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VALUE STREAM ANALYSIS

Creating
Lean
Excellence
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Simpler Consulting, Inc.

Simpler Business System Version 6.1

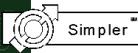
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Value Stream Analysis

Objectives:

- ✓ understand what Value Stream Analysis is
- ✓ learn how to use it as a planning tool

... part of the Simpler Business System™



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The objectives of this training module are to introduce you to Value Stream Analysis and to teach you how to use Value Stream Analysis as a planning tool.

Remember the 5 key principles of Lean Thinking.

VALUE: Exactly what are customers willing to pay for?

VALUE STREAM: ...is “everything that goes into” creating and delivering the “Value” to the end-customer. These are the steps that deliver the Value.

FLOW: Flow challenges us to reorganize the Value Stream to be continuous... “one by one, non-stop”.

PULL: Pull challenges us to only respond “on demand” to our downstream customers.

PERFECTION: Perfection challenges us to also create compelling quality (“defect free”) while also reducing cost (“lowest cost”).

Value Stream Analysis is a powerful tool to help you look strategically at your business, or a business process, and quickly identify opportunities for improvement. Wastes are identified and documented.

After documenting the current state, you will apply the concepts of “Flow” and “Pull” to re-organize the Value Stream into an Ideal state (“Perfection”) and a Future state (6-12 months from now).



Objectives

Background

- ❑ Value Stream Mapping originally started at Toyota
- ❑ many companies are pursuing "Lean" conversions
- ❑ most find that Events by themselves are not enough
- ❑ Value Stream Mapping is becoming an important tool
- ❑ (read "Learning to See" from www.lean.org)

- ❑ see the waste first, then plan what you'll do about it



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Value Stream Mapping as it's described here was originally started at Toyota.

The Lean Enterprise Institute is an important resource for people who are implementing a Lean conversion. Check out their web site to pick up a copy of Learning to See - a good overview of the Value Stream Mapping process with a hypothetical example.

Widespread interest in converting businesses to Lean started with a book that generated significant interest in the automotive industry. The Machine That Changed the World (Womack, Jones, Roos - 1986) caused many people in the automotive industry to realize that the Japanese had developed a production system that created better performance in terms of quality, cost and delivery. At that time, Toyota wasn't mentioned by name in the book, however they were the key benchmark leader.

In their follow-up book (Lean Thinking - 1996), Womack and Jones created a great deal more interest in Lean with a few success stories that were profiled in detail.

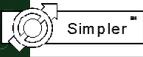
Most businesses that say they're "doing Lean" are really doing "Kaizen Events". In many businesses, these Events create outstanding change. In most organizations, they are not enough by themselves. Although a company's Lean transition usually starts with these Events, it quickly becomes apparent that Events require a simple game plan.

Value Stream Analysis uses Value Stream Mapping and simple logic to make sure that the Event plans are guided toward creating better overall performance. **VALUE STREAM ANALYSIS MUST BE DONE QUICKLY - IT GUIDES ACTION BUT MUST NOT DELAY IT!!**

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What is Value?

- think like a customer
- "Value" is what the customer is buying
- always think first about the end-customer
 - WHO IS THE CUSTOMER?
 - WHAT ARE THEY BUYING?
- when you describe Value use the customers' words



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To talk about this, we're going to need to think like a customer. We need a few examples to talk about. Let's list six things that customers buy from us:

ITEMS / VALUE CUSTOMERS ARE BUYING

1: _____

2: _____

3: _____

4: _____

5: _____

6: _____

Always write the "Value" using words that a customer might say. When you talk about Value, THINK FIRST FROM THE POINT OF VIEW OF THE END-CUSTOMER.

Any other customer is an intermediate customer who also buys something - but THE WHOLE VALUE STREAM IS SERVING THE END-CUSTOMER.

What is Value?

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What is a Value Stream?

- ❑ a Value Stream is all the activities that create Value
- ❑ a Value Stream starts with raw materials
- ❑ a Value Stream ends with the end-customer
- ❑ most Value Streams involve several businesses



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What does the word “Value Stream” mean to you? A Value Stream delivers Value to the end-customer. This phrase comes from the book “Lean Thinking”.

If we think of this from the point of view of an end-customer, does this help you understand what these words mean?

A “Value Stream” is a flow path like a river. Small streams join together to create a larger stream and eventually this flows to its logical end (think about the Mississippi).

OK, let’s think of our examples from page 3. Where does the Value Stream start and end for a few of these examples?

THE ITEMS / THE START AND END OF THEIR VALUE STREAMS

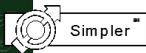
Remember that Value Streams involve several businesses... think beyond your walls!!!.

