

Resources

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- Web Page:
<http://www.dtsc.ca.gov/PollutionPrevention/p2gbp.cfm>

Resources

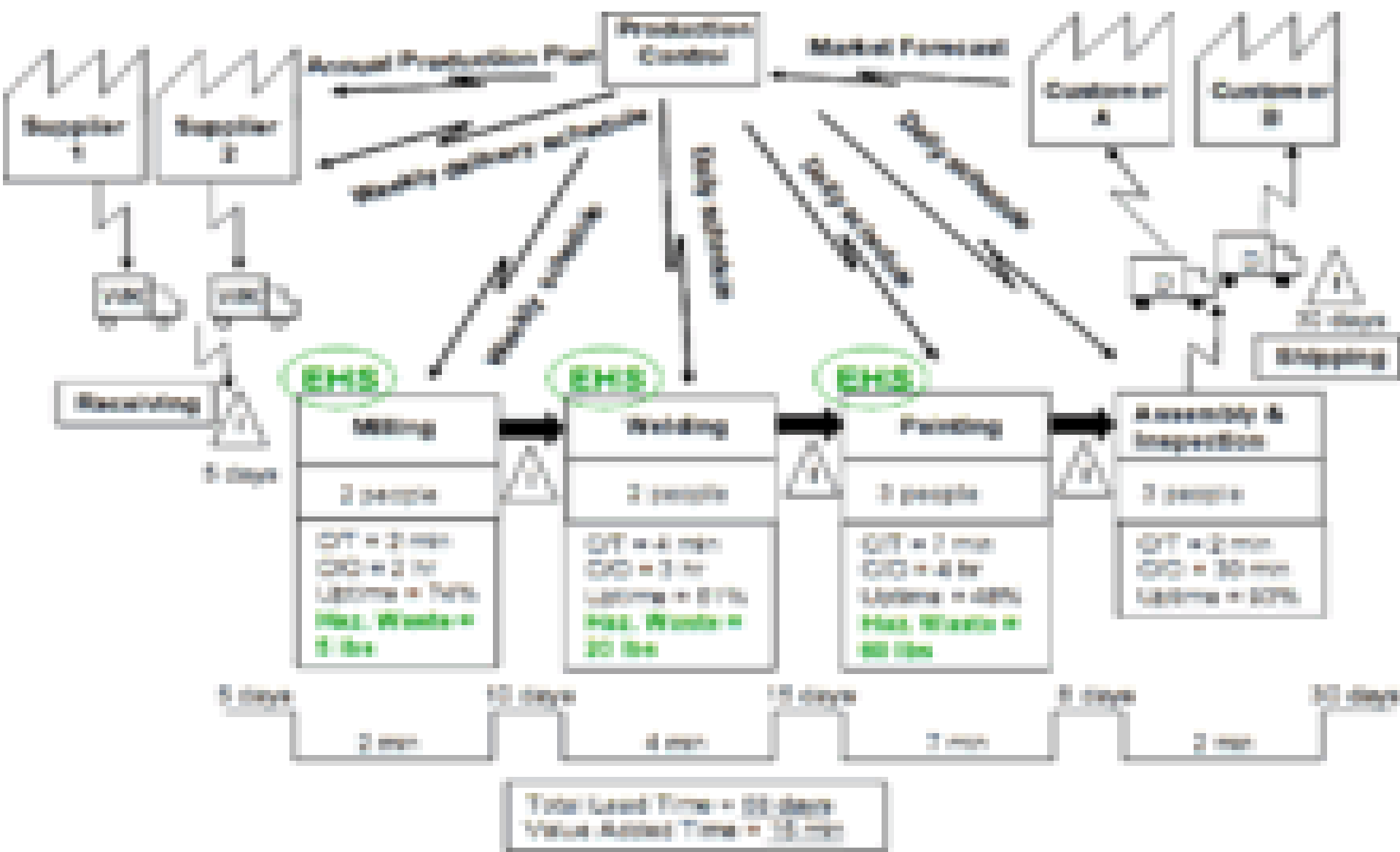
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- California Green Business Program Network
- <http://www.greenbiz.ca.gov/GreenResources.html>
- (This website has links to the various Green Business Programs (GBPs) in California. They vary in size, funding, eligible sectors, etc.,
- Contact a couple of programs to learn about the different experiences of jurisdictions when starting their programs.

Value Stream Mapping

Value Stream Mapping (VSM) is a lean manufacturing technique used to analyze and design the flow of materials and information required to bring a product or service to a consumer.

Value Stream Mapping (VSM)

- Value Stream Mapping is based on Toyota's "Material and Information Flow Maps."
- The value stream map is drawn in real time. That means on the shop floor if it is a manufacturer.
- VSM are often drawn by hand in pencil to allow for correction.



Value Stream Mapping Benefits

- It reveals opportunities for improvement – for our purposes -waste reduction, recycling, energy efficiency
- Enables effective communication among staff – what we do
- Forms the base for implementation of changes

A sustainability focused Value Stream map shows the energy and materials that flow into and out of each process along the way.

Steps for VSM

- Identify the target product or service.
- Have long butcher paper available, post-its, or smaller pieces of paper and tape.
- Draw while on the shop floor a “current state” value stream map.
- Show the current steps, delays, and information flows required to deliver the target product or service.

Modifications for our use

- Go through the steps of production
- Example: High-end manufacturer of sporting goods.
- Their manufacturing discards are scrap technical material, PP plastic scraps, kraft paper - where did this material become waste?

Creating a Map of Production Steps

- Deepen the understanding of a value stream by drawing a map of it.
- Current-state mapping is done while observing the actual value stream

Water sports textile manufacturer

- Layers of PP, kraft paper, and technical material
- Cut the pattern
- Take cut material forms
- Pull materials that are left into waste bin – becomes waste
- Design a way to separate the materials after the material has been cut:
- 3 bins at the end of the cutting table – one for kraft, one for PP, one for technical material or fleece

Examining the Discards

What can be done with this material?

- PP plastic
- Kraft paper
- Technical Material
- Fleece

Examples from Naturlogic /Gil Friend VSM

- Excess energy use
- Insufficient product yield
- Excess non-product output
- Hazardous products
- Non-products
- Unrecovered resources

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Next Steps

- Quantify
- Prioritize
- Look for synergies
- Product redesign