

MOONSHINE war



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Our Team

- Tom Kato – Senior Lean Practitioner BPSS
- Bart Taylor – Senior Lean Practitioner BPSS
- Ryan Madden – Senior Lean Practitioner
- Jovanka Fournarakis – Senior Lean Practitioner
- Tommy Huynh – Moonshine Leader

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What Is Moonshine?

An activity that allows us to take the innovative ideas of team members to develop valuable solutions to problems by creatively adapting materials that are already on hand. It also allows us to use mock-ups and simulation to prove or disprove the ideas.

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What is the Moonshine War?

A cross-functional team challenge to make breakthrough improvements using the 3P (Production Preparation Process) Lean tools and moonshine techniques

A minimum of 2 projects with 3 teams assigned to each

Teams are provided:

- 3P and moonshine coach
- Training
- Additional resources
- 6+ days to develop proposed solution to a real-life production problem

Teams demonstrate solutions at the live report-out event – end of the week

Teams are evaluated by peers and a judging panel of leaders and subject matter experts

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How Did We Get Here?

Annually, challenging problems are submitted to the Moonshine War Team for entry into the Moonshine War Challenge

Cross-functional team members, of diverse backgrounds, are identified

Similar, in concept, to the TV Show Junkyard Wars, teams are not notified of the project until the day of the event

Once the projects are revealed and the training has taken place, teams spend time familiarizing themselves with the process/product by talking with SMEs, spending time on the shop floor (Gemba) and understanding the requirements

Teams have a week to produce innovative solutions using the 3P tool. They work out of Moonshine Shops, to “simulate & try-storm” solutions while receiving daily lean coaching from experts

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The WHY

Resolve real manufacturing/engineering problems in various production environments; while, focusing on Safety, Quality, Flow and the Elimination of Waste

Create a fun competitive forum of problem resolution that fosters learning, innovation, teaming and empowers creativity

Fosters employee learning and development, motivation, engagement and rapid idea validation

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What is 3P and How Does it Work?

Production Preparation
Process (3P)

How Does 3P Work?



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What is 3P and How Does it Work?

Production Preparation
Process (3P)

How Does 3P Work?

3P is a tool used to design new products or processes. It is also used to radically redesign existing processes, tools, and equipment. The goal is to guarantee first-pass quality while reducing cost, lead-time, and Work in Process.



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What is 3P and How Does it Work?

Production Preparation
Process (3P)

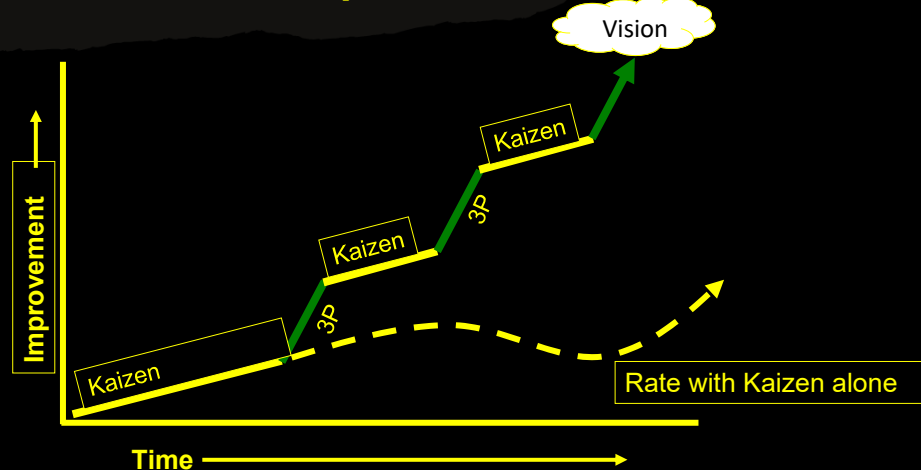
How Does 3P Work?

3P works by focusing on the product or service first, and then designing processes around each transformational step of the product as it moves through the work sequence.