What is A Value Stream?

	<u>ITEM</u>	<u>START</u>	<u>END</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

What Flows?

- ❑ we usually analyze part of a total Value Stream
- ❑ that part of the Value Stream has customers too
- ❑ "ITEMS" flow through a Value Stream
 - ❑ IN MANUFACTURING, MATERIALS ARE THE ITEMS
 - ❑ IN SERVICE, EXTERNAL CUSTOMER NEEDS ARE THE ITEMS
 - ❑ IN ADMIN., INTERNAL CUSTOMER NEEDS ARE THE ITEMS



Most of the time, we look at only part of a Value Stream. This is logical, but should be done in the context of the whole Value Stream, which keeps us focused on the end-customer.

NEVER FORGET THAT THE END CUSTOMER SUBSIDIZES THE EXISTENCE OF THE WHOLE VALUE STREAM. ALWAYS KEEP THE END-CUSTOMER'S VALUE IN MIND.

When you look at a portion of a total Value Stream, you need to understand what it does.

Any part of a Value Stream has customers. An example? Pick part of a total Value Stream. Who is the end customer? Who is the intermediate customer?

Each part of a Value Stream provides some item to its immediate customer. That customer needs that ITEM in order to continue to add value and at the final point in the Value Stream provide the "Value" that the end-customer is buying.

Value Stream thinking applies to manufacturing, service and administrative situations. Don't let this confuse you... keep this thought in mind and it's simple: **VALUE STREAMS PROVIDE VALUE THROUGH "ITEMS"...** in manufacturing the items are physical, in service and admin. The ITEM is the NEED of one customer.

VALUE IS CREATED BY ADDING VALUE TO ITEMS AS THEY FLOW THROUGH THE VALUE STREAM.

What is Value Stream Analysis?

- Value Stream Maps describe a Value Stream
- Value Stream Analysis is a planning process
 - FOCUSED ON PARTS OF THE VALUE STREAM
 - USES VALUE STREAM MAPS TO COMMUNICATE
 - Information Flow
 - Material Flow
- 3 Value Stream Maps are created
 - CURRENT CONDITIONS
 - IDEAL STATE
 - FUTURE STATE (6-12 MONTHS FROM NOW)
- action plans are developed for the Future State Map



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Value Stream Maps are visual descriptions of a Value Stream. They are powerful because they give us a way of communicating about what the current Value Stream is and what it will become in the future.

Value Stream Analysis is a planning process that uses Value Stream Maps. It has clear boundaries and is usually focused on a part of the Value Stream. (However, some of the most powerful Value Stream Analysis exercises are the ones that look at the whole Value Stream, these can change the structure and business models of whole industries.)

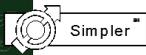
In a Value Stream Analysis, three Value Stream Maps are created:

- Current Conditions Map (what is the Value Stream today?)
- Ideal State (what is “perfection”, even if we don’t know how to do it yet?)
- Future State (6-12 months from now, what do we want the Value Stream to be?)

From the Future State (created with the ideal state in mind), we choose action plans for the next 3-6 months. These action plans usually have the most detail in the first 90 days and are frequently updated - usually once a month.

Remember the Purpose

- ❑ why are you doing a Value Stream Analysis?
- ❑ what does a Value Stream Map help us do?
 - ❑ COMMUNICATE
 - ❑ Provides common language for everyone to see process
 - ❑ SEE WASTE
 - ❑ IDENTIFIES 'SOURCES' OF WASTE
 - ❑ SEE THE FUTURE
 - ❑ PLAN ACTION
- ❑ change is easier if we understand why



Why make the effort to do Value Stream Analysis?

Let's start by asking a few questions...

DO YOU KNOW WHY YOU'RE "DOING LEAN"?

DO YOU KNOW WHY YOU ARE CHOOSING SPECIFIC EVENTS AND PROJECTS?

ARE YOUR EFFORTS CREATING CONSISTENT IMPROVEMENT IN THE NUMBERS?

The reasons for making this effort are simple...

