

# Advances in Information and Resulting Shifts in Office Environment

## SAKURAI Masamitsu

Chairman of the Board, President and Chief Executive Officer  
Ricoh Co., Ltd.

[www.ricoh.co.jp](http://www.ricoh.co.jp)

In the 1980s, the term “office automation” (OA) was introduced as a concept of promoting renovations in the office environment. The term OA was coined after the term “factory automation” (FA), which symbolized the success of greatly improved productivity and efficiency in factories through the introduction of automated production systems. Thus, the aim of using OA was to promote increased productivity and efficiency in the workplace.

Information in those days was recorded and kept on paper. As a result, storage, search, transmission and distribution of information had been made on a paper basis. The main reason behind it was that structures of organizations and offices were designed to facilitate workers’ performing “commands (directions and orders)” given by their management. An organization would first be composed of several business units, each in charge of one of its main business processes (for example, development, manufacturing, production and sales). Then, hierarchical subunits were created under those units. The most important considerations upon designing a command-based internal organization were (i) enabling workers to report the information possessed in subunits to upper units for decision-making purposes, (ii) feeding back the decisions of upper level units to subunits, and (iii) to coordinate linkage of various business processes by use of information. In the 1980s, paper-based documentation played a major role in such reporting, feedback and coordination. It was under these circumstances that copiers and facsimiles were widely adopted at the workplace, and these devices helped to increase workplace productivity.

From the 1990s onwards, in line with rapid advances in information and communications technology (ICT), most offices introduced personal computers (PCs) into the workplace and interconnected them via networks, and thereby information was distributed via the networks. Electronic information-based groupware, e-mail, business application software, etc. superseded paper-based documents in delivering information, orders and directions as well as coordinating business processes at the workplace. Such changes contributed to greatly increased productivity within an office environment as the scale of reduction in time and costs were more significant than before. People expected that paperless offices would become reality.

Nevertheless, the more volume of information increased, the more paper consumption increased. The ease with which information can be obtained due to advances in ICT has led office workers to use an increased volume of information to accomplish their tasks. They now use more paper than ever before to output information.

Since then, office workers have been required to perform

more intellectual tasks than ever by gathering information, analyzing said information, creating new knowledge and then releasing the findings to the outside world. As Peter F. DRUCKER stated in his work “Post-Capitalist Society” published in 1993 the following concept (a summary by SAKURAI):

The Knowledge Society begins, where the basic resource is knowledge, not capital, natural resources or labor force, and the leading social group in the Knowledge Society will be knowledge workers.

It was construed that business competitiveness of each corporation was judged by the level of knowledge it owned. As knowledge became increasingly valued, there was an increased demand for office design centered upon “information,” from the viewpoint of designing each as the center of collected information, different from the former command-oriented ones. Workers became professionals in certain fields. Such “knowledge workers” from different units with different skills work together as a project team. Then, they were to be made to perform quickly and creatively.

There is an old Japanese saying, “Out of the counsel of three comes the wisdom of Monju (the bodhisattva of wisdom and intellect) [meaning roughly equivalent to: ‘Two heads are better than one.’]” The same applies to creation of knowledge in the work environment. New ideas and findings are generated upon sharing and discussing common issues by such knowledge workers, who would inspire each other with mutually different knowledge by expressing their empathy and antipathy. Provision of such expertise from different fields, in an environment for open discussions, and other tools are of utmost importance. As a move toward this goal, many offices have been built in recent years based upon the concept of making them an open space for improved communications. Advances in ICT have also enabled experts to communicate with one another without constraint in terms of whereabouts, via high-speed networks stretching worldwide, using TV conferencing systems, e-mails, chat, blogs, etc. Furthermore, quick access to information attributable to advances in ICT have spared time for communications required for knowledge creation. In fact, paper is still being used in abundance today as a helpful communications medium in the daily discussions.

In order to accelerate such knowledge creation, both the PC-based ICT industry and the paper-based OA industry should cooperate with each other more to establish international standards to remove obstacles by differences among products and manufacturers.

