojis located in chat function.

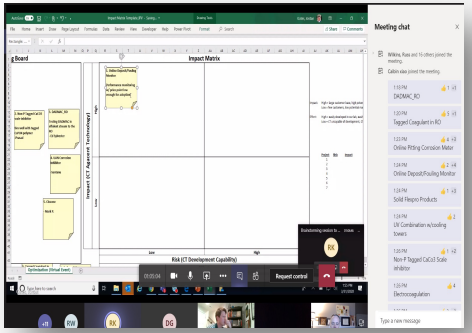
Voting Rules:

- Wait until all notes from Affinity have been typed into chat before voting.
- Only 4 Votes per person (Heart = All 4 Votes, Thumbs up = 3 Votes, etc.)
- Honor Syster

Impact Matrix: In Excel Format with Sticky Notes

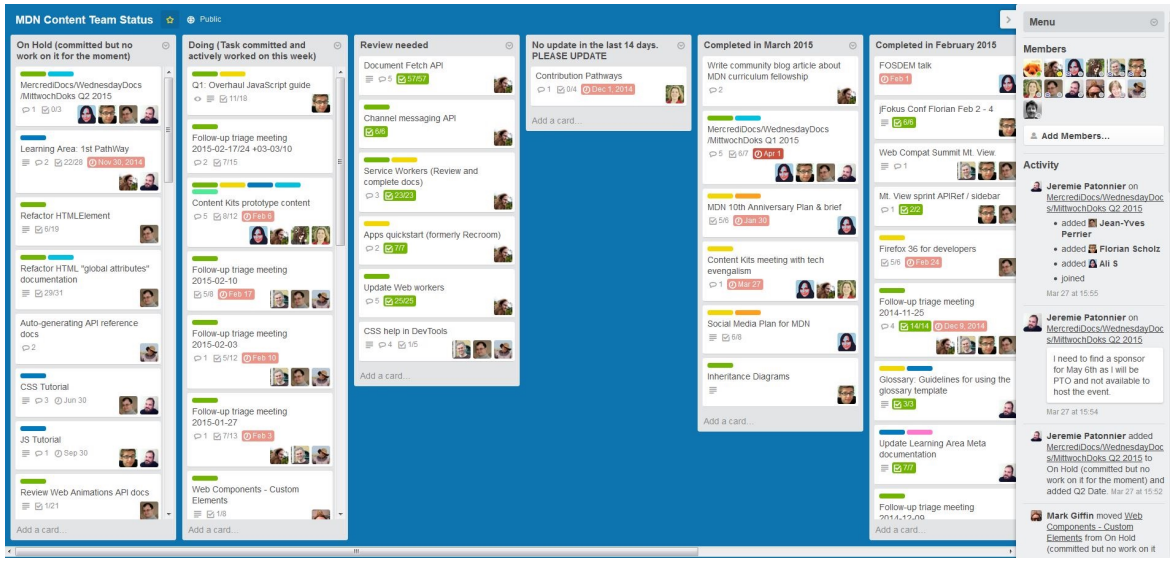
Step 4: Tallied up cotes in excel and selected top 15.