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What do I get? Faster, More Comprehensive rate of improvement



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3P Results

Right-sized processes

Right-sized systems

Right-sized equipment



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3P Results

Transactions are clearly
linked with clearly defined
inputs, outputs, and
handoffs



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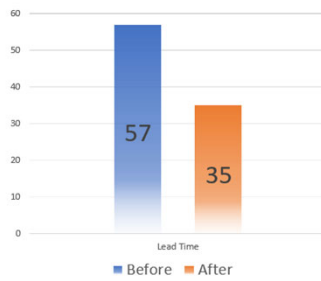


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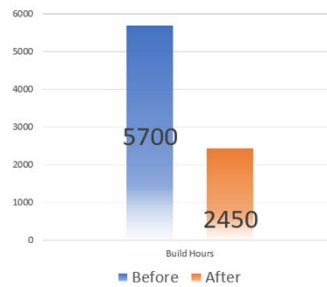
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3P Results

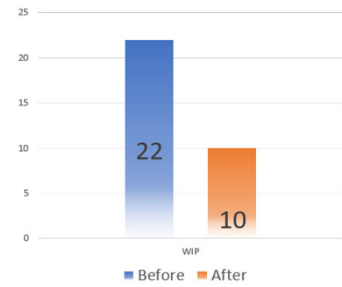
LEAD TIME



BUILD HOURS



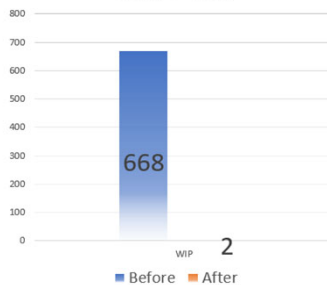
WIP



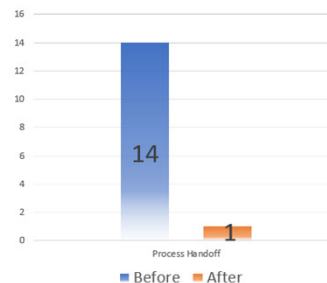
15

3P Results

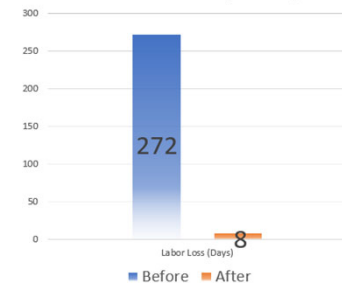
UNITS WIP



PROCESS HANDOFF



LABOR LOSS (DAYS)



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3P Results

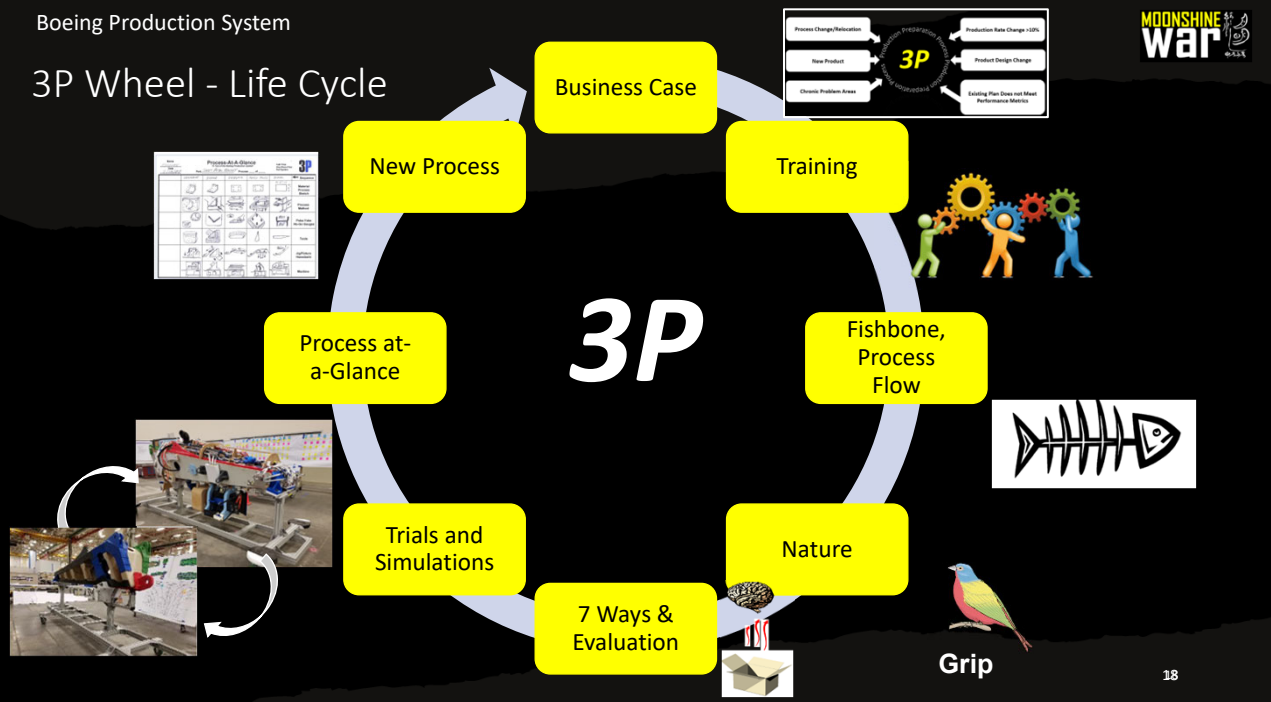
Products or services
FLOW through their
processes

