Value Stream Mapping

Colorado Eligibility Process Improvement Collaborative

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Value Stream Mapping

What is a "Lean Value Stream"?

- Value
  - From the perspective of the customer
- Flow
  - No waiting
  - No rework
- Work
  - Standardized
  - Built-in quality
- Managing for Improving and Learning
  - Milestones and checkpoints
  - Learning embedded

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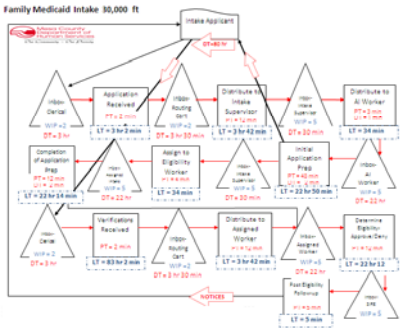
Value Stream Mapping

What is Value Stream Mapping



Value Stream Mapping

Team Activity # 1

- Find a Value Stream Map that loosely fits your Eligibility Site's Business Process
- Discuss the differences
- Discuss the similarities
- What steps add value
- What steps do not add value

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Value Stream Mapping

What the Numbers Mean

- **Process Time (PT)** – actual touch time of one work item; exclude interruptions
- **Delay Time (DT)** – time work item is delayed or not touched
- **Lead Time (LT)** – total time to complete a process step; LT=PT+DT
- **% Complete & Accurate (%C/A)** – % of work entering process that is complete and accurate
- **Work in Progress (WIP)** – a count of work

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Value Stream Mapping

Problem Identification

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Value Stream Mapping

Problem Categories

- Meeting customer requirements
- Making work flow
- Doing the work
- Managing to improve and learn

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Value Stream Mapping

Meeting Customer Requirements: Typical Problems

- Late, incomplete or wrong output
- Not meeting timing needs, overtime
- Not meeting quality expectations
- Inspections or case reviews needed to meet quality requirements
- Customer complaints
- Worker complaints about customers

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Value Stream Mapping

Making Work Flow: Typical Problems

- Work or people waiting, delays, and interruptions
- Rework for completion or correction
- Handoffs, batching, bottlenecks
- Too many requirements for decisions and approvals
- Poorly defined work
- Expectations too high

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Doing the Work: Typical Problems

- Lots of rework
- Passing along work without checking for completeness and accuracy
- Tasks within process vary based on who does the work
- Work-arounds developed over time

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Managing to Improve and Learn: Typical Problems

- No method for comparing daily performance to plan
- Lack of management corrective action process until too late
- Many reviews but no systemic improvements
- Limited reuse of existing information
- Learning not integrated in the process

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Value Stream Mapping

Team Activity # 2

- Use post-it notes
- Identify problem areas
- Post on Value Stream Map
- Report out

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Value Stream Mapping

Step 1 – Define Customer Requirements

Critical Questions

1. Who are my customers (end-user and internal)?
2. What do my customers really require?
   - How many, how much, how often, and why?

Key Lean Concepts/Tools

1. "Chunk" the value stream
2. Confirm customer requirements

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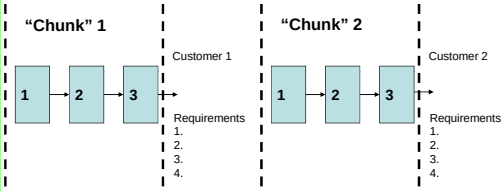
Defining "Chunks"

Chunks



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Step 2 – Make the Work Flow

Critical Questions

1. Do we really need all these steps?
2. How can we avoid/eliminate all delays and interruptions to make the work flow?

Key Lean Concepts/Tools

1. Combine steps
2. Adopt Service-Level/Proceed-Until-Halted Agreements
3. Adjust procedures for prioritizing work between steps

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Common Barriers to Flow and Typical Countermeasures

• Too many handoffs	• Combine steps
• Fluctuations in work requirements (job size, complexity, due dates, etc.)	• Separate standard process from "special" work, create Service-Level Agreements
• Fluctuations in work pace	• Standardize pace
• Waiting for decisions/approvals	• Adopt "Proceed-Until-Halted agreements
• Interruptions	• Manage the interruptions
• Rework	• Proceed with "Doing the work"

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Step 3 – Improve Work Quality and Reliability

Critical Questions

1. How can I structure the work inside the process step to deliver 100% C/A (Complete & Accurate) to my downstream customer 100% of the time?
2. How can I identify problems immediately?

Key Lean Concepts/Tools

1. Implement standard work
2. Build in quality at the source
3. Introduce visual management

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Techniques for Catching Defects as Close to the Source as Possible

- Posted procedures and checklists
  - For both work steps and quality requirements
- Self checking
  - Visual confirmations built into work sequence
- Automatic error detection Zone control
  - Checks completed before leaving the group or area
- Systems for immediately giving feedback about abnormalities to the processes where they originated

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Step 4 – Design to Manage for Improving and Learning

Critical Questions

1. How will you use milestones to draw together the organization?
2. How will you manage the process so that the work is complete and accurate at the milestones?
3. How will you ensure that learning is captured and used to improve the performance of the value stream?

