

Premiere's Three Value Streams		
Family I	Family II	Family III
Clubs Company	Summit, Inc.	Velocity
Aces Company	Peoples, Inc.	
APEX, Inc.	Foreign Distributors	
Domestic Distributors	Suppliers	
	Outlet Sources	

Figure 16. Premiere's Three Value Streams

For their first project the team decided to work on Family I orders because they accounted for 50 percent of all orders received. They notified the champion of their decision to narrow their focus, and the champion agreed with the decision.

The champion also noted that this decision should have a helpful effect on the other customer processes as well, which reaffirmed his support.

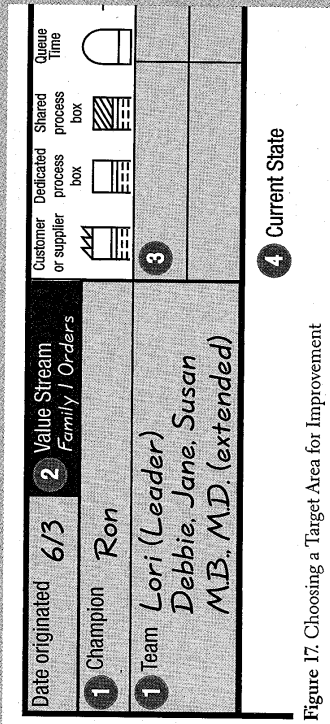


Figure 17. Choosing a Target Area for Improvement

Step 3. Learn About Lean

In Steps 1 and 2 you gained management commitment, formed a core implementation team, and identified the value stream targeted for lean conversion. Before you can map the current state (Step 4), identify lean metrics (Step 5), and map the future state (Step 6), you must gain a good understanding of lean concepts and terms. The purpose of Step 3 is to ensure that everyone has this understanding.

This step covers some key points on how to approach the training, and then reviews the lean concepts that should be conveyed during the training. As you read about each concept or tool, keep in mind that this is only one avenue or approach to learning about lean. The learning and implementation process is different for every organization. Here we document a proven approach that has worked in many organizations throughout the world, but it is by no means the only way. Take what makes good business sense for your organization and integrate it.

Training and Doing—The Balancing Act

There is a delicate balance between training and doing. Lean concepts must make good business sense *now*, before going to the next step. But ideally you will want to utilize the “LEAP” approach to all training:



The faster the AP follows the LE, the better the results. You will learn a lot once you start creating and implementing. But if people are not asking questions, or if they seem disinterested, reconsider the approach immediately before you go any further. More training or explanation on lean concepts and tools may be necessary.

Learning the lean system is a lot like learning to ride a bicycle. It is something that cannot be done entirely in a classroom or by reading a book. You can draw a bicycle on a white board and tell people where to place their hands, where to sit, and where to put their feet. But this explanation is not enough to teach someone how to ride a bike. To become proficient at riding a bike, you have to *get on the bike and ride it*. You may need some assistance at first, because you haven't yet learned how to balance. After several attempts and falls, however, you start to understand the requirements and develop a sense of feel for riding.

Understanding and implementing the lean system is very similar. You can read material about the system and attend workshops and conferences on the subject. This will help, but like riding a bicycle, you must learn by *doing*. Similarly, you will need some assistance in the beginning from people who have implemented before. They can help you keep your balance. You can now begin to change your workplace with kaizen events. You will make mistakes; don't give up when that happens. Pick yourself up and try again.

Remember that the goal of learning is to get to the *doing* in Step 8. The point of a lean office transformation is to drive waste from the value stream. If you put a great deal of effort into planning a transformation, but then the transformation doesn't actually occur, all the time and effort that went into the planning is wasted.

Creating a Learning Plan

All companies aspiring to become lean must place a premium on education and training. To get the core implementation team up to speed, develop a training plan based on the following six steps:

1. Determine the required skills and knowledge.
2. Assess current skill and knowledge levels of team members.
3. Determine the gap between present skills and knowledge and required skills and knowledge.
4. Design the training.
5. Schedule and conduct the training.
6. Evaluate the effectiveness of the training.

Be sure to document the plan by making a specific agenda of activities, listing who will participate, and setting target completion dates.

