

Value Stream Mapping Getting Started



Rother, Mike, and John Shook. Learning to See: Value Stream Mapping to Add Value and Eliminate Muda.

The Continuous Improvement Academy[™]



Course Material Source



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What is Value Stream Mapping

- A value stream is **all the actions** (both value added and nonvalue added) currently **required to bring a product** through the main flows essential to every product.
- •Adopting a value stream viewpoint involves focusing on the overall picture rather than isolated processes, and enhancing the entirety instead of merely fine-tuning the individual components.
- An effective starting point for mapping and implementing lean processes is to examine the "door-to-door" production flow within a facility. This includes both the shipment to customers and the delivery of supplied parts and materials.



 At Toyota, the method—called "Value Stream Mapping"—is known as "Material and Information Flow Mapping."





What is the problem with "point improvements"

• **Point improvements**: searching for wastes "muda" and doing projects to eliminate them

Pros

- Quick Wins
- Buy-in
- Learning experience

Cons

- Value flow comes to a stop by inventories and detours ahead of the next downstream step.
- Doesn't guarantee bottom line improvements or customer satisfaction
- Isolated victories over muda, some of them quite dramatic, which fail to improve the whole.

Kaizen efforts, or any lean manufacturing technique, are most effective when applied strategically within the context of building a lean value stream.

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Why Value Stream Mapping is an Essential Tool?

- It helps visualizing the whole flow (Material + Information)
- Aids in recognizing significant wastes and their origins.
- Offers a shared vocabulary for discussing manufacturing workflows.
- Links lean principles and techniques, helping to avoid spontaneous improvements.
- Acts as a basis for creating an implementation plan by guiding the design of the complete door-to-door operational flow.







Material and Information Flows

- Within the production flow, the movement of material through the factory is the flow that usually comes to mind.
- But there is another flow—of information—that tells each process what to make or do next. Material and information flow are two sides of the same coin.
- You must map both of them.



In lean manufacturing the information flow is treated with just as much importance as the material flow.



Getting Started Selecting a Product Family

- A family is a group of products that pass through similar processing steps and over **common equipment** in your downstream processes.
- Write down clearly what your **selected product family** is, how many • different finished part numbers there are in the family, and the demand patterns (when, how much)







Selecting a Product Family

- One point to understand clearly before starting is the need to focus on one product family.
- Unless you have a small, **one-product plant**, drawing all your product flows on one map is too complicated.
- Value stream mapping means walking and drawing the **processing steps** (material and information) for one product family from door to door in your plant.





Getting Started Selecting a Product Family

If your product mix is complicated you can create a matrix with assembly steps and equipment on one axis, and your products on the other axis

Identify your product families from the customer end of the value stream.

		ASSEMBLY STEPS & EQUIPMENT							
		1	2	3	4	5	6	7	8
PRODUCTS	A	X	×	×		X	×		
	B	X	×	×	×	X	×		
	C	X	X	×		X	X	X	
	D		×	X	X			X	X
	E		X	X	X			X	X
	F	0		0		0	0	0	
	G	0		0		0	0	0	



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Using the Mapping Tool – Key Tip

- Value-stream mapping initially follows the steps shown at right.
- A current state without a future state is not much use. The future-state map is most important.
- Arrows indicate:
 - Future state ideas will come up as you are mapping the current state.
 - Likewise, drawing your future state will often point out important current-state information you have overlooked.
- Then, as your future state becomes reality, a new future-state map should be drawn.
- In about two days you should have a future-state map drawn to the point where implementation can begin.
- Don't get hung up trying to make all the details on your future-state map perfectly correct.
- Fine-tune your future-state map as implementation progresses.

Current State Map

Product Family

Future State Map

Implementation

As with any new language, the best way to learn mapping is to practice it formally at first, until you can use it instinctively.

