

Chapter 7 Glossary

analyzability

a dimension of technology in which work can be reduced to mechanical steps and participants can follow an objective, computational procedure to solve problems.

continuous-process production

a completely mechanized manufacturing process in which there is no starting or stopping.

core technology

the work process that is directly related to the organization's mission.

craft technologies

technologies characterized by a fairly stable stream of activities, but the conversion process is not analyzable or well understood.

digital factories

the ultimate automated factories that link manufacturing components that previously stood alone.

engineering technologies

technologies that tend to be complex because there is substantial variety in the tasks performed, but activities are usually handled on the basis of established formulas, procedures, and techniques.

intensive technologies

technologies that provide a variety of products or services in combination to a client.

interdependence

the extent to which departments depend on each other for resources or materials to accomplish their tasks.

job design

the assignment of goals and tasks to be accomplished by employees.

job enlargement

an expansion of the number of different tasks performed by an employee in a job.

job enrichment

designing a job to provide greater responsibility, recognition, and opportunities for growth and development.

job rotation

moving employees from job to job to give them a greater variety of tasks.

job simplification

the variety and difficulty of tasks performed by a single person are reduced.

joint optimization

the goal of the sociotechnical systems approach, which states that an organization functions best when the social and technical systems are designed to fit the needs of one another.

large-batch production

a manufacturing process characterized by long production runs of standardized parts.

lean manufacturing

a process that uses highly trained employees at every stage of the production process, who take a painstaking approach to details and problem solving to cut waste and improve quality.

long-linked technology

the combination within one organization of successive stages of production, with each stage using as its inputs the production of the preceding stage.

mass customization

using mass-production technology to quickly and cost-effectively assemble goods that are uniquely designed to fit the demands of individual customers.

mediating technology

technology that allows each department to work independently by virtue of providing products or services that mediate or link clients from the external environment.

noncore technology

a department work process that is important to the organization but is not directly related to its primary mission.

nonroutine technologies

technologies characterized by high task variety, and the conversion process is not analyz-able or well understood.

pooled interdependence

the lowest form of interdependence, in which work does not flow between departments.

reciprocal interdependence

the highest level of interdependence, in which the output of one operation is the input of a second, and the output of the second operation is the input of the first (for example, a hospital).

routine technologies

technologies characterized by little task variety and the use of objective, computational procedures.

sequential interdependence

a serial form of interdependence in which the output of one operation becomes the input to another operation.

service technology

technology characterized by simultaneous production and consumption, customized output, customer participation, intangible output, and being labor intensive.

small-batch production

a manufacturing process, often custom work, that relies heavily on the human operator and is not highly mechanized.

sociotechnical systems approach

an approach that combines the needs of people with the organization's need for technical efficiency.

technical complexity

the extent of mechanization of the manufacturing process.

technology

the work processes, techniques, machines, and actions used to transform organizational inputs into outputs.

variety

in terms of tasks, the frequency of unexpected and novel events that occur in the conversion process.