



Manufacturers Alliance Seminar **Lean for Custom Manufacturers**

Practical experiences from practitioners on how custom and
job shop manufacturer can benefit from Lean

Lean for Custom Manufacturers

Kara McPipe, Director of Operations



ARTISTICFINISHES.COM

Who is Artistic Finishes, Inc.?

- We finish hardwood moldings, vents, treads, and accessories that complement over 18,000 manufacturer's hardwood, laminate, LVT/LVP and engineered floors.
- Average \$16 million in sales annually
- Employ 110 skilled team members
- Operations run from 6 am – 8 pm daily



ARTISTICFINISHES.COM

My History

- Kaizen Facilitator at Japs-Olson of over 20+ 3 – 5 day Kaizen events a year for 6 years
- Department Manager for 2 years
- Continuous Improvement Manager at Artistic Finishes for 2 years
- Director of Operations for 2 years

My experiences come from two very different types of manufacturers but both have taught me very similar lessons...



ARTISTICFINISHES.COM

The Dramatic Shift

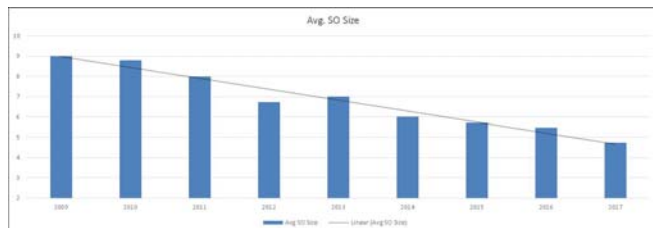
- From 1995 – 2008 – Primarily focused on Distribution and building stocking orders for our customer to hold in their warehouse.
- Average line item size was well over 50 pieces.
- We built finished goods to be able to pick and pull off our shelves.



ARTISTICFINISHES.COM

The Dramatic Shift

- In 2008, we felt our niche in the industry changing. We knew that we needed to move to building exactly what the customer needed when they needed it. No more building for finished goods, but instead building to order 100s of small jobs every day.
- In 2018, over 70% of our customers are on our Direct Ship program – 5 day lead time, no minimums.
- 58% of our orders are 1 – 5 pieces total, which accounts for 13% of our volume = lots of cost for little revenue and very tight margins.

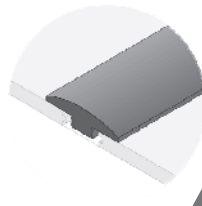
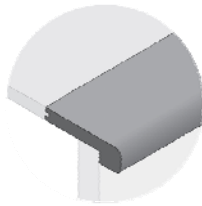


ARTISTICFINISHES.COM

The SKUs are Endless...

- 18,000 + different floors that we blend to
- 100 + profiles (stairnose, t-molding, tread, vent, etc.)
- 50 + wood species (white oak, maple, bamboo, etc.)

Our SKU possibilities are over 1 million!



**A ARTISTIC
FINISHES**

ARTISTICFINISHES.COM

Diving Deeper into the Day to Day

- 263,222 sticks shipped YTD
(2,000 per day)
- 23,176 unique SKUs
- 6,365 unique stain colors
(250 unique stain colors per day)
- 115 unique routes (Stain Topcoat,
Wirebrush Stain Topcoat,
Scrape Stain Topcoat)



**A ARTISTIC
FINISHES**

ARTISTICFINISHES.COM

Lean in this Environment?

- How do we use Lean tools with this much variability per job?

Every job is different, but the processes to get the job done are still the same!

- We must adapt Lean tools to fit the needs of how we work on jobs throughout the company!
- We must break the job down to the lowest COMMON denominator.

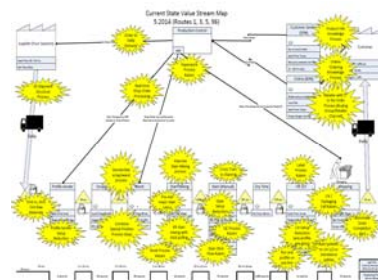


ARTISTICFINISHES.COM

One Size Doesn't Fit All – Value Stream Map

- The Lie: 115 unique routes – there are way too many Value Streams... I can't possibly use Value Stream Mapping!
- The Truth: Find the similarities in the data.

