by Joan Adams

Muda II – Solutions To Waste

The earlier you stop an error, the less costly it is.

In my last article ("Stop Wasting Time, Effort, Money!" SUPPLY HOUSE TIMES, January 2006, page 26) you learned about Muda, the Japanese word for waste. Since then, you have no doubt seen all sorts of Muda every day in your business — inside salespeople waiting for information; more inventory than needed stacked up around your warehouse; billing, shipping, receiving errors. There is an old saw that goes something like, "Half of solving the problem is identifying it." So, you are halfway there. Now, armed with the knowledge about these specific kinds of Muda, it is time to use some "Lean techniques" to reduce and ultimately eliminate them.

1 Waiting: Waiting waste is tough to stop. That's because many causes of waiting are beyond your control – weather, vendors, traffic, etc. Inside your company, I bet a lot of waiting is caused by lack of information. An inside sales guy waits for someone in the warehouse to tell him how many fittings are in stock. An inside sales gal takes an order – but doesn't send it to the warehouse for another two hours.

All your employees should input inventory and order data into your computer system in real time. The computer database should tell the inside guy how many valves are in stock (no waiting). The warehouse should learn about orders the instant they are placed. This will involve training and procedures.

2 Inventory: It's all about turns. Track your inventory turns, for every last item. Establish reorder quantities. And plan to reduce those quantities over time. Consider dumping all products that haven't moved in more than a year, then go down from there. I know write-downs hurt – but they only hurt once. Start tracking typical vendor lead times – these will help you to continue to reduce inventory. As lead times get shorter, you can reduce your in-house stock even more.

3 Transportation: Map the process. Literally, draw a pictogram showing the "journey" a valve makes from arrival at your warehouse to the door of your customer.

This is a pretty straightforward process: A valve arrives in a box from a vendor. It gets unpacked in a receiving area. Then the valve gets put away in the warehouse. Ultimately it gets picked, and is probably put in a staging area. It gets packed and then the packed order is moved to a shipping area.

How does it work in your warehouse? Does the valve make some other "side" trips? Maybe it goes to an overstock area first, then to its proper place. After being picked, does it sit in a staging area for a while, waiting for a back order? When the order gets canceled, the valve gets restocked. This valve has done more than a little traveling – and still hasn't generated a dime of revenue for you. Now follow the paperwork. Documents also can take a very circuitous route through the warehouse and then to the back office before getting filed. Mapping doesn't cure the excess transportation of product and paper – but it does give you a clear picture of what needs to be streamlined and where to start.

4 Over-production: Preparing partial orders can be a waste of time. It is always more useful for your staff to prepare orders that can be shipped today rather than those that won't be shipped for days, weeks or maybe never. Simple rules — such as, completed orders take priority over partial — will help prevent "over-production."

5 Over-processing: This is subtle – but both important and expensive. The simplest way to think about it is: Don't perform tasks or deliver services for your customers that they don't particularly want and therefore won't pay for. Many customers are happy with once-a-week delivery. There is no reason ever to give these folks one-day delivery. It costs you money and they don't care!

6 Motion: Transportation waste means excessive movement of materials and paperwork. Motion waste is about your employees. How much moving around do they do in order to perform their jobs?

Draw up some more maps. Trace the steps of your warehouse guys preparing an order for shipping. Are the computer and the printer near the workstation? Are all the necessary tools (tape guns, boxes, shipping labels, etc.) near the workstation? Take a hard look at each person's work area. In Lean, all the materials needed for one day's work should be located as close to the process as possible. In many offices, I see things like the fax machine being the furthest away from the person who uses it the most. Rearranging work tables, machines, and people can cut down on a lot of the useless motion.

7 Errors/Defects: The earlier you stop an error, the less costly it is. Lean is very big on "Getting it right the first time." Each time an employee passes on an order, it should be inspected for quality. This needs to happen from beginning to end. If "bad" materials are received, stocked, picked, packed and shipped, you are going to be in a world of hurt. You have to pick up the return, correct all the invoicing, return to vendor, verify credit and then try to convince the customer you are still a quality PVF supply house despite the mistake.

All this could be avoided if receiving had caught the error. The same is true throughout the process. Your people load up the truck for deliveries. Make it part of their job to verify piece counts. There is no reason to deliver the wrong number of pipe lengths to a customer. This is what Lean calls "quality at the source." Your shippers can count – and they should for each delivery. Make it part of their job description.

8 People: Not using your people to the fullest of their capabilities is a total waste. So, what can you do about it? Start by creating a skills matrix. List the employees in a column and then across the top write all skills. This can include product knowledge, language skills, and computer competencies.

A simple example:

Skill Level 1-5

	Valves	Pipes	Steamtraps	Word	Excel	Spanish
John Doe	5	1	5	3	2	0
Bill Farrow	4	3	3	2	2	2
Mike Strong	4	4	1	4	4	0
Jose Vasquez	2	4	1	1	0	5

Now you have a "skills" inventory. You can quickly see where your staff is strong and what areas need work. From this, you can develop a training and incentive program. Develop skills goals for each employee: John Doe needs to improve his pipe knowledge, Jose needs to learn more about valves, Bill needs to improve his computer skills. Tie achieving these goals with the annual review. A skills matrix and training/incentive plan will help you raise the skill level of your employees. It will help you when it comes time to hire.

Here you have eight specific, identified sources of waste in your operation. Pick two or three and go after them relentlessly for the next two to three months. You will see a difference. Then move to another one or two. You can work through this list again and again, doing what Lean calls Continuous Improvement. You have mastered "Muda," saving you all sorts of time, money and aggravation.

Now head for the Sushi Bar. This Japanese lesson is over. <<

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