Processes have minimal
waste



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3P Wheel - Life Cycle



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When to use 3P



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Teaming and Training

People selection is crucial!

Identify a group of people to work together on the project.

Look for those who want to make fundamental improvements through hands-on involvement.

Open minds and fresh ideas are just as important as experience.



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Teaming and Training

Create a basic understanding – level set

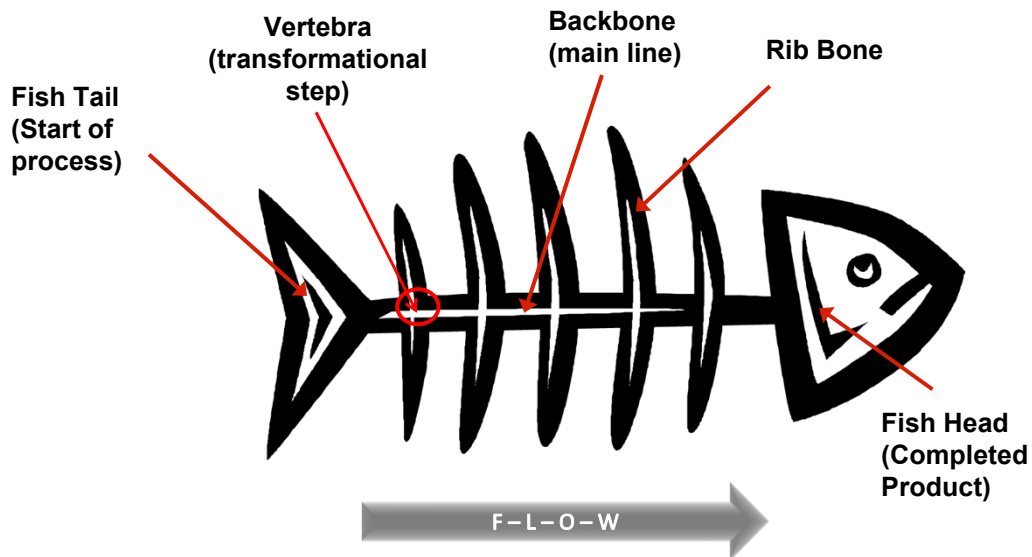
Train the team in the basic tools and concepts of Production Preparation Process.

The “Why” is often more important than the what and how.




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Fishbone Diagram: When You Seek To Understand



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Define the Function

(e.g. hold, bind, tether)


Use keywords to better define Function

(e.g. grip, cling, wrap, adhere, tie)


Sketch examples of keywords in Nature, examine what is happening




Grip



Adhere



Wrap



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7 Ways

Think of 7 different methods of transforming the part, product, process or service.