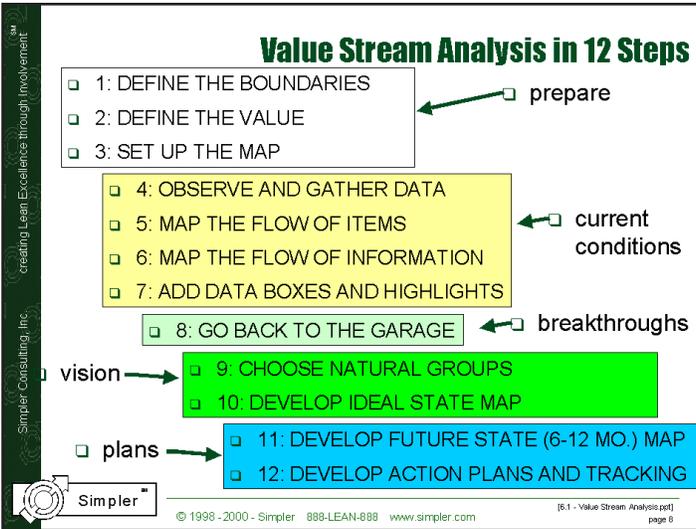
PEOPLE WANT TO UNDERSTAND WHY... it's easier to adapt to change if you understand why you're doing it.

PEOPLE NEED TO GET INVOLVED... good plans depend on dialogue.

ONLY WHEN EVERY PERSON IS INVOLVED IN DEVELOPING A VISION AND IMPLEMENTING A PLAN WILL THE RESULTS BE SUCCESSFUL.

IT'S WORTH THE EFFORT! YOUR BUSINESS' COMPETITIVE SUCCESS DEPENDS ON IT.

Remember The Purpose



Value Stream Analysis happens in 12 steps. Think of these steps in five blocks:

First, we need to prepare for the Value Stream Analysis. The most important part of preparing is to define the boundaries of the analysis. Focus your energy. Choose your boundaries clearly (who are the customers, what are the outputs, who are the suppliers, what are the inputs).

Second, we study current conditions. Developing the current conditions Value Stream Map is the foundation of Value Stream Analysis. It keeps the effort grounded in a clear understanding of “reality”.

Third, it’s time to be very creative. The “Go Back to the Garage” step is a place where breakthrough thinking happens. At this point, we pretend we’re a very small business operating out of a garage. We’re loaded with creativity, have very low volume of customer demand and almost no cash. We develop an “absolute minimum” sized Value Stream that can deliver the same quality as our largest, wealthiest competitor.

Fourth, we stay creative but become a bit more practical. With the “garage” in mind, we divide up the items that flow through the Value Stream into natural groups and develop an ideal state Value Stream Map. We may not know how to accomplish this yet, but we develop it anyway. It guides our vision and creates a few important R&D projects.

Fifth, we develop a practical future state Value Stream Map for what we’d like to have in 6-12 months. This map should move us towards the ideal state in logical steps. From the future state map, we develop practical action plans for the next 3-6 months.

12 Steps In VSA

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1: Define the Boundaries

□ Value Stream Analysis starts with clear boundaries:

```

    graph LR
      S[suppliers] -- inputs --> V[part of the total Value Stream]
      V -- outputs --> C[customers]
  
```

- WHO ARE THE SUPPLIERS?
- WHAT ARE THE TRIGGERS?
- WHO ARE THE CUSTOMERS?
- WHAT ARE THE INPUTS?
- WHAT ARE THE OUTPUTS?

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It's important for maps to have boundaries. You wouldn't start out creating a map of Iowa (assuming you wanted to!) without first knowing where its borders are, would you? Also, you'd need to know the size of the state of Iowa in order to choose how big a map to create and how detailed a resolution to use.

Value Stream Mapping presents similar issues - you'll end up with confusion and frustration if you don't clearly define the boundaries of your map at the beginning.

The best way to think about these boundaries is to think of your particular section of the map as a black box. Inputs go in, outputs come out. Figure out the boundaries by asking these questions:

- what is the ITEM that flows through this part of the Value Stream? (remember: for manufacturing items are usually parts or materials and for service and admin. areas, the items are the needs of individual customers which are being "processed" until they are met)
- who is the customer of the part of the Value Stream being mapped?
- what is delivered to them? in what state or condition? (OUTPUTS)
- who are the suppliers of the part of the Value Stream being mapped?
- what do they supply? in what state or condition? (INPUTS)

Also, to better understand the information flow later, ask what the TRIGGERS are for this part of the Value Stream (what triggers the people in it to produce anything?).

