



Improvement Cymru Academy Toolkit Guide



TIMWOODS

What is TIMWOODS?

TIMWOODS is an acronym used to identify waste within the Lean methodology. There are 8 forms of waste, which are represented by TIMWOODS, this acronym stands for transport, inventory, motion, waiting, over production, over processing, defects, and skills utilisation. In healthcare it is considered that value is a combination of what is valued by patients within a care pathway and the achievement of appropriate health outcomes (linked to providing evidence-based care). Any activity that does not contribute to this value can be classified as waste.

Diagram 1: TIMWOODS



Transport – Wasteful transportation refers to the excess movement of the product, patient/ service user or medical records, supplies and equipment through the process.

Inventory – Wasteful inventory is usually excessive inventory – defined as having more of a particular item than is needed to perform the process.

Motion – While transportation considers the movement of the product or patient/service user, the waste of motion refers to employees.

Waiting – Waiting refers to those points in the process where nothing is happening. Patient/service user waiting rooms is one obvious example.

Over production – This is waste where an excess of a product or service is being created without there being any need for them. Examples may include patient/service user meals for those who have discharged.

Over processing – Doing unnecessary work or work to a higher quality than the customer requires.

Defects – Any work activities not done 'right first time'.

Skills – Not using people to the best of their abilities but can also be created through not engaging employees or listening to their ideas. One example could be bed managers acting as porters.

Rationale

The eight-waste approach aims to help achieve improvement by enabling staff to consider and identify waste in the processes they use in their own workplace and removing activities that do not add any value, i.e. wasteful activities.

Background

Toyota introduced the 8 wastes of lean manufacturing between 1948 and 1975. They used logical and systematic improvement to enhance their performance within the manufacturing industry. The term is now known as the Toyota Production System. One of the main objectives of the system was to eliminate waste. Known as 'muda' in Japanese and to later be given the concept of 'lean'. The aim was to make process waste simpler to identify to make improvements. Taiichi Ohno is credited with being the architect of the Toyota production system, that originally classified the eight wastes.

When to use?

Waste is a symptom rather than the root cause of a problem. Waste indicates where problems are within the system or organisation. You can use the TIMWOODS approach if you are embarking on a project to ensure that resources are being used to optimal efficiency.

How to use TIMWOODS?

1. Map out your process from beginning to end. (See Process Mapping Toolkit Guide)
2. Use each acronym of TIMWOODS to ask your stakeholders or yourself if you can find out examples of waste in your mapped out process?
3. Write down each waste as you come across it.
4. Go to your process map and colour code each step based on whether it adds value or doesn't not add value. E.g., Blue for adding value, red for not adding value.
5. Ask yourself of stakeholders - 'Why is this waste here?'
6. Once you've located the statements to TIMWOODS, you are now able to decide on solutions and actions as a team.

Example

Large inventories have the effect of hiding out-of-date and obsolescent material. It is not unusual to find boxes of leaflets that are no longer in use. Sometimes inventories are purchased to take advantage of lower bulk prices in the short term. However, this can prove to be more expensive as there may be no actual usage.



What next?

Once you have succeeded in eliminating waste, your next step should be waste prevention. Ensure you design new services without inherently wasteful steps. Eliminating waste is not the only way to achieve an efficient process, but it is a

valuable learning exercise, which brings all the team together to understand and improve problems.

Additional resources

If you would like to learn more about making improvement to your workplace take a look at our website for what we offer you <https://phw.nhs.wales/services-and-teams/improvement-cymru/improvement-cymru-academy/> or email us PHW_ImprovementCymru@wales.nhs.uk to find about the improvement courses we can offer.

Resources and further reading

NHS England and NHS Improvement. *Quality, Service Improvement and Redesign Tools: Lean – Ohno's eight wastes*. [online] [Layout 1 \(england.nhs.uk\)](#) [Accessed 1 September 2022].

8 Wastes of Lean- TIMWOODS-[8 Wastes of Lean TIMWOODS - \(opexlearning.com\)](#) [Accessed 1 October 2022]

Process Efficiency to cut waste- [How to identify process inefficiency and waste | nibusinessinfo.co.uk](#) [Accessed 6 October 2022]