Be creative...use examples from nature to develop innovative designs.

Return to your 10-year-old mindset and use this style of thinking to generate useful ideas.

THINK OUTSIDE



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Get Engaged! 7 Ways Exercise

*Everyone has sketching
amnesty!*



Situation

Balloon slipped away from child and got stuck at the top of a tree

Instructions – Part 1

With post-its provided, each of you are to individually come up with as many ideas as possible in 5 min – Climbing the tree is not an option!

YOU NEED TO SKETCH THEM! – NO WORDS

One idea per post-it

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Get Engaged! 7 Ways Exercise

5 min are up! Select one team member to introduce his/her ideas

Post each individual idea on the paper (left to right) and place a post it with a title above it

After each individual idea has been described, ask if other team members have something similar; they may place their post it underneath the existing one

Once the team member has introduced all his/her ideas, ask the team if there are other ideas

Continue in the same manner as above

INSTRUCTIONS – PART 2



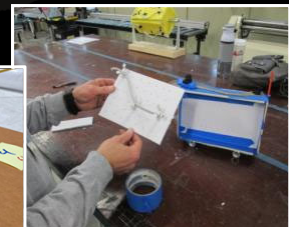
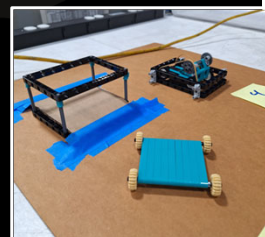
Small Scale Mock-Ups

The goal behind the small-scale mock-up:
Level setting everybody of the concept/idea

Getting everyone on the same page of how the concept would work

Small scale simulation as close to how the product or process would function

Testing the functionality on a small scale before spending time on creating a full-scale model



Evaluation

Evaluation Criteria	1	2	3	4	5	6	7
1. Ability to Start Task Time	3	4	3	3	2	3	3
2. Choose One Piece Flow	4	4	4	4	2	2	4
3. Choose a Pull System - Minimum WIP	3	4	3	3	3	3	3
4. Min. Operator Investment / Worker-Per Operator, Time & Loading	3	3	3	3	3	3	3
5. Plan-Do-Check-Act (PDCA) Process	3	2	2	2	2	2	2
6. Quality Improvement System - On-the-Grounding Check Process	3	4	3	3	3	3	3
7. Process Capable of Quality Products, Minimal Defects	4	3	4	4	4	2	4
8. Minimal Capital Required	3	3	3	3	3	3	3
9. Proper Check, Check, Stop/Correction - Minimize Check Interruption	3	3	3	3	2	2	3
10. Low Changeover/Setup Time	3	3	3	3	3	3	3
11. Low Level of Programmed Issues (Automation, Flex, Safety, etc)	3	4	3	3	3	3	3
12. Clean Technology in Working	4	3	3	3	4	4	4
13. Low Level of Tool Maintenance	4	3	3	3	3	3	3
14. Minimal Development Time is Required	3	3	3	3	3	3	3
15. Maintenance Free Equipment or Easy First Aid Maintenance	4	4	4	4	4	4	4
16. Low Level of Equipment Need to Obtain Running Materials	3	3	3	3	3	3	3
17. Minimize High-Level Process Capable Equipment	4	4	4	4	4	4	4
18. High Level of Value-Adding Operations - MCA/MSA Process	3	3	3	3	3	3	3
19. Equipment Safety Issues Addressed - Safety Guarded, Good Problem	3	3	3	3	3	3	3
20. Level of Risk Addressed (Automatically - Limit 7.5 & 10)	3	3	3	3	3	3	3
21. Minimize CHANGING concept	3	3	3	3	3	3	3
22. Choose a Competitor in Technological Advantage	3	4	3	3	3	3	3
23. Spare Solution - Innovative design	3	3	3	3	3	3	3
24. Quality - On-the-Grounding Check Process	3	3	3	3	3	3	3
25. Structural Steps as Possible	3	4	3	3	3	3	3
Total	84	74	84	74	73	74	84

Judge all proposals against the selected evaluation criteria.