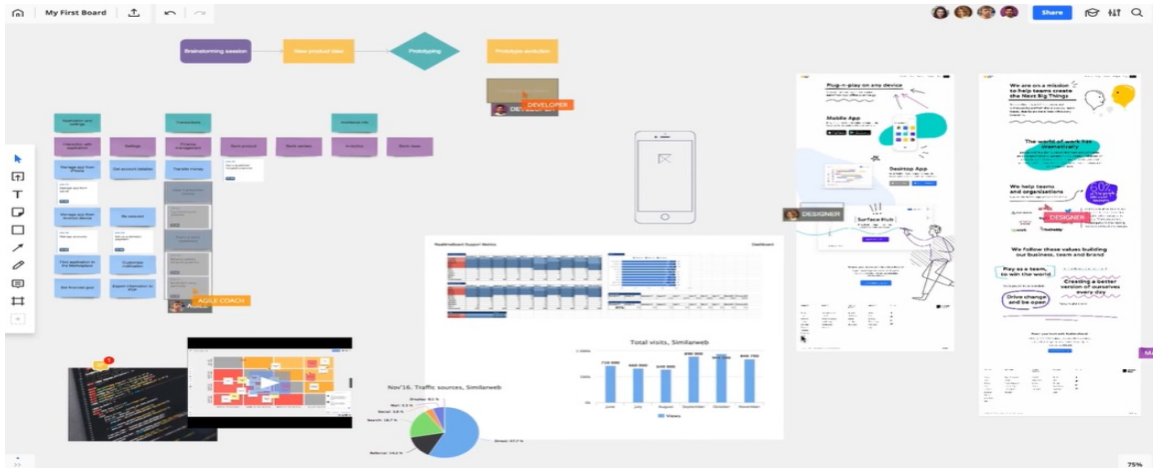
Step 5: Use Impact / Effort Matrix to funnel down best ideas to move forward with.

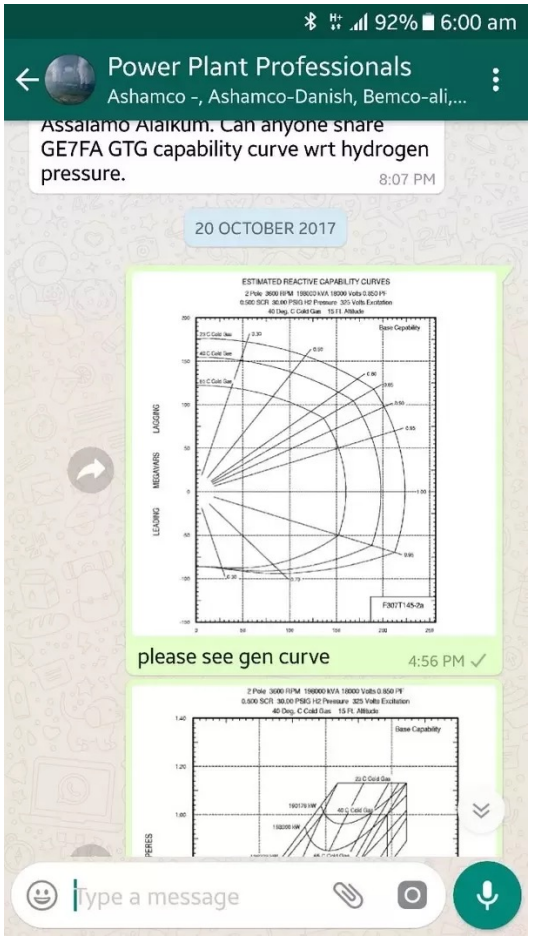


Virtual Kaizen Coach
2.08K subscribers

Chad Burroughs | MBA |CLSSBB
Virtual Kaizen Coach







DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

LEAN SOLUTIONS

METHODS USED

TO MEASURE THE OUTCOME

- Be Consistent, Don't Fall Back To The Old Ways
- Be Visible
- Measure Team Satisfaction
- Follow Up With Team Concerns

MONITOR, MEASURE & CONTROL

- Remember that just because you have executed your plan does not mean that the problem is solved.
- You must verify your results and continually or periodically monitor results.
- If performance deteriorates, you must repeat the process.

Quality Tools

- Graphs
- Histograms
- Control Charts

METHODS USED

TO SUSTAIN THE GAINS

- Auditing The New Standard
- Add Monitoring To Your Leader Standard Work
- Visual Management Controls
- Schedule Next Kaizen Event

QUIZ 4:

1. How do you calculate Takt Time?
    - **Effective working time per time period / Customer demand per time period**

2. What is the difference between special cause and common cause variation?
    - **Common cause is expected while Special cause is unexpected.**

3. What is the goal of the measurement phase?
    - **Evaluate the "As-Is" capability of the process**

LEAN SOLUTIONS

HOMEWORK REVIEW

(Open Computers and Log into your Portal)

LEAN SOLUTIONS

END OF DAY 2

LEAN SOLUTIONS