



# Taichi Ohno's Seven Wastes Plus Two

## 1. Processing

**Find simple solutions in place of complex ones.**

## 2. Motion

**Eliminate all unnecessary "movement" and steps of people.**

## 3. Overproduction

**Produce only the exact amount of goods the customer wants when the customer wants them.**



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- **4 Defects**                      **Strive to achieve the goal of no rework ever (no mistakes, rework, or defects).**
- **5 Inventory**                      **Avoid scrap, trim, excess, or bad raw materials. Make sure that nothing sits, so there is a steady flow to the customer. Any kind of idle inventory represents waste, including raw materials in any form, work-in-process, and finished goods inventories.**
- **6 Time**                              **Eliminate delays, long setups, and unplanned downtime of machines, processes, or people. These often result from poor specifications,**



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## **7 Transportation**

**Eliminate the movement of materials or information that does not add value to the product, such as double and triple handling of goods and the needless movement of information**

- **8 Space**

**Conserve space in the plant or office layout by improving poor arrangement of machines, people, conveyors, or work stations, and storage of excess raw materials, parts, work-in-process, and finished goods inventories.**

- **9 Energy**

**Operate Equipment and use person-power only for productive purposes.**



# Value Added / Non Value Added

- Value Added activity is that which the end user customer will pay for.
- Non Value Added is waste activity that has no value to the end user customer. The form, function and features of the product are unaffected.
- Non Value Added but Necessary activity is that which is required of a regulatory authority.
- Non Value Added and Not Necessary activity should be eliminated.