Introduction and Overview

Work Study

Work Study is the systematic examination of the methods of carrying on activities so as to improve the effective use of resources and to set up standards of performance for the activities being carried out.
Method Study

Method study examines the way a task (changing the clutch on a car, preparing a flower bed for planting, cleaning a hotel room) is done. The industrial engineer has an eye on operational efficiencies and costs, quality of processes, service reliability, staff safety etc. Method study techniques are applicable from factory/workshop manufacturing to cabin crew activities on an international flight and office clerical work.

Method Study

a collection of techniques used to examine work - what is done and how it is done - so that there is systematic analysis of all the elements, factors, resources and relationships affecting the efficiency and effectiveness of the work being studied.

Work Measurement

Work measurement provides management with a means of measuring the time taken in the performance of an operation or a series of operations in such a way that ineffective time is shown up and can be separated from effective time.

Work measurement is the application of techniques designed to establish the time for a qualified worker to carry out a task at a defined rate of working.
Method Study: Early Applications

Taylor’s Shoveling Experiment

| Tons handled on piecework during the year ended 30 April 1901 | 924,040 |
| Cost of handling these materials | $30,798 |
| Former cost per year | $67,215 |
| Net saving | $36,417 |
| Average cost per ton Now | $0.033  Formerly | $0.072 |
| Average earnings per man per day | $1.88  $1.15 |
| Average tons handled per man per day | 57  16 |
| Number of men | 140  400–600 |

Frank Gilbreth designed a special scaffold and a new brick laying procedure that reduced the movements needed from 18 to 5 and in one case to 2. The worker’s productivity increased from laying 120 bricks per hour to laying 350 bricks per hour.
Business Process Reengineering (BPR)

Business Process Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed. (Hammer and Champy)

BPR - New Language

**Radical:** Break away from out-dated, patched, obsolete arrangements and practices of work.

**Fundamental Re-design:** generate new, deeply penetrating, best-way methods. Changing the way work is done.

**Process:** Re-design core activities cross-functionally, break-down departmentalism. Departments are structures which after all - merely solutions to past organizational problems. They are not fixed for ever.

**Dramatic:** Don’t just make incremental or marginal improvements. Find breakthroughs in performance in terms of cost, quality, service, and time-compression.