



## Eight Deadly Wastes



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One of the key tools of the lean enterprise thinking is identifying and reducing if not completely eliminating waste from the processes and systems. The following are eight deadly wastes that consume resources, cut into cash flow, reduce capacities and ultimately add cost the organization's bottom line.

The overproduction waste is making more, earlier or faster than the next operation needs it. Some signs of this waste are batches of material awaiting the second or third operations, parts built up in front of equipment, or even excess copies at a meeting or replying to more people on e-mails than needed. Balance the load between operations and creating a one piece flow can help reduce this waste. Look around and see how many copies are left at the end of a meeting or how many forms become obsolete when revised.

The motion waste is any movement of people that does not add value to the product or service. Some signs of this waste are people twisting, walking, bending or reaching. Determine how these motions can be reduced or eliminating by creating point of use storage to minimize movement. Some of the guidelines are to have those items used hourly within an arm's reach, items needed daily within a couple steps, and those other items used less than daily stored and identified for quick retrieval as needed. Planning ahead you can stage in advance at the point of use and when they are needed.

The inventory waste is any supply in excess of one-piece flow. Although many organizations cannot get to one-piece flow depending on the product, but most all can reduce inventory. Many organizations have safety stock with the just-in-case mentality and this can cover a multitude of sins or problems. However, these problems are not identified or resolved because of this safety stock and excess inventory; causing inefficiencies that get buried. If there is revision in the part, then excess inventory or excess forms become obsolete and costs the organization. Improve turns and reducing inventory improves cash flow and reduces cost of storage.

The transportation waste is moving of materials, information or people around the organization that does not add value. Some signs of this are moving material more than once, people driving back and forth to the shop to get tools, or poorly placed equipment requiring excess transportation. A spaghetti diagram of products, people and equipment is a good visual tool to identify and reduce this waste. This requires better planning and point of use storage to reduce transportation.

The waiting waste is non-productive time waiting for a machine, materials, information, people, sign-offs, etc. Some signs of this waste are machine sitting idle awaiting material, machine down for maintenance, awaiting sign-off for first piece, trying to answer a customer question but waiting for information from supervisor, or a delay in sending out purchase order awaiting a sign-off by Vice-president. By observation, doing the value stream mapping determining take time verses actual time and using Total Productive Maintenance to reduce down time can help identify and reduce this waste.

The underutilized people waste is not utilizing people's experience, skills, knowledge, creativity or ideas. The original seven wastes did not include this waste; however, it is very prevalent in the western world to rely most on managers, outsourcing and consultants. They fail to see the abilities, ideas and experience are working for them right under their nose. It is important is any continuous improvement and your lean effort includes the people closed to the process, who often have the best ideas.

The defects waste is any information, products, parts, or services that require rework, corrections or are scrapped. This is the one area of waste that is the most measured and gets the most attention. Many defects go unnoticed like retyping a report, fixing a problem on the fly, reprinting documents after review, or conducting an operation on the part a second time to make it right. Many organizations add inspection to the try and reduce the number of defects of getting to the customer. I real key is to Poke-Yoke or mistake proof the process so the defect will not happen again and make sure you identify and fix all the defects in the organization.

The over-processing waste is the efforts that add no value to the product or service from the customer's stand point. Any process that does not change the fit form or function of the product or service is technically over-production. Things like inspection, movement, transportation, storage or billing are non-value added activities and over processing. Some of these items are necessary but should be minimized and optimized to provide the processing at the lowest cost. Sometimes we add processing the customer does not need like painting or other functions and features to the product or services.

It is important to understand these wastes so they become second nature for your culture to see on a daily basis and deal with, so you start reducing the cost of the product or service for the organization. In future newsletters T3 Time will examine some of the common tools used in Lean Enterprise Thinking.