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2: Define the Value

- ❑ VALUE is what the customer is buying
- ❑ who is the end-customer? what Value do they buy?
- ❑ how does this part of the Value Stream contribute?
- ❑ summarize (attach to the Value Stream Map):

THE VALUE TO THE
END CUSTOMER IS:

THE VALUE-ADDED
BY THIS AREA IS:

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VALUE is what the end-customer is buying from the total Value Stream? (for example... a total Value Stream may provide a storage cabinet to an end-customer... the Value that the end-customer is buying is “an orderly, organized area” which they create by buying the cabinet, some bins and some labels)

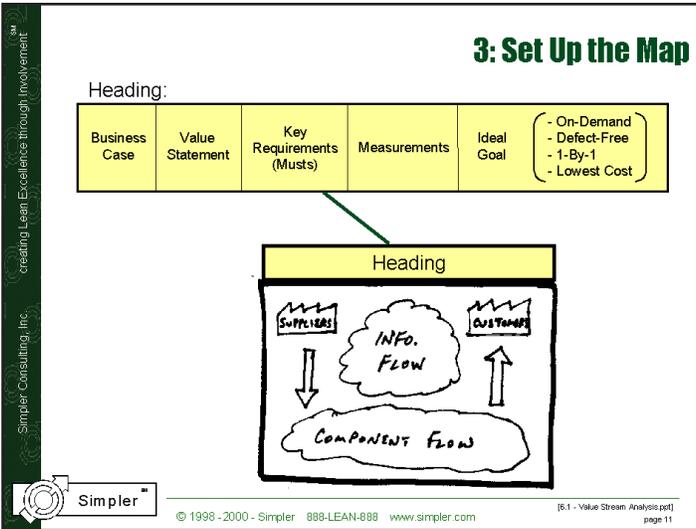
Who is the end-customer of the total Value Stream?

What Value are they buying?

Who are the suppliers of this part of the Value Stream? What do they provide?

Who are the customers of this part of the Value Stream? What are they pulling?

What Value does this part of the Value Stream add?



Now, it's time to set up the Value Stream Map. Plan on enough space.

Fill in the heading...

BUSINESS CASE is a short statement about why you're improving the Value Stream. This should be approximately 10 words long and focused on a combination of customer and shareholder reasons.

VALUE STATEMENT is a summary of the two pieces of information you created in the previous step. What is the Value that the end-customer is buying and what is the Value added by this part of the Value Stream?

KEY CUSTOMER REQUIREMENTS (MUSTS) refers to those few aspects of the Value Stream that can not be compromised due to important customer reasons (e.g.. "we must collect our hazardous waste for proper disposal" or "we must not disrupt the flight-readiness of more than 3 fighter jets at a time").

MEASUREMENTS are the key performance indicators of this part of the Value Stream. There should not be more than 7 measurements. These should show some degree of balance between the needs of customers, shareholders and members of the company.

IDEAL GOAL is a simple statement that keeps us focused on why we're doing this effort. We suggest the statement: "on-demand, defect-free, one by one, at the lowest cost". It reminds all of us why we're making Value Stream improvements.

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4: Observe and Gather Data

- ❑ walk the Value Stream - see the actual work place
- ❑ follow and make notes about the path of each "ITEM"
- ❑ gather data for each step in the flow:

Trigger:
Done:
Flow Time =
Manual Cycle Time =
People =
WIP Pieces =
C/O Time =
% Yield = :

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Walking the Value Stream and seeing the actual work place is an important step even if the purpose of the Map is to describe a future state or ideal state. It is essential that we keep our efforts “grounded” in the shop floor (or, for service and admin. Value Streams, the work place where Value is added).

Start by walking the Value Stream. Follow and make notes about the path of each individual item that flows through this part of the Value Stream (learn the flow). Your understanding and notes about of the flow of each item will be used to map the flow of items in the Value Stream.

You’re also going to need some numbers. Gather real data - this is your chance to really understand what’s happening. Don’t shortcut this step. Consider the items noted in the data box, above, as a good start:

TRIGGER - what causes people to start doing something for a customer?

DONE - how do we know when an item has been completed?

FLOW TIME - how long does it take to flow - start to finish (waiting or being worked on)?

MANUAL CYCLE TIME - how many seconds of manual work are done on each item?

PEOPLE - how many people work in the area?

WIP PIECES - how many items are in the area (being worked on or waiting)?

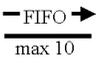
C/O TIME - how long does it take to change over from one item to another

YIELD % - how many items are defect-free the first time (no rework required)?

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5: Map the Flow of Items

PROCESS notes and details	use this box to represent each process step
EXTERNAL PLACES	use this symbol for customers and suppliers
	use this symbol to represent a "supermarket" (first-in-first-out)

	use this symbol for stored inventory (known quantities)
	use this symbol for pushed inventory (arrow implies WIP)
	use this symbol for a pull system
	use this symbol for a first-in-first-out flow "lane"
	use this symbol for transportation

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Now, go back to the blank Value Stream Map you set up in step 3.

From your notes, map the flow of items. These symbols are the ones you'll use the most.

