



# Time & Motion Study

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## What is a time and motion study and the value it provides an organization

### What

A scientific method for collecting and analyzing work tasks in creating employee productivity standards and identifying all “hands-on time” while the entire work process to include, resources, layout, waiting, travel, walk away time, machine, and automation time are collected and documented.

### How

A work task is broken into small and simple steps. The movements taken by the employee in performing those steps are carefully observed to identify and remove redundant or wasteful motion. The actual time taken for each correct movement is measured and captured (in most cases utilizing electronic data collection device with specialized software).

### ESSENTIAL steps in

performing a time and motion study:

1. Familiarize yourself with the work tasks. This will allow you to understand the work tasks and process to identify opportunities (low hanging fruit) to improve the work task before starting the time and motion study.
2. Define and document the standard work method
3. Divide and document the work task into elements.
4. Review and validate the work task elements with experienced associates and managers
5. Time the work elements and collect data on observed time for the work tasks

6. Evaluate the associates pace comparative to standard performance, utilizing performance rating to determine normal time for a task.
7. During the data collection, multiple work cycles are timed and data collected. Note each cycle is rated separately.
8. Apply an allowance to the normal time to calculate the standard time.
9. To normalize the time for each work task studied, average the values.
10. Perform regression analysis to confirm the appropriate cycles have been collected and are statistically sound.

## BENEFITS of Time and

### Motion Study:

1. Improve the utilization of people, equipment, inventory, systems and facilities
2. Reduce and eliminate waste of work tasks
3. Improve the methods or procedures of a work task or process.
4. Streamline and standardize work
5. Identify waste and inefficiencies and improve the lay out of the facility, laboratory, work center, work area, service vehicle, etc.
6. Collect labor and all resource data in the performance of a procedure and work process, system, automation, equipment and instruments. Resulting in various solutions including:
  - a. Understanding labor and all resource requirements
  - b. Mapping and reducing labor cost for work process
  - c. Defining staffing requirements and planning capacity
  - d. Improving work flow
  - e. White Papers for marketing or sales
  - f. Competitive workflow sales tools
  - g. Competitive Total Cost of ownership tools
  - h. Establish fair labor work standards
  - i. Develop and implement fair and measurable employee incentive programs
  - j. Deploy labor management systems to track and report employee performance, plan capacity and work schedules, perform and track performance coaching.



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