Chapter 9
Technology Imperative in Managerial Decision-Making

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ABSTRACT

Decisions can make or mar an organization. Decision-making is a multifaceted and intricate process. This process becomes even more complicated and complex when it comes to organizations, especially in this competitive world. Today, decisions are made not only under uncertainty, with available and/or limited information, but may also be made in a virtual setting. Decision makers may not be engaged in face-to-face deliberations. Hence, understanding the challenges, complexity, and rewards of the use of technology, especially information technology in managerial decision-making, is important. Such an understanding is not only vital in determining the efficacy of managers and their organizations, but also significant in designing future management approaches and organizations. This is the core objective of this chapter.

INTRODUCTION

Organizations now face new challenges as the business environment becomes more turbulent and new technology paradigms emerge. Further, both the enterprise and the geopolitical order are becoming more open, networked, and information-based. These changes have brought forth significant changes in the way information technology is perceived to enable business processes. IT (Information Technology) enables organizations to have a high performance team structure, to function as integrated and interlinked units, and to reach beyond the confines of its

boundaries to external entities (Tapscott & Caston, 1993). Such changes have yielded wake-up calls to organizations in the form of business process reengineering initiatives and reassessments of the role of IT. Under this redesigned organizational context, organizational decision support takes a far greater significance. Hence, to be an effective manager in this networked world, one needs to examine IT issues. With the beginning of the second decade of the new millennium, everyone from social commentators to the general public have observed that information technologies are changing our patterns of social, commercial, and political interaction. These changes raise profound challenges and opportunities for people everywhere. It is a revolutionary period in history, with issues not yet fully understood, let alone resolved. It is a time when–ready or not–we are being forced to make choices that will ultimately redefine the essence of governmental institutions, corporate organizations, and governance. Until quite recently, however, our managers, including public and private sector organizations, have too often ignored technology-related issues or have delegated them to others. The conventional wisdom has been that technology issues are either not very important, require technical expertise rather than management/leadership, or are simply too risky for a manager to tackle. These views are changing, primarily due to the astonishing growth of the Internet and e-commerce, technology is now widely acknowledged as a critical force in shaping the future. The need for skillful and committed management decision-making has become obvious. But the risks are still there.

As a result, managers–often under enormous and competing pressures—remain uncertain as to how to successfully engage technology-related issues. In the context of business transformation, information technology is viewed as an enabler of business processes. An enabler not only supports the business processes but also fosters the creative and innovative spirit of the internal and external users of an information system (T. H.

Davenport, J. Short,. and D.B. Stoddard, 1994). Our present period in history is widely referred to as the Information Age—in contrast to the Agricultural and Industrial Ages that preceded it-because new capabilities for managing information are creating fundamental changes in the structure and functioning of society.

How will managers respond to the challenges that these changes present?

If there is skepticism about this line of questioning, it's time for a reality check:

Some observations are:

- Over the past decade, the portion of new capital investment devoted to information technologies has risen from under 10 percent to over 50 percent, making it the largest category of capital investment in most of the economies.
- Companies in the information industry are now the preeminent generators of market value and wealth. Between 1995 and 1998, IT-producing industries. Only about 38 countries have a GDP larger than Bill Gates' personal net worth.
- Banking transactions over the Internet cost only about 3 percent of those at traditional walk-in counters, suggesting the huge productivity gains possible from delivering services over computer networks.
- By the time this chapter is published e-commerce will have grown to about 10 times than what it is when I started writing in 2012. If any of these facts are not already familiar, you may find yourself unprepared for some of today's paramount management challenges.

Many managers are not yet ready to take on technology issues in a meaningful way. Even though most readily acknowledge that computers and networks have dramatically transformed the way organizations function as compared to just a few years ago, too few have become actively

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