4. **Electronic Commerce**

**Evolution**

**Introduction**

The economic context in which organizations exist today places fresh stresses on the way in which they compete, and shapes the way in which products and services are brought to market.

While IT can make an important contribution to the introduction of improved business processes, it is a tool, and therefore it requires management to create the environment in which initiatives can bring about organizational change. The development of new computer-based applications must be aligned to the goals of the organization. This makes it possible to optimize the use of precious resources and directly contribute to improvements in critical areas of the business cycle.

Many organizations have been undergoing a continual process of change over the last two decades. Those that have survived the transition have established a "change" culture in their organizations, resulting in innovation and flexibility in the way they operate. Yet this process has not been easy, involving reductions in the number of employees, a flattening of the management hierarchy and a rationalization of business interests.

With management setting aggressive business goals to meet the challenges of the marketplace, many of the business processes created in the 1970s and the 1980s have ceased to be relevant. Organizations are changing the way they work and the resulting improved business processes have a greater dependency upon IT.

Growth in electronic business communications within organizations has been taking place since the arrival of the personal computer in the early 1980s, and has been further fuelled by the availability of third party messaging services and maturity of Local Area Networks (LANs). Electronic business communications takes many forms, as covered in Part B, and are becoming an essential framework for conducting business both within and between organizations, and indeed, across a wide range of business functions. It is this trend to trade electronically, that emerged first within the financial services sector, and that is now becoming the way business is conducted in a wide range of industry sectors.

What was termed "electronic business communications" is now becoming known by the more fashionable name of electronic commerce.

Throughout this book, "electronic commerce" is defined as any interaction between an organization and its trading community undertaken in an electronic manner. It is really a sub-set of electronic business communications that covers
both intra and inter-organizational electronic messaging and information management.

The main factors attributed to the creation of the information revolution include:

- the economic context that has given rise to a highly competitive market environment;
- resultant action by management to change the way businesses are run affecting organizational structure, culture and staffing levels;
- the phenomenal pace of Information Technology (IT) development, its availability and continued improvement in cost/performance making it more affordable to greater numbers of organizations.

With the pervasiveness of IT, many of the new business processes being introduced by organizations contain a much richer IT content. In many ways, it is the application of IT by organizations that is making possible the drive towards improvements in business productivity, and resulting in the dramatic re-structuring of staffing levels across whole industries. This can be seen by examining performance indicators such as turnover per employee; for example, Tesco (a major UK retailer) increased turnover per employee in 1980 from £38,360 to £138,660 in 1994.

**Example – Retail Banking**

The nature of retail banking has changed rapidly in recent years, due in part to the emergence of a “cash-less society” and Automated Teller Machines (ATM) that now exist in most high streets and shopping centres. But retail banking is now in crisis, trying to redefine the business that it is in and find new services to market to its customers that will be seen of value. This has placed an even greater emphasis upon delivering services to business customers who continue to be a profitable part of the business. However, IT developments within retail banking have changed the habits of its customers. Home banking, typically offered over a bank’s own private network, is likely to further change the face of retail banking in the coming years in much the same way that ATM machines did in the past. The Security First Network Bank (SFNB) was the first US federally approved and insured Internet bank that aims to demonstrate that the Internet can provide a secure and convenient environment for conducting home banking. So unless there is some major business diversification or new initiative, it seems certain that this sector will continue to reduce staffing levels for the foreseeable future.

The application of IT by organizations takes many different forms. The use of IT for internal electronic communications and external electronic trading, is explored more fully in this and subsequent chapters.

**Birth of Electronic Commerce**

Electronic commerce is an evolving concept that is coming to represent the spread of messaging and information management technologies across the whole of the