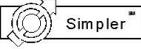
Make sure you're using the right resolution for your map. If you have more than 100 post-it notes on the whole map, you're trying to analyze in too much detail. Consider doing a macro-map with a more coarse resolution and several micro-maps with a finer resolution instead. Keep the map simple. *It's a communication tool.*

5. Map The Flow of Items

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6: Map the Flow of Information

	<p>use this symbol for manual flow of information</p>		<p>use this symbol for pull system paper trigger</p>
	<p>use this symbol for electronic flow of information</p>		<p>use this symbol for a pull system returnable container trigger</p>
	<p>use this symbol to represent information that flows (such as "schedule sequence")</p>		<p>use this symbol for pull system trigger at a particular quantity level</p>
			<p>use this symbol for pull system "go see" trigger</p>
			<p>use this symbol for pull system information storage points</p>

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Now, add symbols that show the flow of information in the Value Stream. Focus especially on how a customer's need is communicated and scheduled, and on how schedule and sequence information is communicated between areas in the Value Stream.

7: Add Data Boxes and Highlights

Trigger:
Done:
Flow Time =
MCT =
People =
WIP =
% Yield =
:

add data boxes to the map to show the data that you collected (see step 4)

use this symbol to show where the people are (eg. = 5 people)

add numbers to the push flow symbols

1,200 pcs
3.2 days

add numbers to the "stored inventory" symbols

use this symbol to show capital equip. (eg. = \$100k)

use this symbol to show progress in establishing cells:
1 = 1-Piece Flow
S = Standard Work
6 = Basic 6-S
P = Pull Systems

302 pcs
8.1 days

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Add data boxes and highlights to your map. These should show the hard data you gathered and the important highlights of the factors that affect the performance of the Value Stream.

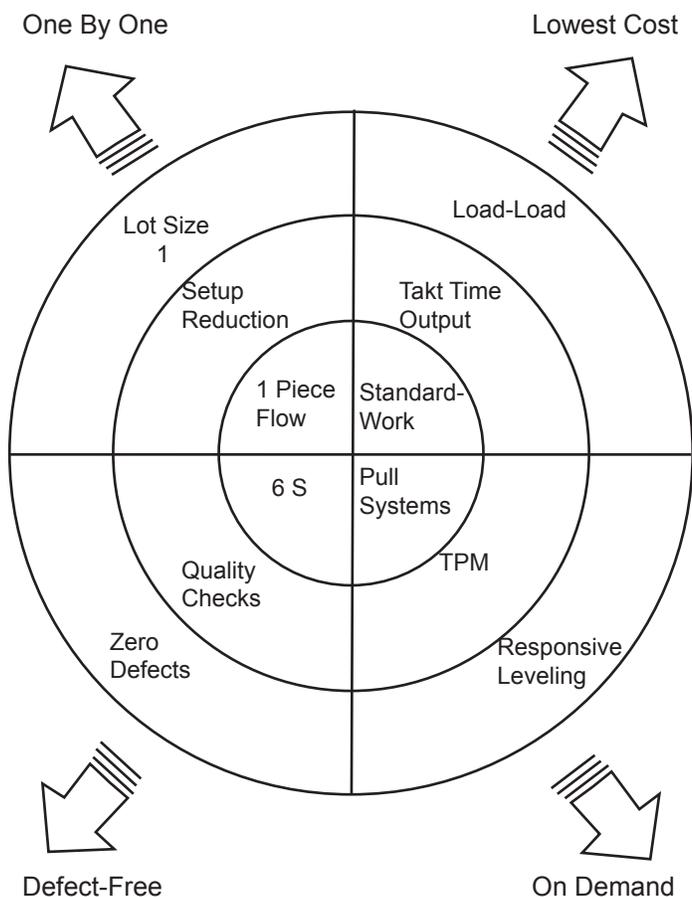
Showing the people highlights where the biggest opportunities for productivity gain are.

Showing the inventory (pushed or stored) highlights where the biggest opportunities for reducing lead times (and for turning inventory into cash).

Showing the expensive capital equipment highlights where there are equipment design challenges (these are usually "monuments" that need to be decentralized with "right-sized equipment").

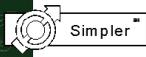
Showing where cells are being established helps plan RI Events and key projects. Remember, cells need to be established before they can be improved. The cell progress symbol represents the middle circle of this diagram. Color in quarters of it as you establish each cell:

- 1-Piece Flow
- Standard Work
- 6-S
- Pull Systems



8: Go Back to the Garage

- pick a few items that flow through the Value Stream
- pretend you are your smallest competitor
 - YOU'RE IN A GARAGE WITH ALMOST NO MONEY
 - YOU HAVE HARDLY ANY SALES (very long takt time)
- develop the smallest, lowest capital Value Stream



This step may feel a bit strange to you...

