

## Finding Hidden Wastes in a Work Area

The following checklist can be used to assess your workplace and help you discover waste reduction opportunities therein. The second page has more detailed guidance for each of the checkoff questions the help you understand what you are looking for, enjoy the journey.

- | Yes                      | No                       |                                                                                                                                                                                                                                                                   |
|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Is there a place for everything and is everything in its place?                                                                                                                                                                                                |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Is inventory sitting idle in the plant, not being immediately utilized?                                                                                                                                                                                        |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Are there visual aids/controls in each process that identify how the operation should be performed, that limit production volumes to what is needed by the next operation in the chain, and that provide operators with clear, precise operating instructions? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Are there devices on equipment/processes that eliminate the chance of production and/or assembly errors?                                                                                                                                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Are only a few minutes spent, in any process, to set up or change over the equipment/process?                                                                                                                                                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Is a pull system used for the movement and control of material and components?                                                                                                                                                                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Have preventive maintenance procedures been established for all equipment that clearly identifies operator obligations in the process?                                                                                                                         |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Are there owner-operators for key equipment and procedures?                                                                                                                                                                                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Is there any scrap, rework or obsolescence?                                                                                                                                                                                                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Does the workload of all operators appear to be about equal?                                                                                                                                                                                                  |

Additional discussion/guidelines for questions above

1. *Is there a place for everything and everything in its place?* This question addresses workplace organization or lack of it. Applying the 30-second rule usually will test the level of organization. If you ask an associate to describe an item needed for production, a tool, fixture or material, and YOU can't find it in 30 seconds, there are opportunities for waste reduction here.
2. *Is inventory sitting idle on the plant floor, not being immediately utilized?* Most Japanese manufacturers see inventory as the root of all evil. It is quite visible to employees within an organization such as Toyota, that a plant with inventory that is not being immediately used is almost a shocking waste. However, this is usually hidden in the eyes of employees and managers who are used to seeing large batches of product produced and stored often for excessive periods of time. Thus, the wastes associated with not fully resolving question one are the wastes of overproducing.

As a result of overproduction scrap and rework always occur, the production associate's time is not utilized effectively in meeting customer demand and you incur carrying costs for unneeded inventory. Plus, quite often you must then use overtime to produce something that is not immediately needed – to point out just a few of the more common wastes created with overproduction.
3. *Are there visual aids/controls in each process that identify how the operation should be performed, that limit production volume to what is needed by the next operation in the chain, and that provide operators with clear, precise operating instructions?* –The wastes associated with the lack of appropriate visual controls may not be obvious as the waste of overproduction, but much time and effort is wasted by employees when they do not clearly understand what is expected of them-in terms of the job to be done. This is not meant to imply that large volumes of written text should be given to each operator. As a simple guide operator instructions should be 90 percent visual in nature.
4. *Are there devices on equipment/processes that eliminate the chance of production and/or assembly errors?* – Equipment/process devices designed to eliminate mistakes guard against the wastes associated with producing defective parts (product), assemblies, and components and thus, the potential of scrap and rework.
5. *Are only a few minutes spent, in any process, to set up or change over the equipment/process?* – Set up or change over requiring anything more than a few minutes create wastes in the form of under-utilizing an employee's time and adding absolutely unnecessary costs to the products due to gross inefficiency in the operation.
6. *Is a pull system used for the movement and control of materials or components?* – Knowing if a pull system of production exists relates to the wastes associated with batching and pushing material through the factory versus a flow that calls for material as required and in the exact quantities needed. Obviously, with this type of approach there is absolutely no room for defective parts or materials, thus the requirement to fully address and resolve any quality problems and/or issues within the process.
7. *Have preventive maintenance procedures been established for all equipment that clearly identify operator obligations to the process?* – Maintenance procedures that call for active involvement of the operator (generally termed TPM, total productive maintenance) help drive out wastes of equipment downtime by doing the kinds of things that serve to keep the equipment well maintained and operative – at all times.
8. *Are there owner-operators for key equipment and procedures?* – Owner-operators are employees who have the ability to do more than simply run parts (product). They, in essence, own the equipment and have a well-defined set of tasks and responsibilities.
9. *Is there any scrap, rework, or obsolescence?* – Any scrap, rework, or obsolescence is a waste that most workers can understand without extensive explanation. The key becomes assuring the work force that this is no longer acceptable and that every effort will be made to insert the kind of initiatives (tools) that help to drive most, if not all, of these considerable wastes out of the operation.
10. *Does the workload of all operators appear to be about equal?* – If the workload between employees is not about equal the waste is the inherent loss of balance and the inefficiencies that seems to create. Efforts have to be applied to balance work as equally as possible between operations.