41.8% - 4 nearly identical routes
87% - Jobs use these same steps



Use the tool to determine your capacity constraints, bottlenecks and material flow!

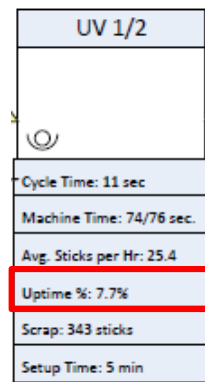


ARTISTICFINISHES.COM

One Size Doesn't Fit All – Value Stream Map

- Create a Value Stream Map to show the big rocks (opportunities).

- Capacity constraints (or lack there of)



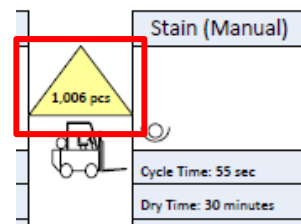
ARTISTICFINISHES.COM

One Size Doesn't Fit All – Value Stream Map

- Create a Value Stream Map to show the big rocks (the opportunities).

- Capacity constraints (or lack there of)

- Bottlenecks



ARTISTICFINISHES.COM

One Size Doesn't Fit All – Value Stream Map

- Create a Value Stream Map to show the big rocks (the opportunities).
 - Capacity constraints (or lack there of)
 - Bottlenecks
 - Material flow

Value Stream Mapping isn't just for building a physical value stream in your plant.



ARTISTIC
FINISHES

ARTISTICFINISHES.COM

One Size Doesn't Fit All – Kaizen Activities

- The Lie: We have way too much work and too few people, we can't possibly do Kaizen activities.
- The Truth: Break down a Kaizen event into smaller more manageable chunks in terms of scope, time and number of people.
 - Create the scope with a very defined start and stop point.
 - Make it narrow and deep so that it is manageable to tackle in the given time frame.

Scope:

The scope of this event will be from running the Purchasing Regen MRP report through the order being placed to Four Seasons. We will use swim lane mapping to identify opportunities to improve this process and minimize manual steps.

ARTISTICFINISHES.COM

One Size Doesn't Fit All – Kaizen Activities

- Schedule time needed based on size of scope and resources needed.
 - Larger Companies: 3 – 5 day events
 - Smaller Companies: 6 – 8 hour events

Wednesday, July 9th 10:00 a.m. – 12:00 p.m.	<ul style="list-style-type: none">• Swim Lane Mapping Training• Walk the process to observe and identify current state• Map Current State Swim Lane Map
Friday, July 11th 10:00 a.m. – 12:00 p.m.	<ul style="list-style-type: none">• Brainstorm future state ideas• Map Future State Swim Lane Map• Create an Implementation Plan



ARTISTICFINISHES.COM

One Size Doesn't Fit All – Kaizen Activities

- Determine the number of resources available given the size of the company and to meet the needs of the Kaizen scope.
 - Larger Companies: 6 – 8 people
 - Smaller Companies: 4 – 5 people
- The make-up of the team should still include:
 - Subject Matter Experts (SMEs)
 - Fresh Eyes
 - Upstream / Downstream Functions



Kaizen activities are an effective approach to improvement no matter the size of the scope, schedule, or team.



ARTISTICFINISHES.COM

One Size Doesn't Fit All – Standard Work

- The Lie: We needed to write Standard Work for every possible scenario of job that could come to the work center – the possibilities were endless!
- We had printing presses the size of football fields!



ARTISTIC FINISHES

ARTISTICFINISHES.COM

One Size Doesn't Fit All – Standard Work

- The Truth: We knew what pieces of equipment were needed for each job.
 - Create Standard Work for each of the pieces of equipment.
 - Establish a setup time based on the “per” machine / part / adjustment time.

2. Wash-up

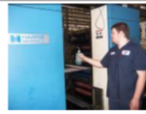
15:00 per unit



A) Save job information in colorquick & GML.



B) If routing to the Warehouse, place final load ticket/job jacket in staging box. Any other routing, place final load ticket/job jacket with last pallet.



C) Wash up press. Full web – use press. Narrow web – use wash-up trays. Clean slip rollers.



E) Scoop out ink & clean ink fountains.