The knowledge for the training should come from a variety of sources. Some good options for training include:

- Conducting a simulation that ties all the lean concepts together. This can be accomplished by attending a public workshop or using materials your training department may supply.
- Benchmarking another facility that is using some of the tools.
- Demonstrating a successful in-house project.
- Using internal resources to conduct "just-in-time" lean training sessions that are quickly followed by actual application of the concepts.
- Using a consultant to facilitate the learning as it relates to the value stream.
- Using books and videos combined with group discussion of the content.

The more you learn and do regarding lean, the more you will be able to learn and do. As with everything, real learning is cumulative; the way to gain experience with a lean office is in small, incremental steps. Build from what works and move on.

Benchmarking

Benchmarking is a structured approach to identifying a world-class process, then gathering relevant information and applying it within your own organization to improve a similar process.

Benchmarking Guidelines

- Be specific.** Be specific in defining what you want to improve. You may want to improve your entire administrative operation, but you also may want to see specifically how a company uses supermarket concepts and kanbans.
- Be willing to share.** Identify an area you think may be world class in your organization, if you can, and present that to the potential benchmark site as something you are willing to share with them.
- Make it win-win.** Attempt to make it a win-win experience. Identify what's in it for them! Offer something. Let them know that you are sincere.
- Know the site.** Ensure that the benchmark team is familiar with some aspects of the company you will benchmark (what it produces or sells, size, etc.).
- Send questions.** Fax or e-mail specific questions in advance to the benchmark company's point person.
- Don't go alone.** Do not benchmark in isolation. It is always better to have a minimum of two members on the benchmarking team.
- Document.** Document and take notes as needed.
- Respect privacy.** If some information is proprietary and cannot be released, respect that and move on.
- Dress appropriately.** Be sure to discuss attire prior to the visit. Most companies have a "business-casual" dress code, but make sure you never underdress.
- Call them.** Consider conference calling if an on-site visit is not practical.
- Say "thanks"—a lot.** Show appreciation to the benchmarking site host. Consider giving some company t-shirts, hats, or golf balls to the people you will be visiting.
- Follow up.** Follow up with a letter to the host facility detailing what you found helpful. Again, offer to be a benchmark site for them at any time in the future.

Key Concepts of Lean

What exactly do we mean when we talk about lean? A lean system is one in which people strive to eliminate non-value-adding activities, or waste. In the remainder of this chapter, we will briefly identify the various tools utilized within the lean approach. They

will be further utilized and explained as they relate to the Premiere case study in Steps, 4, 5 and 6.

What do employees need to know before embarking on a transformation to a lean system? The key concepts in understanding lean are:

- The cost reduction principle
- The seven deadly wastes
- Just-in-time
- Three phases of lean application:
 - Customer demand phase
 - Continuous flow phase
 - Leveling phase
- Total employee involvement
- The visual office

The Cost Reduction Principle

Traditional management thinking dictates that you set your sale price by calculating your cost and adding on a margin of profit. But in today's economic environment this is a problem. There is always someone ready to take your place.

Lean evolved out of Toyota's cost reduction philosophy. In that approach, market conditions (i.e., customers) set the selling price, and cost and profit become variables. The primary focus is on internal costs.

Using the cost reduction approach, you determine the price customers are willing to pay and subtract your cost to determine your profit at that cost level (see Figure 18). This "lean thinking"—that price = cost + profit—forces you to reduce costs within the organization to ensure profit. That is why it is so important to look at reducing waste as the primary method of maximizing your profits.

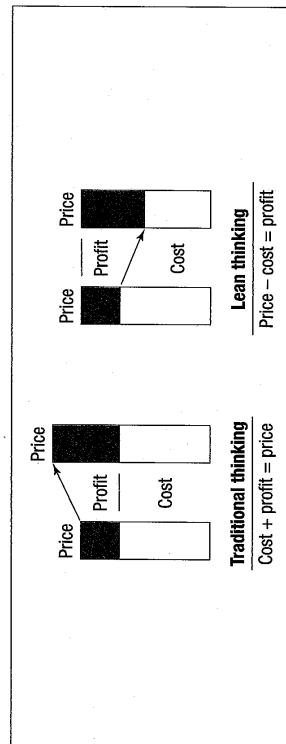


Figure 18. Cost Plus versus Price Minus

So in lean, when we say "The customer is first" we really mean it—even to the level of determining our cost and profit, and by extension, how efficient we will be.

The Seven Deadly Wastes

How can office workers reduce and maintain costs on a daily basis? It's just not reasonable to have everyone being a part-time bookkeeper. However, everyone can wage war on the seven deadly wastes.

