

Value Stream Mapping - Start to Finish

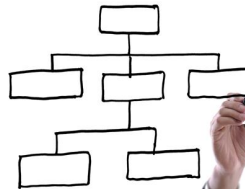


MANUFACTURING
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1

Course Agenda



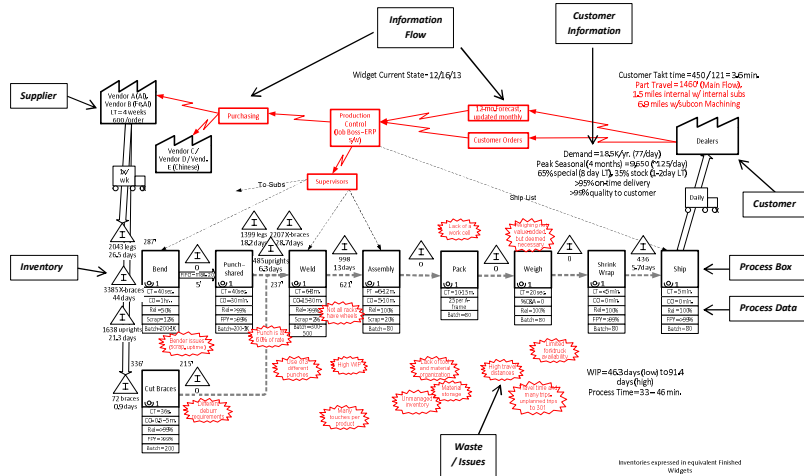
1. Brief VSM Overview
2. Purpose of VSM
3. VSM vs. Process Mapping
4. Manufacturing vs. Transactional VSM
5. Determining level of mapping detail
6. VSM Team Members
7. Creating the Maps
8. Future State Planning

2

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2

Manufacturing Value Stream Map

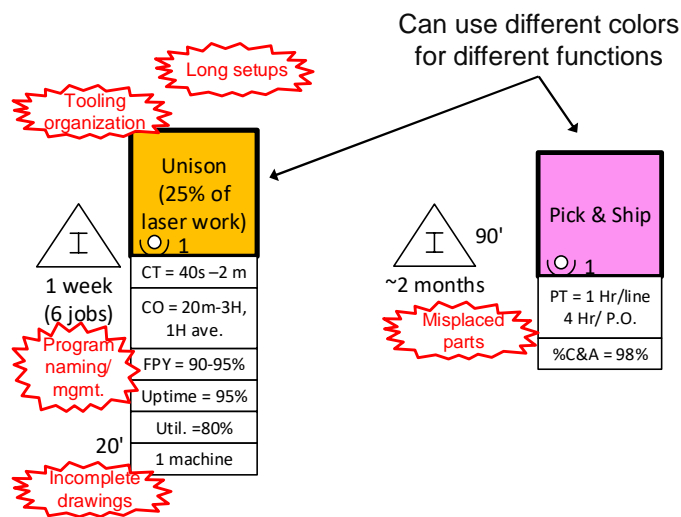


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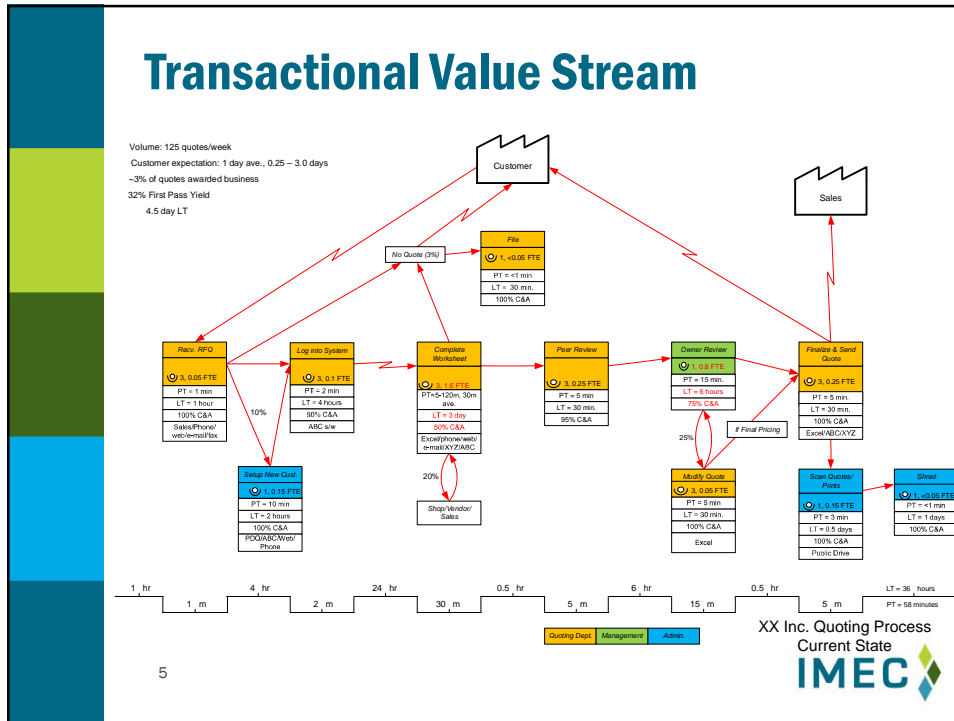
Value Stream Map