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Value Stream Mapping

Step 4 – Design to Manage for Improving and Learning

Key Lean Concepts/Tools

1. Identify performance indicators, create progress tracking tools, and use milestones to pace the work
2. Conduct regular check-ups – use them to problem-solve on the spot
3. Schedule formal reflection/review sessions at key points
4. Capture lessons learned, and feedback for continuous improvement

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Team Activity # 3

- Chunk the current system
- Define customer requirements for each chunk
- Answer the critical questions in steps 1 - 4

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Value Stream Mapping

Concepts and Tools

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Value Stream Mapping

Supply and Demand

- Customer demands food → restaurant serves
- Customer demands lodging → hotel supplies room
- Customer demands Medicaid → eligibility site provides access

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Value Stream Mapping

Types of Waste

- Correction
- Time
- Material transportation
- Movement
- Overproduction
- Processing
- Inventory
- Underutilized people

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Value Stream Mapping

Tools to Optimize Work Flow

- Reduce demand failure
- Standardized work
- Quality at the source
- Visual controls and management
- People involvement
- Batch reduction or elimination
- Triage
- Pull work

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Value Stream Mapping

Hamburger Exercise

- Sequencing of work
- Use of capacity
- Standardized work

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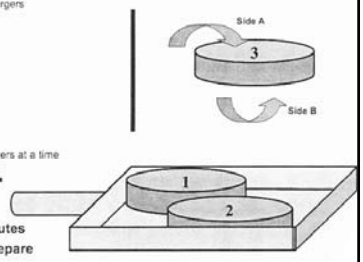
Value Stream Mapping

Warming up… The Burger Case

Requirement:
Customer demand for 3 burgers
Method
Grill 1 minute per side
Material
Burgers
Worker
1 cook
Machine
Capacity of the grill: 2 burgers at a time



Q: How many minutes should it take you to prepare all 3 burgers?

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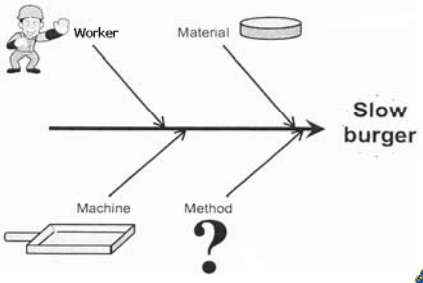
The Burger Case



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Value Stream Mapping

The Burger Case: How to Make a Slow Burger Fast

Worker

- Add more people
- Make people work faster
- More training
- Motivation
- Ergonomics
- Work environment
- Etc
- Etc

→ Slow burger

Pros-Cons	

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Value Stream Mapping

The Burger Case: How to Make a Slow Burger Fast

Material

- Change supplier
- Triangular burger
- Thinner burger
- Pre-cooked
- Etc
- Etc

→ Slow burger

Pros-Cons	

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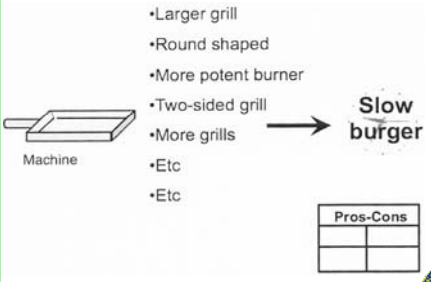
The Burger Case: How to Make a Slow Burger Fast



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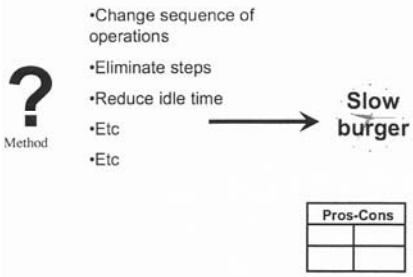

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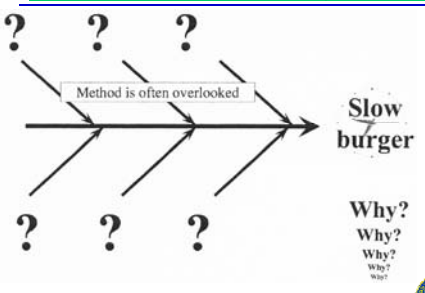
Value Stream Mapping

The Burger Case: How to Make a Slow Burger Fast



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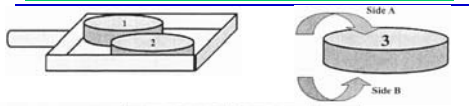
Value Stream Mapping

The Burger Case: How Long Does it Take to Cook a Burger



Burger	Side	Minutes 1	2	3	4	5
1	A	●				
	B		●			
2	A	●				
	B		●			
3	A			●		
	B				●	

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Value Stream Mapping

Quality at the Source

- Workers must be certain that the product or information they are passing to the next work area is of acceptable quality
- Workers must be given the means to perform inspection at the source, before they pass it along
- Samples or established standards are visible tools that can be used for such purposes

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Value Stream Mapping

Applicant's Desired Process

Applicant submits application → Worker processes application & sends notice → Applicant receives answer

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Value Stream Mapping

Team Activity

- Draw the future state

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Value Stream Mapping

Questions?

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