Have you ever said things like...

“We’re always waiting for capital approval.”

“We could do _____ if we just had more money for equipment. “We should spend the money, the payback is great!”

“We can buy one of those right off the shelf.”

MOST VERY TINY BUSINESSES ARE LEAN.

WHY? THEY DON'T HAVE ENOUGH MONEY OR TIME TO WASTE IT FOOLISHLY.

So...

Let’s erase all our thoughts about what we should be doing.

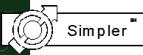
Work with the ground rules noted above. Imagine you are a garage-sized competitor and you have to make one of the items that your part of the Value Stream delivers to its customer... **BUT YOU HAVE NO MONEY.**

For now, also assume that you’re willing to compensate for your lack of money with a great deal of hard work.

Now, follow the steps outlined above.

9: Choose Natural Groups

- ❑ review the items that flow through the Value Stream
 - ❑ WHAT FACTORS MAKE ITEMS SIMILAR OR DIFFERENT
 - ❑ GROUP SIMILAR ITEMS TOGETHER
 - ❑ SET ASIDE ITEMS THAT COMPLICATE THE GROUPS
- ❑ choose a target takt time for the whole Value Stream
 - ❑ WHAT FACTORS DRIVE THE PROCESS CYCLE TIMES
 - ❑ HOW MANY PARALLEL FLOW PATHS DO YOU WANT
 - ❑ WHAT IS THE VOLUME? HOW MANY SHIFTS?
 - ❑ CHOOSE TARGET TAKT TIME FOR THE VALUE STREAM
- ❑ choose natural groups of items (add "miscellaneous")



As you choose your natural groups, don't get too fancy.

You're going to need to figure out some logic about what you make in which cells. The goal of this set of decisions is to simplify the design of each cell in the Value Stream.

Why do you buy expensive equipment?

What are the 10 most expensive pieces of equipment in your Value Stream?

Why couldn't you buy something that cost 1/10 as much?

Usually, the justification for high-priced equipment is flexibility. This is fueled by equipment companies that sell engineers equipment that appeals to their "engineer" side.

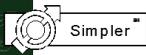
Choosing natural groups challenges you to think simple. Figure out what factors are similar or different about the items that your part of the Value Stream handles.

IF YOU HAVE DOUBTS ABOUT WHAT BELONGS IN A NATURAL GROUP, LEAVE IT OUT. ONCE YOU FIGURE OUT HOW TO HANDLE THE EASY 80%, THE DIFFICULT 20% WON'T BE THAT DIFFICULT OR WON'T BE THAT IMPORTANT.

Don't try to do this perfectly, just well enough to keep your flow paths simple so that your cells will also be easy to equip, establish, and manage.

10: Develop Ideal State Map

- ❑ assume that anything is possible
- ❑ avoid shared resources, aim for 1-3 cells per path
- ❑ create an ideal state Value Stream Map
- ❑ begin resolving possible obstacles
 - ❑ LIST POSSIBLE OBSTACLES
 - ❑ START KEY R&D PROJECTS
 - ❑ START "RIGHT-SIZED EQUIPMENT" PROJECTS



Drawing the ideal state Value Stream Map is fun. The reason it's fun is that you are not constrained by having to be "practical".

REALLY ASSUME THAT ANYTHING IS POSSIBLE WITH RESPECT TO PROCESSES AND ALSO ASSUME THAT THE PRODUCT OR SERVICE DESIGN CAN'T BE CHANGED. FINALLY, ASSUME THAT THERE ARE NO SHARED RESOURCES.

These assumptions challenge you to envision the perfect flow vision for the products or service you have now (you'll adapt just fine when the product or service does change).

Why do this... to guide yourself in the direction of maximum performance.

For each natural group, create a very simple and idealistic Value Stream Map. Try to structure no more than 2-3 cells in sequence for the Value Stream of any item inside a single business.

Make sure each cell serves customers and receives materials using pull systems.

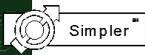
DON'T SKIP THE STEP OF ALSO MAPPING THE INFORMATION FLOW!!! YOU'LL ESPECIALLY NEED TO FIGURE OUT HOW YOU PLAN TO SCHEDULE THE VALUE STREAM.

Before you leave the ideal state diagram, make sure you list the top 5 obstacles that prevent you from easily implementing this ideal state vision. (Bring this list up later when your company is developing process R&D priorities.)