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5


Value Streams

“Whenever there is a product or service for a customer, there is a value stream. ..The challenge lies in seeing it.”

- ✓ Raw Materials to Customer - Manufacturing
- ✓ Order to Cash – Support Processes
 - Quoting
 - Hiring
 - Engineering Design
 - Engineering Change Order
 - New Product Launch
 - Service & Warranty Support
 - Service Industries
 - Others?

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6



VSM Is...

- Team activity
- Visual representation of material and information flows
 - *Helps team understand the process*
 - *Concise, with relevant data/information*
 - *Creates a focused, facilitated conversation*
- Typically completed in 1 – 3 days
- Uses data/observation when possible, not standards and router info.
- Imperfect data is fine (as long as it's close)
- Not a witch hunt...comfort sharing issues

7



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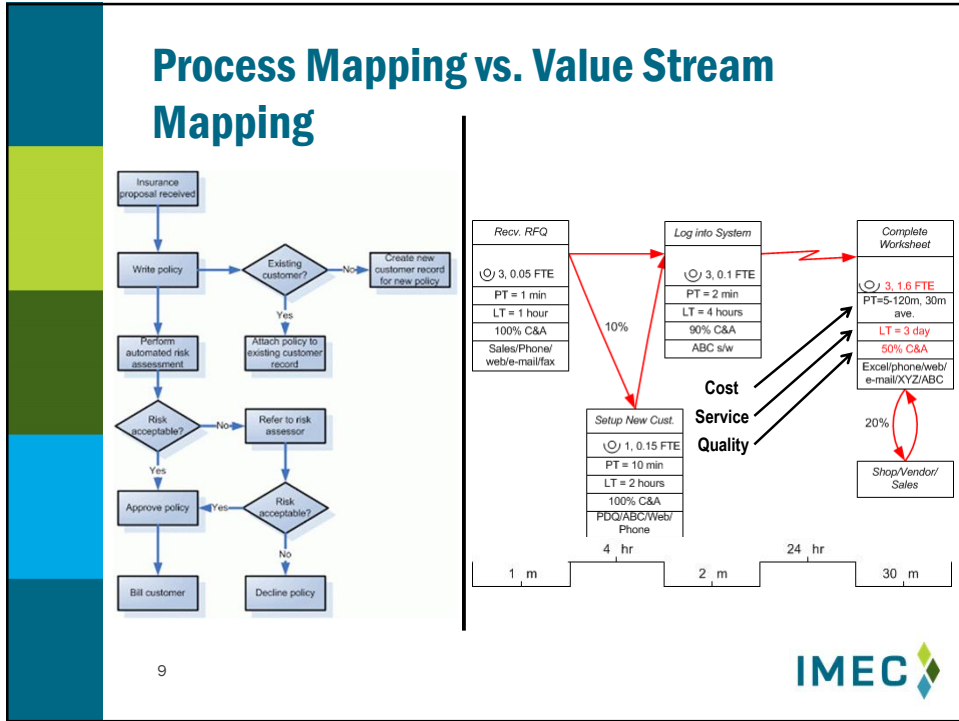
Why Do Organizations VSM?