Down-select to top 2 or 3 ideas to be simulated.



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Trials and Simulations

Mock-up and simulate is the best way to test new ideas

Removes assumptions from 2D media

Improves creativity and teaming

Fast and inexpensive

Try-Storming vs Brainstorming



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Process-At-A-Glance

Understanding each transformational step in its entirety

A communication and comparison tool

Visually show gaps

Template for creating Standard Operations

Name: KOSMEN Date: 8/08/08

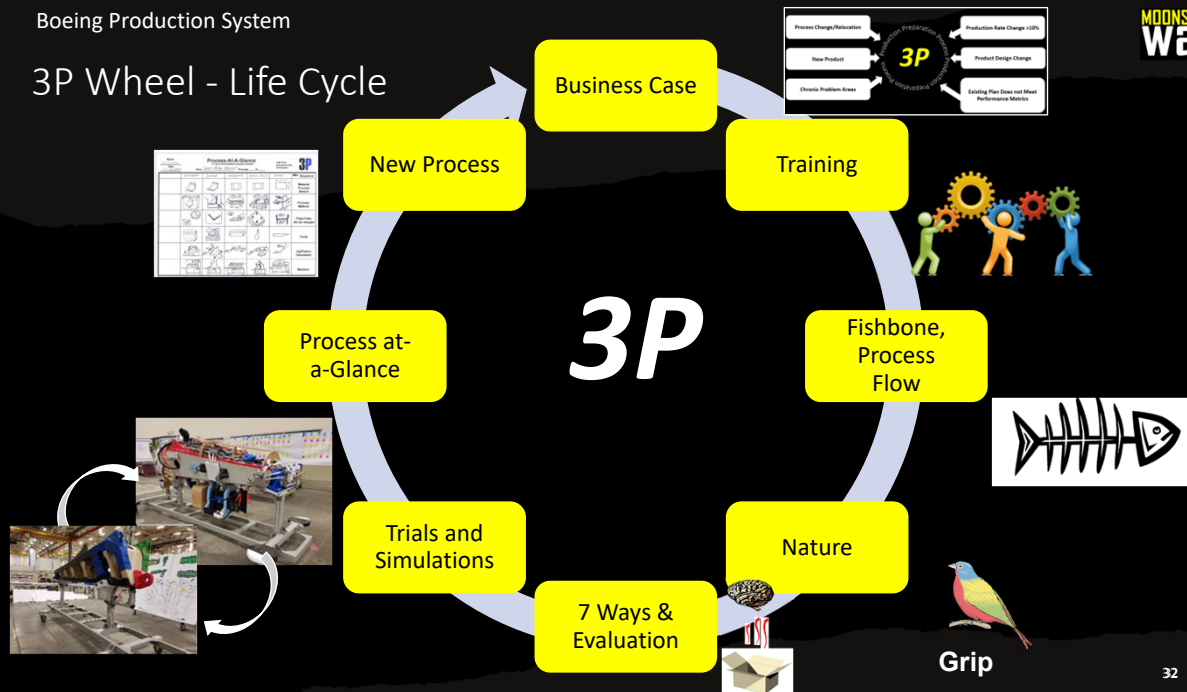
Part: SHEET METAL BRACKET Process: of

Yakt Time One-Piece-Flow Pull System **3P**

	DEGREASE	BRAKE	DEBURR	PUNCH HOLES	BLANK	← Sequence
						Material Process Sketch
						Process Method
						Poka-Yoke No-Go Gauges
						Tools
						Jig/Fixture Hanedashi
						Machine

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3P Wheel - Life Cycle



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Quality TEAMWORK
Learning
IDEAS Engagement Development
INNOVATION
FUN SAFETY
EMPOWER
PROTOTYPE
Problem Solving
Creative IMPROVEMENT
COMPETITION Simulation

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Shaping Tomorrow - Developing People

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