Waste

The ultimate lean target is the total elimination of waste. In lean terms, waste is anything that adds cost or time without adding value. It is something being done that has no value to customers even though it may be included in the overall cost.

Prior methods of process improvement have looked at waste from a departmental perspective, without clearly defining specifics. This approach made it extremely difficult to get a handle on dealing with waste. Waste is often hidden in processes, which makes it difficult to detect. Lean breaks waste down into specific aspects to allow easier identification for focused improvement activities.

Waste is categorized into seven different types. Each can be targeted specifically to help identify the appropriate lean tool to assist in its elimination. To date, the focus of waste reduction has been primarily on the shopfloor, in manufacturing processes.

Waste is even more of a problem in the office. A disorganized, wasteful environment exacts a heavy toll on people. It keeps them from being and feeling successful.

Wastes are known as the seven deadly wastes because they are like toxins in the work environment. The first step toward eliminating them is to be able to recognize them for what they are. Let's review the seven deadly wastes.

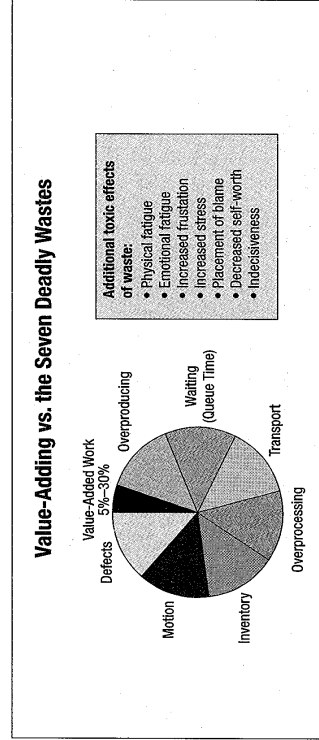


Figure 19. Value-Adding vs. the Seven Deadly Wastes

1. The waste of overproducing.

When you overproduce you produce too much of something or produce it before it is required. In the manufacturing environment, units are overproduced. In the office, it is more likely to be paper and information.

Producing more than needed or producing it too soon does not improve efficiency. It consumes resources, such as materials, people, and storage, faster than necessary and brings about other kinds of waste.

***To eliminate this type of waste:**

- Establish a work flow sequence to satisfy the downstream customer.
- Create workplace norms and standards for each process.
- Create signal devices to prevent early processing.

2. The waste of waiting.

Waiting for anything—people, paper, machines or information—is waste. Waiting means idle time, and that causes the workflow to stop. It adds no value to the work unit or service, and the customer certainly doesn't want to pay for it.

The waste of waiting is the easiest to detect. It is also the most aggravating to employees. There are many examples in the office: waiting for signatures, waiting for machines, waiting for phone calls, waiting for supplies.

To eliminate this type of waste:

- Review and standardize required signatures to eliminate unnecessary ones.
- Cross-train employees to allow work flow to continue while someone is out.
- Balance the workload throughout the day to ensure that all people are being used optimally.
- Make sure that equipment and supplies are available.

3. The waste of overprocessing.

Waste is associated with processing things that the customer doesn't want (and therefore doesn't want to pay for). The waste of overprocessing often includes redundant activities such as checking someone else's work, obtaining multiple signatures, or excessive reviews.

To eliminate this type of waste:

- Review the value-added steps in each process, and streamline or eliminate steps whenever possible.
- Review all signature requirements and eliminate signatures whenever possible.

4. The waste of inventory.

Excess stock of anything is waste. Excess inventory takes up space, may impact safety, and can become obsolete if work requirements change. Unneeded files, extra supplies, and unnecessary copies are some types of inventory waste. The waste of inventory can be a departmental matter, or it can be an individual one (How many pads of post-its do you squirrel away in your desk?).

The waste of inventory is a habit that may be difficult to break. Extra inventory represents a margin of safety that we may be unwilling to let go of. Lean thinking means changing this mindset.

Having extra supplies means you have more to manage. Extra inventory can obstruct other processes as well: if you are looking for another item, you have to move extra inventory, resulting in a waste of motion. Or, if it is improperly lifted, it can be a safety issue. Finally, things may become obsolete before you get around to using them.

A critical point: we also relate this waste to time. *Time is a valuable commodity in the office environment, and a work unit or folder sitting on someone's desk is waste.*

To eliminate this type of waste:

- Produce only enough to satisfy the work requirements of your downstream customer.
- Standardize work locations and the number of units per location.
- Ensure that work arrives at the downstream process when it is required and does not sit there.

