Mistakes that require additional time, resources, and money to fix. In a manufacturing process, a defect might involve a defective part that has to be remade. Some causes:

- **Poor quality controls**
- **Poor repair**
- **Poor documentation**
- **Lack of standards**
- **Weak or missing processes**
- **Misunderstanding customer needs**
- **Uncontrolled inventory levels**
- **Poor design and undocumented design changes**

Completely eradicating a waste is very difficult, but defects can certainly be limited by the application of standardized work plans, more stringent quality control at all levels, a full understanding of work requirements and customer needs, and simple job aids such as checklists

In some organizations, workers just blindly keep producing, even when those who receive their output either are not ready for it or do not need it. This is a big flaw as it can tie up significant working capital. It is especially common in manufacturing, but it can occur in any workplace situation in which there is a bottleneck. Overproduction may occur due to:

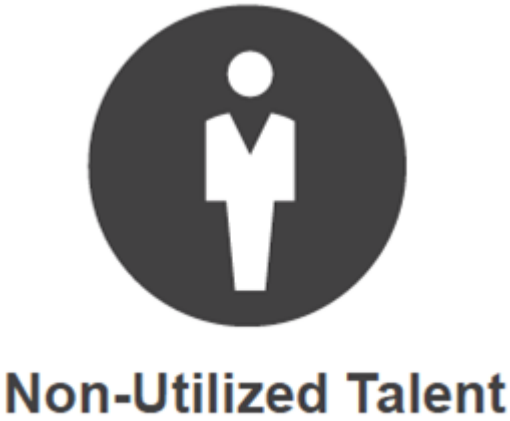
- **Just-in-case production**
- **Unclear customer needs**
- **Producing to a forecast**
- **Long set-up times**
- **Engineering changes**
- **Poorly applied automation**

The solution to overproduction is to establish a reasonable workflow for the benefit of the customer. Be sure that there are well-established procedures in place for every process in your organization, and if necessary, implement new processes to keep work from backing up behind bottlenecks in the organization.

This occurs whenever work has to stop for some reason: because the next person in line is overwhelmed, because something broke down, because you are waiting for approval or materials, or because you have run out of something. Causes can include:

- **Unbalanced workloads**
- **Unplanned downtime**
- **Long set-up times**
- **Producing to a forecast**
- **Insufficient staffing**
- **Work absences**
- **Poor process quality**
- **Poor communication**

Whatever the cause, some workers have to wait for a bottleneck to be cleared. One way to address this is the need to provide adequate staffing to handle the workload at the bottlenecks, which some managers may target as a source of monetary waste.



While not part of TPS's seven wastes, this waste is being increasingly seen within businesses today. Not or under-utilizing people's talents, skills and knowledge can have a detrimental effect on an organization. Companies can experience great benefits when recognizing the value of skills and improvement ideas from all levels of the business and can suffer when not effectively engaging in the process. This can typically be seen with:

- **Assigning staff to wrong tasks**
- **Wasteful admin tasks**
- **Poor communication**
- **Lack of teamwork**
- **Poor management**
- **Insufficient training**

If the above list sounds oddly familiar, it should: many of these failings are the same ones that result in a lack of employee engagement, which can hamstring any organization's productivity. Key solutions include empowering your employees, stop micromanaging and increase training.

Transportation

Waste caused by moving things around. This is less of a problem in a business office than in a manufacturing plant, since most of what white collar workers "transport" can be sent by email for example. Otherwise, too much transportation tends to increase costs, wastes time, increases the likelihood of product damage and deterioration, and can result in poor communication. In general, transportation waste can be caused by:

- **Poor plant/office layout**
- **Unnecessary or excessive steps in the process**
- **Misaligned process flow**
- **Poorly designed systems**

Limiting transportation waste can be easily addressed by common-sense efforts such as simplifying processes, repairing physical layouts, handling products less often and making distances between steps as short as possible.

Inventory

This waste occurs when there is supply in excess of real customer demand, which masks real production. Causes include:

- **Overproduction and buffers**
- **Poor monitoring systems**
- **Mismatched production speeds**
- **Unreliable suppliers**
- **Long set-up times**
- **Misunderstood customer needs**

Motion

Any excess movement, whether by employees or machines, that does not add value to the product, service, or process. Typical causes include:

- **Poor process design and controls**
- **Poor workstation/shop layout**
- **Shared tools and machines**
- **Workstation congestion**
- **Isolated and siloed operations**
- **Lack of standards**

The solution here is to re-arrange layouts to decrease the distance between stations and make it easier to reach things that are often used.

Extra-Processing

This often occurs due to the creation of multiple versions of the same task, process more than is required or long-winded poorly designed processes. Examples include:

- **Excessive reports**
- **Multiple signatures**
- **Re-entering data and duplicated data**
- **Lack of standards**
- **Poor communication**
- **Overdesigned equipment**
- **Misunderstanding of the customer's needs**
- **Human error**

All these unnecessarily increase your costs, time, and resources. You must first examine and map your organization to analyse the processes to fix them. Standardize processes, empower employees, and eliminate unnecessary documentation, sign-off processes, and meetings.