

Glossary

ARPANET project. Large project initiated under the auspices of the Advanced Research Projects Agency (ARPA), a branch of the US Department of Defense (DoD), whose main goal was to build a network of shared mainframe-based computational resources by interconnecting major universities and research centers in the US.

Business process. A set of interrelated activities aimed at accomplishing an organizational task.

Business process improvement. The analysis, redesign, and subsequent change of organizational processes to achieve performance and competitiveness gains.

Business process integration. The electronic integration of several business processes involved in a company's supply chain; often going from ordering, passing through production, invoicing, inventory control, and ending with distribution and/or delivery.

Business process outsourcing. The farming out of entire business processes to external suppliers, building heavily on the infrastructure provided by the Internet.

Business process reengineering. Management movement pioneered by Michael Hammer and others, focusing on approaches for the radical improvement of productivity and quality of business processes, as well as

the implementation of business process-centered organizational strategies; for example, business process outsourcing and organization-wide business process integration through the use of enterprise systems.

Compensatory adaptation hypothesis. Theoretical assumption that individuals who choose to use e-collaboration tools to accomplish collaborative tasks tend to compensate for the cognitive obstacles they perceive as associated with the lack of naturalness of those tools. This leads them to generate group outcomes of the same or better quality than those generated through the face-to-face medium.

Data. Carriers of information and knowledge that are either transferred or stored through a process of changing, or generating perturbations on, a given communication or storage medium.

E-collaboration. Electronic collaboration, or the carrying out of collaborative tasks employing electronic communication technologies. This is an umbrella term that comprises several other closely related fields, commonly known as computer-mediated communication, computer-supported cooperative work, groupware, group support systems, collaboration technologies, and, more recently, the so-called field of knowledge management.

E-collaboration paradox. Phenomenon characterized by two general and competing findings in connection with the impact of e-collaboration tools on groups. The first finding is that group members generally perceive face-to-face communication as posing fewer obstacles to effective communication than other communication media, particularly media generated by e-collaboration systems. The second finding is that when groups conduct collaborative tasks using e-collaboration systems to support interaction among group members, those groups often present the same or higher levels of performance as groups where members interact primarily face-to-face. This second finding is clearly contradictory with the first finding.

Establishment of computer networks. Period going from the late 1960s to the mid 1980s that began with a major development in 1967 (official start date according to most accounts), the ARPANET project, which provided the basis on which the now ubiquitous Internet has evolved.

Excellence movement. Management movement pioneered by Tom Peters and Robert Waterman comprising several best practices employed by successful companies in a variety of industries.

- Expansion of local area networks.** Period going from the mid 1980s to the early 1990s, which owes much of its existence to the development and widespread use of personal computers and their interconnection in local area networks.
- First Industrial Revolution.** Generally seen as the period from around 1770 to 1850.
- Functionalism.** Management doctrine pioneered by Henry Fayol comprising a set of prescriptions for structuring large organizations around forecasting, planning, and coordination activities.
- Hawthorne effect.** The business effect associated with the notion that, for the average worker, the desire to stand well with one's fellows and managers easily outweighs the influence of financial rewards and physical working conditions.
- Information.** Abstract entity that is carried by data, and that is eminently descriptive. From a linguistic perspective, the typical instance of information is the utterance called assertion. One example of assertion is: "Today is a sunny day."
- Internet.** Wide area network interconnecting many local area networks distributed around the world, which evolved from the initial infrastructure set in place through the ARPANET project.
- Internet Era.** Period that began in the early 1990s and that extends to the present day. This period is marked the development of the Web and the expansion of the commercial use of the Internet.
- Internet stock bubble burst.** Event that took place toward the end of the 1990s, when many companies whose business relied heavily on the Internet, or on other Internet-based companies, saw their market values skyrocket, only to see those values take an unprecedented nosedive in the early 2000s.
- Knowledge.** While information is eminently descriptive, and can refer to the past, present and future, knowledge is by its own nature eminently associative. That is, it allows us to associate different world states and respective mental representations, which are typically linked to or described by means of pieces of information.
- Local area networks (LANs).** Networks connecting several computers and computer peripherals usually located near each other (e.g., in the same building). The main appeal of LANs in the 1980s was that they enabled

the sharing of what were then relatively expensive resources, such as laser printers and large-capacity/high-speed hard disks.

Mainframe. Large central computer connected to a number of “dumb” terminals—i.e., terminals with very limited or no processing capacity of their own (hence the term dumb).

Mainframe Era. Period marked by a dominance of large computer systems, usually known as *mainframes*, going from the early 1950s, with the emergence of the first mainframe assembly lines, to the late 1960s, with the first major computer networking projects.

Media naturalness hypothesis. Theoretical assumption that individuals who choose to use e-collaboration tools to accomplish collaborative tasks experience increased cognitive effort and communication ambiguity proportionally to the degree to which the tools suppress elements that are present in face-to-face communication (e.g., synchronicity, ability to convey/perceive non-verbal communication cues).

MetaProi. Group methodology for business process improvement; often referred to as a meta-process to indicate that it is a high-level process that describes how business process improvement should ideally be carried out in organizations. MetaProi is short for Meta-Process for Business Process Improvement.

Organizational development. The generic field of research and practice concerned with structural organizational changes that can have a positive impact on competitiveness.

Post-War Era. Period that goes from the end of World War II to the late 1980s.

Scientific management. Management school of thought pioneered by Frederick Winslow Taylor emphasizing business process improvement through the careful and precise measurement of the times and motions involved in relatively simple manufacturing activities.

Second Industrial Revolution. Period that goes from approximately 1850 to the years preceding the official start of World War II.

Task specialization. Notion proposed by Adam Smith, and also known as division of labor, stating that manifold gains in productivity could be achieved in manufacturing activities if every worker focused their efforts on one simple task of an assembly line.

Total quality management. Management school of thought pioneered by William E. Deming emphasizing continuous business process-focused improvement methods that build heavily on the use of statistics.

World Wide Web. An abstract collection of sites, created by Web servers (e.g., the server that runs Amazon.com's site), which uses the physical infrastructure provided by the Internet. Also known as WWW or the Web.