KEEP THIS STEP QUICK... MAXIMUM OF 1 HOUR. IT'S A DIRECTION NOT A PLAN!!

11: Develop Future State (6-12 mo.) Map

- ❑ Identify short term goals
 - ❑ PRODUCTIVITY
 - ❑ FLOOR SPACE
 - ❑ INVENTORY
 - ❑ CAPACITY
 - ❑ QUALITY
- ❑ identify the most supportive area managers
- ❑ identify sections of the Value Stream easy to change
- ❑ identify the first "complete" flow path you will create
- ❑ work from your current state map



Now it's time to get practical. The future state Map describes what you really think you're going to accomplish in the next 6-12 months.

Again, don't let this step take too long to create - some parts of the plan aren't easy to see yet. Focus on the places that are easy to see and plan about.

YOU WILL LEARN BY DOING. DON'T TRY TO DEVELOP FANCY PLANS.

As you develop the future state map, focus on areas where there is the most opportunity for impact.

- WHAT ARE YOUR SHORT TERM GOALS?

- WHERE IS THE OBVIOUS IMPACT?- WHERE IS THE MONEY? WHERE ARE THE PEOPLE? WHERE'S THE INVENTORY?

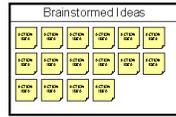
VERY IMPORTANT: WHERE IS THERE A WILLING AND SUPPORTIVE MANAGER?

REMEMBER THAT IF YOU KNOW THE ROAD IMMEDIATELY AHEAD AND ARE CONFIDENT IN YOUR OVERALL DIRECTION, YOU'LL GET THERE. YOU WOULDN'T USE A FULL-SCALE MAP TO TAKE A TRIP WITH... SO DON'T OVER-PLAN HERE!!!

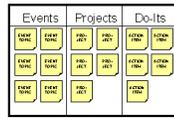
11. DEVELOP FUTURE STATE MAP (6-12 mo.)

12: Develop Action Plans and Tracking

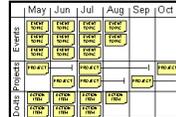
- brainstorm action items



- sort the action items



- develop an action plan



- and... track measurements

From your future state map, action items will become obvious. Create your action plan in three steps (on three flip-charts):

First, brainstorm action items - this should not be too formal. If anyone has any thought, write it down on a post-it.

Second, sort and focus your action items into three categories:

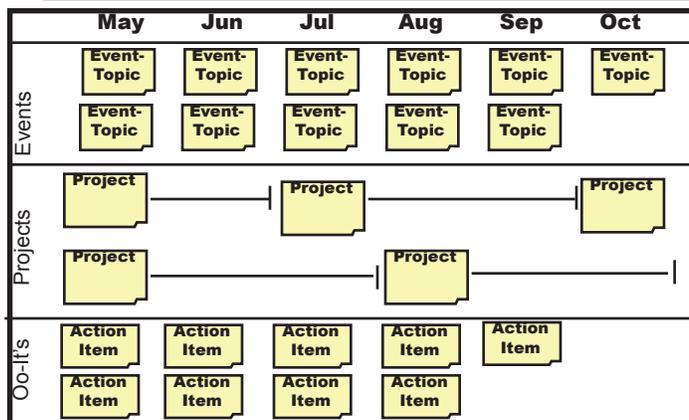
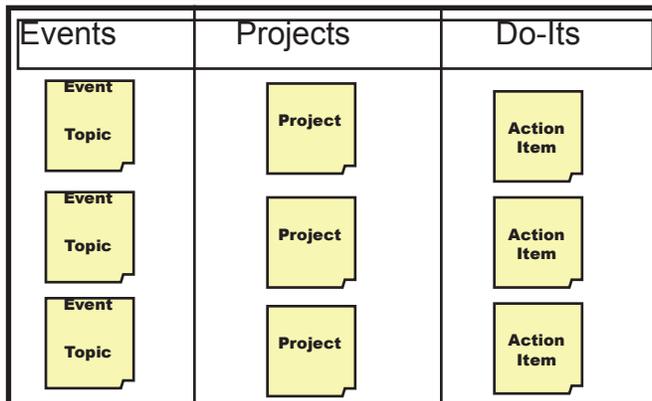
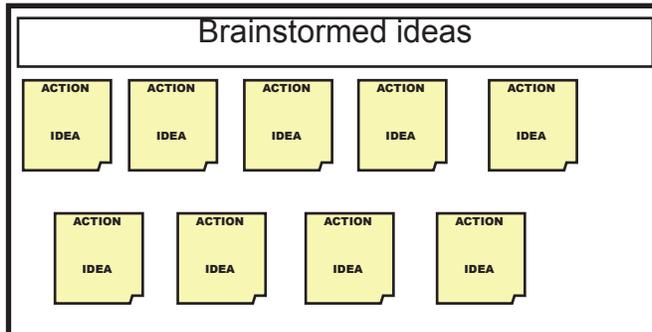
RI Events - 3-5 day Events, 7 week cycle

Projects - not well-suited to Event structure

Do-Its - things that can just be done quickly

Third, develop a time-line plan for the next 6 months with maximum detail in the next 3 months.