5. The waste of motion.

Any motion that is not necessary to the successful completion of an operation is waste. All unnecessary work movements are a form of waste. All motion should add value to the work unit or service for the customer. Ineffective job processes and layout are often responsible for creating more walking, reaching, or bending than are necessary.

To eliminate this type of waste:

- Standardize folders, drawers, and cabinets throughout the area; use color codes as much as possible.
- Arrange your files (desktop and electronic on PC) in such a way you can easily reference them.
- Arrange work areas of office equipment in central locations; consider purchasing additional equipment to eliminate multiple trips.

6. The waste of defects or correction.

Waste arising from producing defective work that needs to be redone is clearly waste. Doing something over is waste. This waste also includes productivity losses associated with disrupting a normal process to deal with defects or rework. The waste of correction is much easier to spot than many other forms of waste.

To eliminate this type of waste:

- Establish standardized work procedures and office forms.
- Create and post job aids.

7. The waste of transport.

Transporting something farther than necessary, or temporarily locating, filing, stocking, stacking, or moving materials, people, information or paper, wastes time and energy. Materials and supplies are often moved several times before reaching a permanent location. All of this movement is waste. In addition, things in temporary storage are more likely to be broken, stolen, lost, or become an obstruction.

To eliminate this type of waste:

- Make the distance over which something is moved as short as possible.
- Eliminate any temporary storage locations or stocking locations.

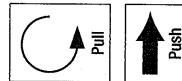
Once you understand waste and where to find it, it's not difficult to see the logic in lean. Use lean to slash waste and increase value-added work. Let's start by looking at just-in-time systems.

Just-in-Time

Just-in-time is at the heart of the lean system. It ensures that, during work, the next downstream process has:

- Only those work units needed.
- Just when they are needed
- In the exact amount needed

The ideal state is characterized by the ability to replenish a single work unit when the customer has pulled it (i.e., it has been pulled by the downstream process). This ideal state is also referred to as a "pull system." This is the opposite of a "push system," common in most workplaces, in which work piles up in batches as it is pushed from process to process.



To accomplish this state, understand that the people with the most important information are your colleagues in the process downstream of you. They are the ones who can tell you what they need, when they need it, in the exact amount needed.

In the office, we are concerned with the flow of various types of work units as well as information. Applying lean principles in the office means learning to see the flow of business processes in terms of units of work or information (see Figure 20).

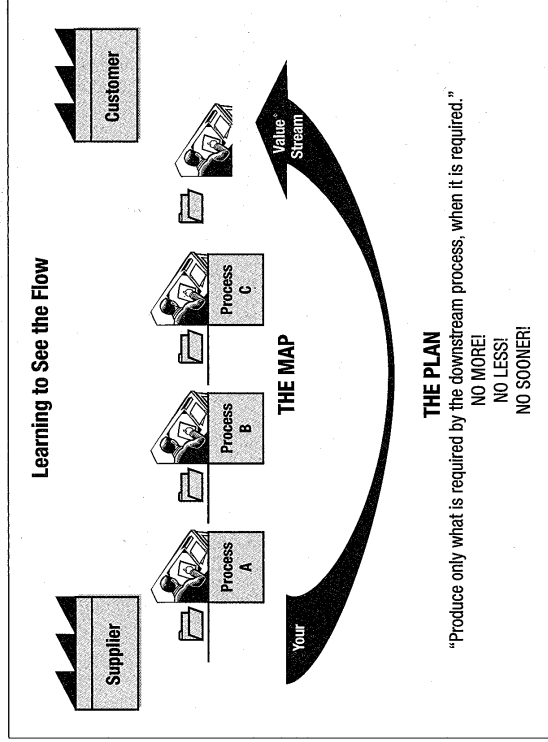


Figure 20. Learning to See the Flow

Three Phases of Lean Application

It is helpful to group lean concepts into three phases: customer demand, continuous flow, and leveling (see Figure 21).

We recommend that you implement these phases in the same order that you learn about them. (Remember, one of the main reasons why lean transformations fail to be sustained is that people have "cherry picked" the implementation tools, including the popular kaizen workshops and value stream mapping workshops.) Understanding the demand, flow, and leveling phases of application, along with the guidelines for implementing the VSM process, will give you the solid approach required, not only for implementing but also for sustaining lean improvements.