- Critical business issue or opportunity **Great!**
 - *Devoted resources*
 - *Great engagement*
- See what sticks **Good!**
 - *Don't know what you'll find*
 - *Intention of improvement*
- "Corporate/boss told me to do it" **Why?**

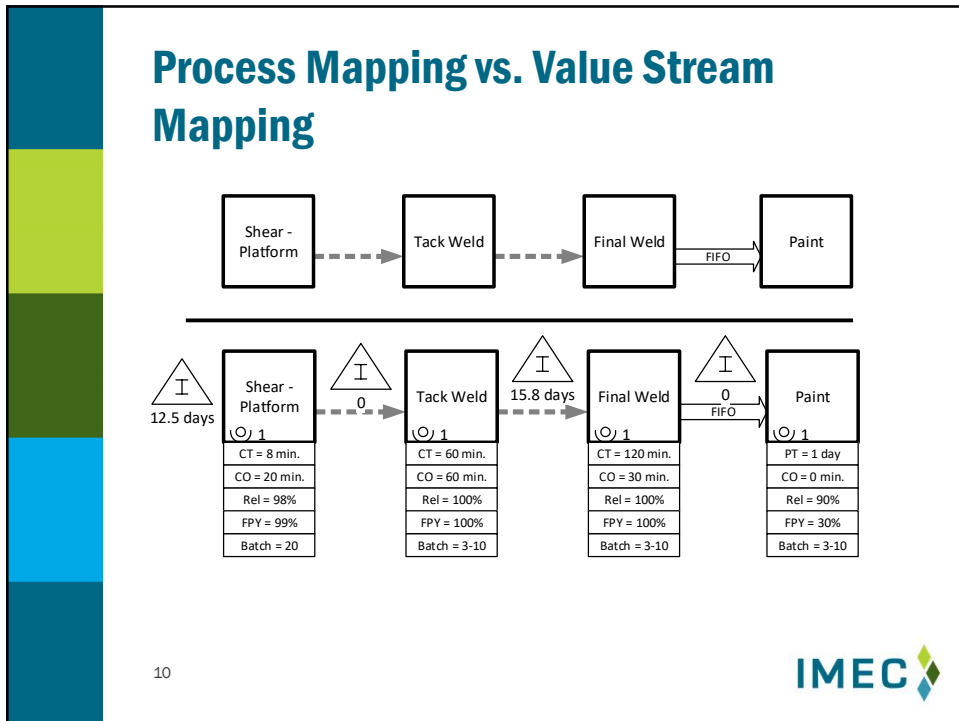
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Challenges with Transactional Processes

- We don't measure the process
 - ✓ *Lead time may be significant relative to total lead time*
 - ✓ *Quality is often not measured (rework is institutionalized)*
- Crossovers between functional areas
- Hard to identify customer value (there is a customer...often internal)
- Waste is hidden - we don't "engineer" our transactional processes. Formal process may not exist.
 - *Manufacturing processes are costed/monitored*
 - *Transactional generally aren't costed/monitored*

11




11



Transactional Processes

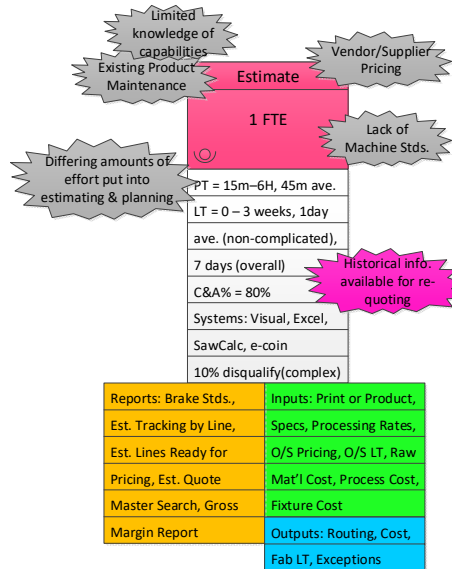
- % Complete and Accurate
 - *How often does an item arrive to an operation being both complete and accurate? No rework, research, or guessing involved.*
 - *If you improve nothing other than this, you'll typically find tremendous impacts!*
- Systems & software used
 - *ERP, Excel, etc.*
- Inputs and Outputs
 - *Data, Reports*

12



12

Transactional Process Box



13



13

VSM Level

- VSM is often initially at a door-to-door level
- However, VSM can span multiple sites or companies
- Or VSM can be very specific (Order Entry process)
- You can vary level to focus on specific issue or dig deeper into a process

14



14

What to Include in a VSM

- 6 – 20 process boxes are generally a good level
 - *Too many boxes are hard to comprehend / digest*
 - *Too few boxes don't surface opportunities*
- Include both Value-Added and Non-Value-Added activities
- Include what you observe when you walk through the process. I often hear “it's not normally like that”.