Keep your plan sorted by type of action (RI Events, Projects, Do-Its).



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Follow the Process

- ❑ remember that Value Stream Analysis is a process
- ❑ **avoid short-cuts** (the steps are important)
- ❑ remind yourself and your team to be disciplined

❌

- ❑ "we can skip this step"
- ❑ "we already know how we want to make this"
- ❑ "let's not worry about that for now"

learn by doing

THIS
PROCESS
WORKS!!

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Value Stream Analysis should be done as a 1-2 day team activity facilitated by an internal or external consultant.

One important caution... it's going to be tempting to skip some of these steps, or to gloss over them casually. This is especially true for the "Go Back to the Garage" step and also to the step where you gather and use the detailed time observation and piece count information involved in creating the Value Stream Map of current conditions.

We talk frequently about "learning by doing". This does depend on your willingness to "do". Don't shortcut or skip these steps, especially the first 3 times you perform this process. This process is designed to help you... trust it and try it. If you do feel the urge to take a short-cut or if you see your team headed in that direction, speak up and stop it. Stay focused, prepare well and work quickly... but please **follow the process!!**

Follow The Process

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Value Stream Analysis

Did We Meet Our Objectives:

- ✓ understand what Value Stream Analysis is
- ✓ learn how to use it as a planning tool

... part of the Simpler Business System™

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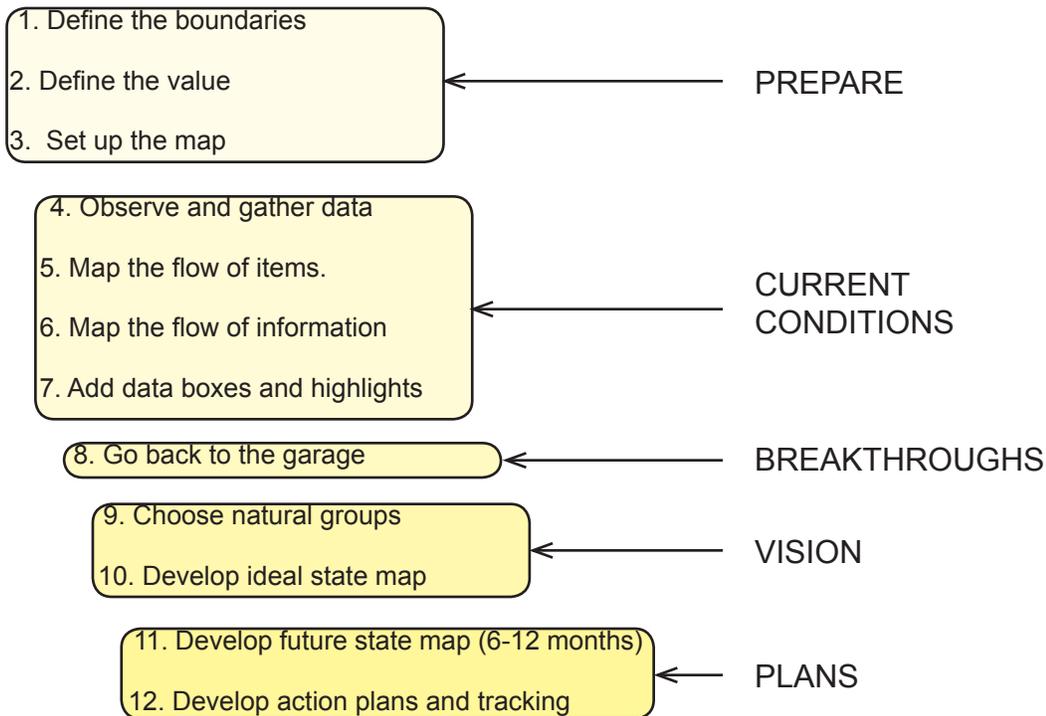
Did we meet our objectives?

What is Value Stream Analysis?

- a planning process for improving the performance of a Value Stream

- it uses Value Stream Maps to communicate current and future state information

How is it used as a planning tool?



Wrap-Up