

### Time & Motion Studies

#### What are Time Studies and how will it help my workplace?

Vative Process Time Studies will provide your business with an overview of Value Adding processes and how they are balanced between process steps. These methods are used to improve processes including Quick Change Over(SMED) and Standard Work.

Using Lean techniques we teach your team about:

- ✓ Why change over time improvements are important
- ✓ Details of Change Over with regards to Internal/External time, preparation and after tasks
- ✓ Sequence the change over efficiently
- ✓ Identify wastes in the current process
- ✓ Effectively implement system to eliminate those wastes
- ✓ Monitor the performance of the change over
- ✓ Continue the process for other types of change overs
- ✓ See Quick Change Over, Standard Work and Labour Balancing information



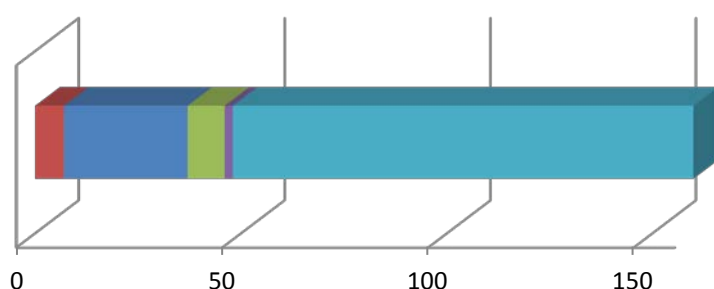
Time can be saved, by measuring the requirements!

Our Resultants are efficient and nationally qualified in:

UAS (Universal Analysis System)  
MTM (Methods Time Measurement)  
Operator speed performance assessment

### Time & Motion – Further Information

The major goal of lean is to identify and eliminate waste. Waste is defined as any resources spent on work that does not add value to the customer. Time & Motion Studies are about measuring what components make up a repetitive task. For example, take the process of “boiling water in a kettle”:



■ take kettle to sink = 7 secs

■ fill kettle with water = 30 secs

■ replace kettle on stand = 9 secs

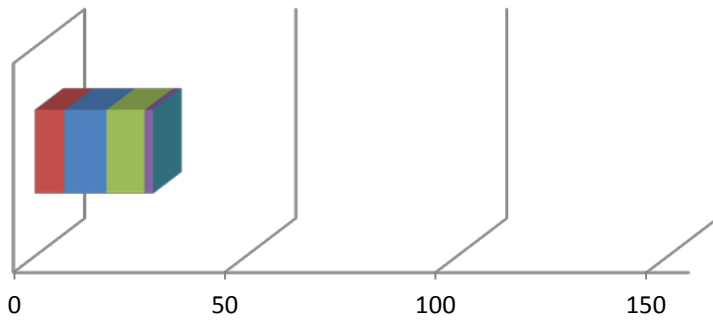
■ switch kettle on = 2 secs

■ wait for water to boil = 120 secs

**Basic time study:**

**BEFORE: Boiling Water in a Kettle**

You can see by doing a basic time study, you can begin to see how the various components of a task each contribute to the whole. There are two components that stand out as having excessive time. Attacking these areas of “waste” can result in a more productive solution.



- take kettle to sink = 7 secs
- fill kettle with water = 10 secs
- replace kettle on stand = 9 secs
- switch kettle on = 2 secs
- wait for water to boil = 0 secs

**Basic time study:**

### **AFTER: Boiling Water in a Kettle**

More complex time and motion study techniques are applied to more complex processes including:

- Capturing machine time and human time
- Capturing value-added and non-value added work
- Capturing walking distances
- Capturing processes that do not occur every cycle
- Understanding the time the task would take for an 'average speed' operator

Stopwatch studies are a simple and common way to complete time and motion studies, but an alternative is to use a predetermined motion time system such as MTM or MODAPTS. These systems allow the very accurate estimation of process time without having to observe an operator.

Once a process is optimised, it can then be balanced with the right amount of labour, and then the process can be standardised.

Standardised, balanced work is the fastest, highest quality and most efficient way to complete a repetitive task. Time & motion studies are critical in creating standardised and balanced work.