15



15

What to Include in a VSM

- Include what is meaningful and/or may be helpful in identifying waste and improving
 - *Touch Time*
 - *Lead Time*
 - *Quality*
 - *Issues/Challenges*
 - *Reliability?*
 - *Systems used?*
 - *Inputs/Outputs?*
 - *Reports Used?*
 - *Perhaps many others...*

16



16

Team Make-up

- Typically 6 – 10 employees (core team)
 - *May add other “resources” as needed*
- Cross-functional team
- Customer/supplier of the process (if able)
- Include some employees who know the processes intimately (do the work)
- Consider personalities
 - *Open-minded, creative*
 - *Challenge the status quo*
 - *Invested in the success of the business*
 - *Include an “Advocate”*

17



17

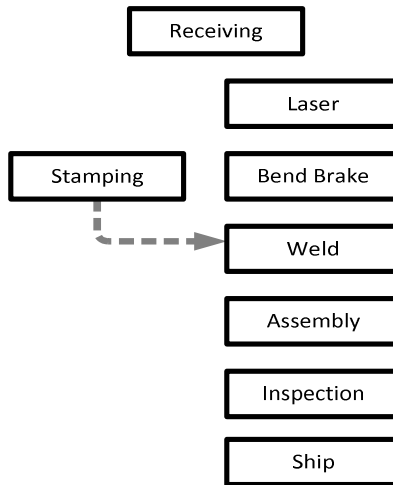
Typical Steps Value Stream Mapping

1. Create charter / define purpose and goals
2. Document customer info. & needs/expectations
3. Identify main processes (in order)
4. Select data attributes (cycle time, etc.)
5. Perform value stream walk through, interview and observe, record data / observations
6. Create value stream map on wall
7. Calculate Value Stream summary measures
8. Identify wastes in the process (throughout)
9. Brainstorm and create future state map
10. Create action items and execute improvements
11. Document maps (throughout) and share

18



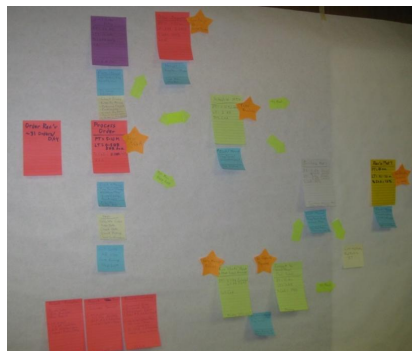
Identifying Main Processes



19


Drawing the Maps

- Get actual data, if possible
- Draw by hand, with pencil or marker and Post-Its
- Be honest about what is really taking place



20

20




Populating Data Attributes: 3 Types of Truths


<u>Subjective</u> – One person’s opinion	GOOD
<u>Normative</u> – Group consensus	BETTER
<u>Objective</u> – Observation and real data	BEST!

- Use data when available, group consensus as an alternative.
- Data accuracy doesn’t have to be perfect...get it directionally correct & close (80%) and keep going.

21




21



Challenge the Current Process

- Ask probing questions
- Challenge the way things are done today
- Don’t be confrontational or criticize...but challenge and encourage ...change is difficult for most people
- “If you’re asking questions that make people uncomfortable, you’re asking the right questions”.

22



22

Future State Map

- Create a vision/roadmap for a 6 – 12 month timeframe (typically)
- Focus on the most impactful wastes/opportunities identified in the current state map
- The future state may be tweaks to a good process...or it may be blowing up the current process and creating a new (better) one
- The future state should be challenging, but not unreasonable

23



23


Develop an Action Plan

Action Items					
Priority Chart					
Easy to Do High Impact 1			Easy to Do Low Impact 2		
Hard to Do High Impact 3			Hard to Do Low Impact 4		
#	Description	Priority	Target Date	Responsible	Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

24




24




Why VSM?

- VSM is a tool
- Analyze and diagnose opportunities
- The focus that VSM brings to a group is the most important benefit

25




25



Questions?

26



26