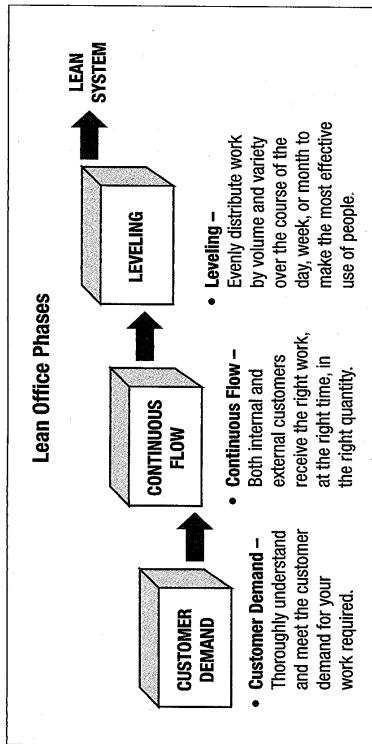


Figure 21. Three Phases of Lean Application

Customer Demand Phase

First, you must determine who the customer is and what the customer's requirements are. You will then be in a position to meet customer demand. The various tools and concepts for determining and meeting demand include:

- Takt time calculation
- Pitch calculation
- Buffer and safety resources
- 5S for the office
- Problem-solving methods

We will explore these tools and concepts in Step 6–Phase I

Continuous Flow Phase

Secondly, you must establish continuous flow to ensure that the right work units arrive at the right time, in the correct amounts, to your customers—both internal and external. In Step 6–Phase II we will explore the following in some detail.

- In-process supermarkets
- Kanban system
- FIFO
- Line balancing
- Standardized work
- Work area design

Leveling Phase

Finally, after you have determined demand and set up continuous flow, you must perform leveling to distribute work evenly and effectively. In Step 6–Phase III we will review:

- Visible pitch board
- Load leveling (heijunka) box
- Runner system

The lean approach is a powerful force for change and growth. Sustaining daily growth depends on establishing two important foundations: total employee involvement and a visual office.

Total Employee Involvement

Every house needs a firm foundation. In a lean system the foundation for everything begins with your philosophy about people. Employees should be encouraged to make positive contributions to improving their own work areas. Through kaizen events, teams meet for a short period to analyze a problem, recommend an improvement activity, and make it happen, allowing continuous improvement ideas to become a reality.

Kaizen

Small daily improvements performed by everyone. The word “kaizen” comes from the Japanese characters “kai,” to take apart, and “zen,” to make good. The point of kaizen implementation is the total elimination of waste.

World-class factories are best known for the thousands of informal kaizens that occur on a daily basis. And it is through total employee involvement that these activities can succeed.

Thousands of books have been written about the role of people in lean, but there are a few basic principles that must exist for you to succeed:

- **No-blame.** Problem solving and improvement focuses on the work, not the people.
- **Teamwork.** A team is much greater than the sum of its parts.
- **Vision.** Each person needs to have a greater view than just the work in front of him or her. Seeing the value stream will fill that requirement.
- **Catchball.** Getting feedback, buy-in, and new ideas is an ongoing activity. Always share ideas with your managers and the people who work for you.
- **Continuous improvement.** Everyone should be encouraged to improve.
- **Ownership.** Everyone needs to feel a part of the event and care about the outcome.

The Visual Office

The visual office begins with one simple premise: "A picture is worth a thousand words"—especially if that picture conveys exactly what you need, when and where you need it. The goal of the visual office is to give people control of the workplace. The visual office contributes to total employee involvement. It entails the following actions:

- A designated place to share improvement ideas that is common to the area.
- A system to maintain visual standards and levels of housekeeping (a 5S program).
- A small team that is rotated on a regular basis to continually improve.

The benefits of maintaining a visual office are:

- Promotes communication throughout the department.
- Allows visitors to get a sense of what is happening in an area.
- Allows for a sense of pride to workers.
- Demonstrates a process of continual improvement.

Keys to Successful Implementation

In order to complete Step 3 successfully, you must:

1. Create a training plan that makes sense for your organization.

Everyone has different needs, budgets, and resources. Every group of people has a different set of knowledge. The training plan should fit your set of knowledge.

After seeing what you need, see what is available to you in your company. You may have a lean expert at home—take advantage of local resources.