3. Makeready 1

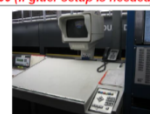
45:00 + 2:00 per fountain + 1:30 per plate + 15:00 (if gluer setup is needed)



A) Punch into job.



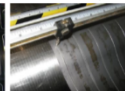
B) Set up GML. C) Set up Colorquick. D) Assign units and inkers.



E) Set up CCR.



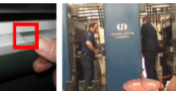
F) Adjust web guides, oven & water. G) Setup additional fountains if applicable.



H) Set perfs and dies if applicable according to Mag Die Standard Work.



I) Help hang plates with 2nd man. Line up to center mark. J) Ink up press. K) Setup gluer and prep plate if applicable.

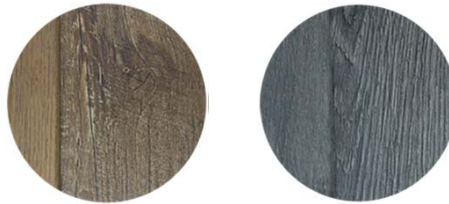


L) Web the press.

ARTISTICFINISHES.COM

One Size Doesn't Fit All – Standard Work

- The Lie: Every floor is different with a different color and different steps that need to be performed. You always have to tweak and adjust your stain because the raw substrate color can vary between sticks.



ARTISTICFINISHES.COM

One Size Doesn't Fit All – Standard Work

- The Truth: Even in a small shop with lots of manual work, you can still use the same “per” idea to establish major steps and expected time.



1. Test the Back of the Stick	1:30 + 2:00 per adjustment (if needed)
-------------------------------	--

2. Stain the Front of the Stick	0:50
---------------------------------	------

3. Apply UV Coating Test on Stained Stick	0:30 per test
---	---------------

4. Check that the Tested Stick Blends to the Sample Book	0:30
--	------



ARTISTICFINISHES.COM

The Benefits of Lean in a Job Shop

- Adapting the tools of Lean has given us the ability to create metrics in an area that has been viewed as an "Art."
- We have set expectations at an individual level and can hold the employee accountable to those expectations.

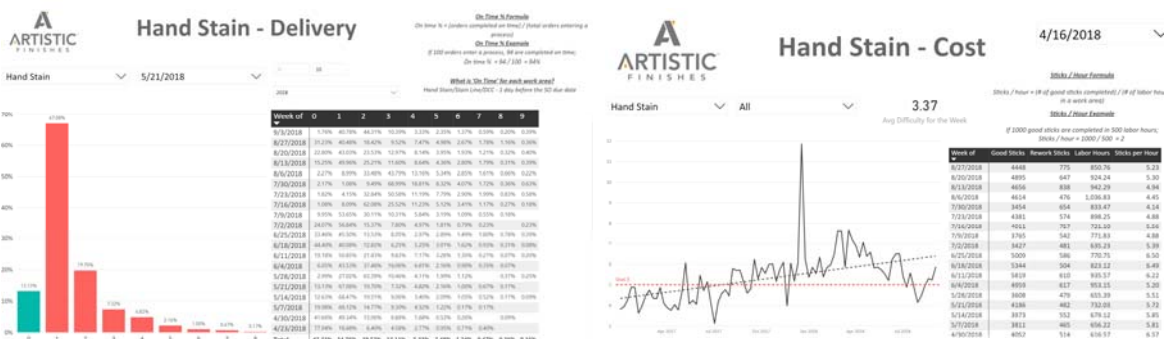


ARTISTIC FINISHES

ARTISTICFINISHES.COM

The Benefits of Lean in a Job Shop

We can now more accurately determine what our output and delivery out of the area should be each day.



ARTISTIC FINISHES

ARTISTICFINISHES.COM

Lessons Learned

- There are great resources that can help you to learn the tools.
 - Manufacturers Alliance
 - Creating a Lean Culture by David Mann
 - Learning to See by Mike Rother & John Shook
 - Ideas are Free by Alan Robinson
- However the Lean tools are NOT a One Size Fits All! You have to learn to adapt the tools to what works in your environment.
- **Every job might be different, but the processes to get the job done are still the same!**



ARTISTICFINISHES.COM



Manufacturers Alliance
Thank you for joining us!

Visit: www.mfrall.com

Call: 763-533-8239

Email: ma@mfrall.com