



VALUE STREAM MAPPING

Introduction

Traditional projects typically are managed by evaluating and optimizing individual tasks or small sets of work with a single idea or a few individual ideas of how best to perform the entirety of the work. This often leads to inefficiency because the approach doesn't represent all of the details or knowledge about the work. Collaborative teams are encouraged to evaluate the entirety of the value stream; map the process; consider the value of each step; and optimize the process through Value Stream Mapping.

Value Stream Mapping is best used for mapping the flow of value for processes performed multiple times. It is not to be confused with pull-planning, process mapping or hand-off work-planning, which typically are used for mapping a pathway of work and decisions to get to a particular endpoint.

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1.0 Why

A Value Stream Map (VSM) is a tool that helps individuals visually see and understand a given process rather than simply looking at results. This is vital because understanding the current state of a process is integral to identifying and removing waste.

A VSM enables people to see the flow of value—Customer Value-Added vs. Business Value-Added vs. Non Value-Added—as well as the percentages of each in the process. Non Value-Added components tend to creep into a process over time, and by understanding the process, a project team is better able to design a solution that optimizes functionality and eliminates waste.

Additionally, a VSM:

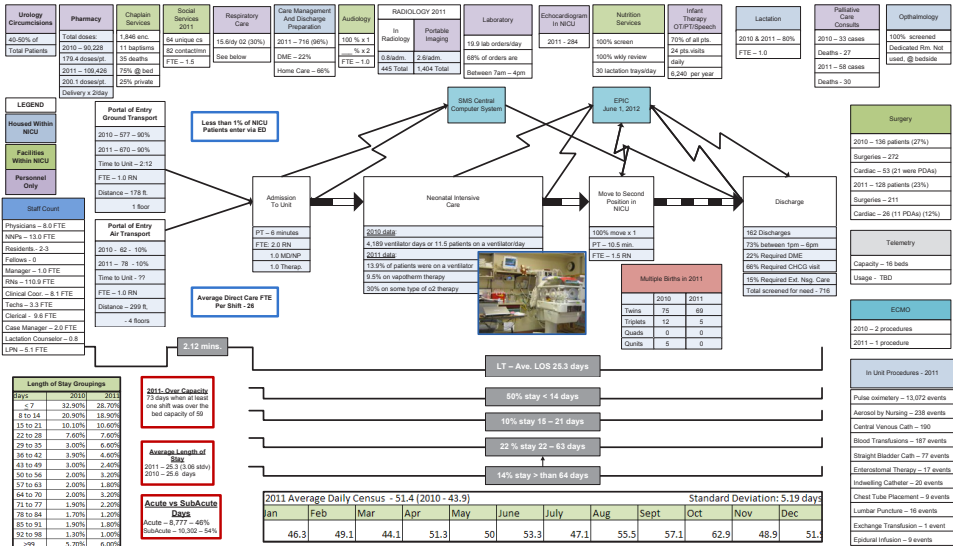
- Identifies opportunities for process improvement;
- Identifies pinch points and helps level the workflow to optimize use of resources;
- Encourages continuous improvement philosophy;
- Enables cultural change by allowing people to identify and improve the process;
- Provides a great mentoring tool; and,
- Helps drive toward a goal.

2.0 How

As a critical first step in the development of a VSM, it is important to accurately assess and gain consensus regarding the current state of the process. This requires input from all who actually participate or use the system/process. Systems often are loaded with non-value-added steps; therefore, it is valuable to assess the current state of the process.

The creation of the VSM should begin with the end in mind, be customer-focused, and be completed by someone who is close to the work. Ultimately, the VSM will lead to quick wins or “just do it,” but inevitably will need a deeper dive to solve the larger issues in the process, such as A3 thinking and Root Cause Analysis. The process does not necessarily require technology.

NICU Current State Value Stream Map Main Campus



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Stakeholders in the VSM development include:

- A facilitator;
- Participants closest to the work; and,
- Customer(s) of the work product.

An example VSM exercise could follow these steps:

1. Assemble a team of stakeholders
2. Identify a process to study
3. Go and see the process (see Go to the Work) and collect actual data
4. Avoid assumptions about the process
5. Map the process visually to establish the current state

- 6. Identify and discuss opportunities for improvement
- 7. Map the process visually to establish the ideal future state
- 8. Document the process and changes required and follow through

3.0 What

A VSM is a picture (map) of the entire process being studied and includes both material (product/service) and information flows, decision points, handoffs and interactions with other systems. Once a process is accurately documented, the team determines which steps are value-added and which are non-value added. Subsequently, a VSM identifies waste within a process and areas for potential improvement. Seeing the system laid out visually allows participants to remove the waste through step elimination and helps them understand the true value of the process/system.

The VSM is a scalable, actionable exercise and should prompt action to reduce waste in the process. This waste reduction frees up resources for other value-added activities.

A VSM should be Defined, Documented, Distributed and Monitored in order to ensure that it is an actionable document, because the VSM is created as a prelude to action.



Quick Reference

Learning to See Waste	23
Continuous Improvement	179
Go to the Work	191

For additional readings and information, please see the below information.

CHAPTER 38 – VALUE STREAM MAPPING

Additional Readings

[5.5 Digital Design-Emdanat](#)

[9-15-08 Lean Construction Opportunities Ideas Practices](#)

[A Lean Modeling Protocol for Evaluating Green Project Delivery](#)

[Analysis of lean construction practices at Abu Dhabi construction industry](#)

[BIM and Value Stream Mapping Robert Mauck](#)

[Contract or Co-Operation Insights from Beyond Construction Collaboration - The Honda Experience](#)

[Discrete Event Simulation Enhanced Value Stream Mapping an Industrialized Construction Case Study](#)

[Editorial Lean and Integrated Project Delivery](#)

[Identification of potential improvement areas in industrial housing A case study of waste](#)

[Implementing Lean Construction Understanding and Action](#)

[Investigation of the Supply Chain of Wooden Doors](#)

CHAPTER 38 – VALUE STREAM MAPPING

Additional Readings

[LCI Congress Presentation 2012-Bagatelos and Lean Stream FINAL](#)

[Lean Journey-Value Stream Mapping](#)

[Learning to see the Effects of Improved Workflow in Civil Engineering Projects](#)

[Moving on - Beyond Lean Thinking](#)

[Reverse Phase Scheduling Slides - George Zettel](#)

[The Application of Lean Principles to In-Service Support a Comparison Between Construction and The Aerospace and Defence Sectors](#)

[Value Delivery through Product Offers a Lean Leap in Multi-Storey Timber Housing Construction](#)