2. Use a variety of sources and materials for the training.

People don't learn in just one way. Some people like to learn by reading, others by watching. Your plan has to include the major learning methods for most people, which are:

- Books, videos, and study groups
- Conferences, seminars, and lectures
- Courses and workshops

3. Gather information and ideas through benchmarking.

Learning to think in lean terms means learning to think creatively. It's important to go beyond the walls of your own workplace—and even outside your own industry—to observe how things are done and how you might adapt ideas to fit your system. A classic example is the supermarket concept for in-process work, which we'll talk about in Step 6.

PREMIERE CASE STUDY—STEP 3

The team creates a training plan and spends the next six weeks learning about lean tools and methods (see Figure 22).

Premiere Manufacturing Lean Training Plan		
Team Member	Training Activity	Completed By
Debbie	Attend Overview/Simulation Benchmark Company C	6/15 6/30
	Attend Lean Workshop	7/15
Jane	Attend Overview/Simulation Benchmark Company C	6/15 6/30
	Attend Overview/Simulation Benchmark Company C	6/15 6/30
Lori (Team Leader)	Attend Overview/Simulation Benchmark Company C	6/15 6/30
	Read <i>Lean Thinking</i> Read <i>Value Stream Management</i>	7/30 7/30
Ron (Champion)	Attend Overview/Simulation Benchmark Company C	6/15 6/30
	Attend Overview/Simulation Benchmark Company C	6/15 6/30
Susan	Attend Overview/Simulation Benchmark Company C	6/15 6/30
	Attend Lean Workshop	7/15

Figure 22. Premiere Manufacturing Lean Training Plan

The entire team attends a four-hour overview on lean techniques conducted by Premiere's training department. The overview includes a lean simulation that demonstrates the benefits of continuous flow. The team also goes on a benchmarking trip to a local company that has successfully implemented lean office methods. Two of the members attend a one-day workshop on lean. The team leader completes and gives a report on *Lean Thinking*, by Womack and Jones.

After discussing what they have learned and observed, the team members conclude that the target value stream is operating with very limited continuous flow. The work areas are generally disorganized and disorderly, and there is tremendous variation in the way different workers in the department perform value-adding tasks. The team enters these observations on the storyboard and looks forward to mapping the current state in Step 4.

Date originated	6/3	Value Stream	Customer, dedicated or supplier process	Shared process	Queue time	Electronic information flow	Manual information flow	Supermarket parts	Mail shipment	Supplier market
1 Champion	Ron	2	Value Stream Family: I Orders							
1	Team: Lori (Leader), Debbie, Jane, Susan, M.B., M.D. (extended)	3	Limited Flow	Disorganized Workplace						No standard work
		4	Current State							

Figure 23. Listing Problems in the Target Area

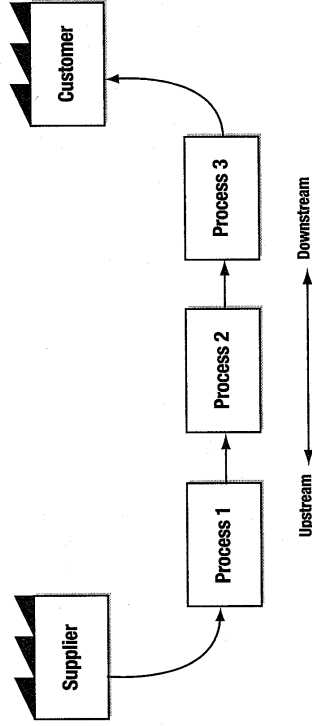
Step 4. Map the Current State

After attaining a good understanding of lean, the next step is to map the current state, showing the flow of work units and information by using a set of symbols or “icons.” Because a value stream map is a visual representation of material and information flow for a particular value stream, it is indispensable as a tool for visually managing process improvements.

To improve a value stream, of course, you must first observe and understand it. Mapping the process gives you a clear picture of the wastes that inhibit flow. Eliminating the waste makes it possible to reduce administrative processing time, which will help you consistently meet customer demand.

In creating your map you should focus on having your core team gather accurate, real-time data related to your product family and its value streams and use this information to identify all the specific activities occurring along each value stream.

When collecting data for your current-state map, start from the closest point to the customer and work your way upstream through the various processes as shown below. This will help you observe and understand the value stream from your customer’s perspective.



Start your map with the customer (on the right side) and move upstream (toward the left).

This mapping step is divided into two parts. The first part is preparing to map, followed by the drawing of the map. Each part will be reviewed.