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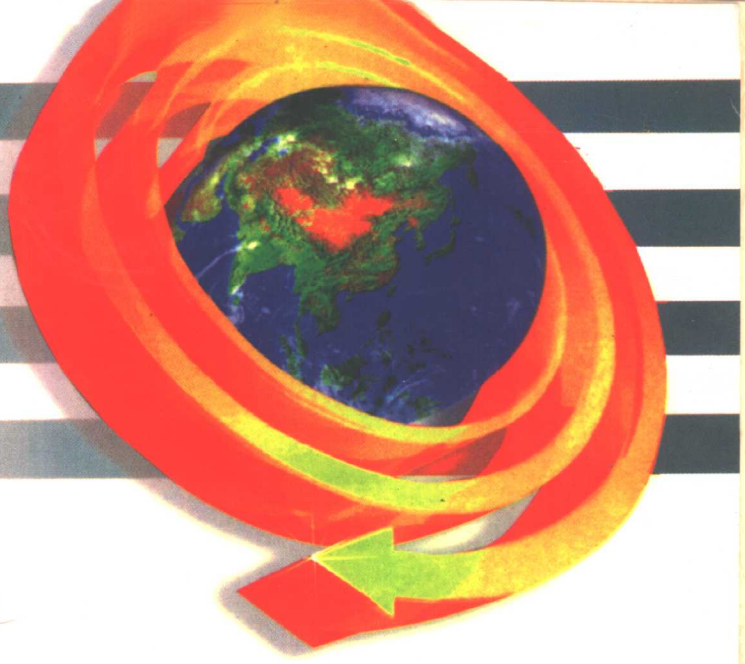

创建信息时代的组织

结构、控制与信息技术

正版

哈佛商学院案例教程

Building the Information-Age Organization

Structure, Control, and Information Technologies

James I. Cash, Jr.
Robert G. Eccles
Nitin Nohria
Richard L. Nolan

东北财经大学出版社
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Preface

There is nothing permanent except change.

—Heraclitus

When information technology substitutes for human effort, it *automates* a task or process.

When information technology augments human effort, it *informates* a task or process.

When information technology restructures, it *transforms* a set of tasks or processes.

This book is for students and managers who understand that sweeping changes are the order of the day. As we approach the twenty-first century, managers are finding that the tools and concepts that drove the twentieth-century, industrial-era organization are insufficient for managing the information-age organization. Concepts that held up well for much of the century—strategy, structure, span of control, organizational boundaries—are shifting on their foundations. Many of these changes are enabled by information technologies, which managers use to fundamentally alter organizational purpose, shape, and practices.

This book blends three previously separate management disciplines—organizational design, management control, and information technology management—in order to offer the student of management an integrated set of concepts and tools for understanding the new roles of the general manager in executing strategy. Our immediate objective is to help students learn how to use organizational structure and management control systems to create flexible, adaptive, and effective organizations. We show how managers can use information technologies to transform their organizations. Our ultimate aim is to help managers build information-age organizations in which the management process itself is a source of sustainable competitive advantage.

The idea for this book was born when a group of Harvard Business School faculty members began to reexamine the MBA program. We had been teaching core courses that largely mapped to traditional functional areas—marketing, finance, control, operations management, and organizational behavior. Yet many of the managers with whom we converse regularly were talking about how difficult it was to improve organizational effectiveness when each employee's vision was limited by the "stovepipe" in which he or she worked. We recognized that managers needed to break out of the "stovepipe" mentality, and so did we.

We also were aware that in some forward-thinking organizations information technology was being used to transform business processes in three fundamental ways:

Shifting from *predicting events* to *managing uncertainty.*

Shifting from *discrete* to *continuous processes.*

Increased emphasis on *horizontal information flows.*

In contrast, many other firms were "automating history" when they should have been "inventing the future." This book, then, represents our attempt to address difficult managerial challenges from an interdisciplinary perspective.

The material in this book was informed by field-based research conducted by Harvard Business School faculty, research associates, and graduate students. We are particularly indebted to the managers and staff members at the case sites, who provided us with time and insights during the course of our research on their organizations. Every example and concept in this book is drawn from observations of actual practice. Without the extensive cooperation of participating organizations, this book would not have come to pass.

Good ideas have many sources. Case development usually involves intensive collaboration between a sponsoring Harvard Business School faculty member and a doctoral student or other research assistant. Our MBA students and Executive Programs participants provide useful feedback when these cases are taught in the classroom. Colleagues from other institutions occasionally participate in case development as well. In addition to the authors' own efforts, we sincerely appreciate the contributions by our Harvard Business School colleagues: Lynda Applegate, Tom Davenport, David Garvin, Janis Gogan, Benn Konsynski, Ken Merchant, Donna Stoddard, and John Sviokla. Finally, the following individuals participated in the development of materials included in this book:

James D. Berkley
John Chalykoff
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Katherine N. Seger
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Given such a long list, there is a chance we have forgotten to mention some colleagues who informed our work. We hope they will accept our apologies, but know that we appreciate their contributions.

Rick Williamson and Christine Bara at Richard D. Irwin provided us with motivation and expert guidance. Maureen Donovan, Hillary Gallagher, Nancy Hayes, Rita Perloff, and Judith Tully typed and edited numerous versions of the work. Their patient attention to the many details of our academic lives helped us to concentrate on adding value to this manuscript. Their efforts and loyalty are deeply appreciated.

Without a doubt, the most important nonauthor contributor was Janis Gogan. She helped us weave together the loose threads in our ideas, contributed many of her own,

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and served as production manager for development of the manuscript. Her patience and persistence were greatly appreciated.

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哈佛商学院案例教程

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内容简介

本书是哈佛商学院信息技术课程标准教材，它展示了信息技术怎样通过有效的组织结构和管理控制开拓企业进行经营活动的途径。最新设计的21个公司案例强调信息技术作为一种日常管理工具在公司的内部组织设计和控制中发挥日益重要的作用。

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PART I

Foundation Concepts

Chapter 1 *Basic Concepts and Tools*
Chapter 2 *Introduction to Organization Structure*
Chapter 3 *Introduction to Control Systems*
Chapter 4 *IT Architecture*

To build the information-age organization, start with the foundation. Part I lays out the necessary foundation concepts. Chapter 1 provides an overview of the fundamental concepts and frameworks, which are reviewed in Chapters 2, 3, and 4. Chapter 2 introduces the concepts of organizational design, and explains why organizational structures are changing. Chapter 3 explains the purpose of management control, and the changing design and uses of management control systems. Chapter 4 explains the concept of an information technology architecture, describes its components, and discusses how managers design a flexible and adaptable IT architecture.

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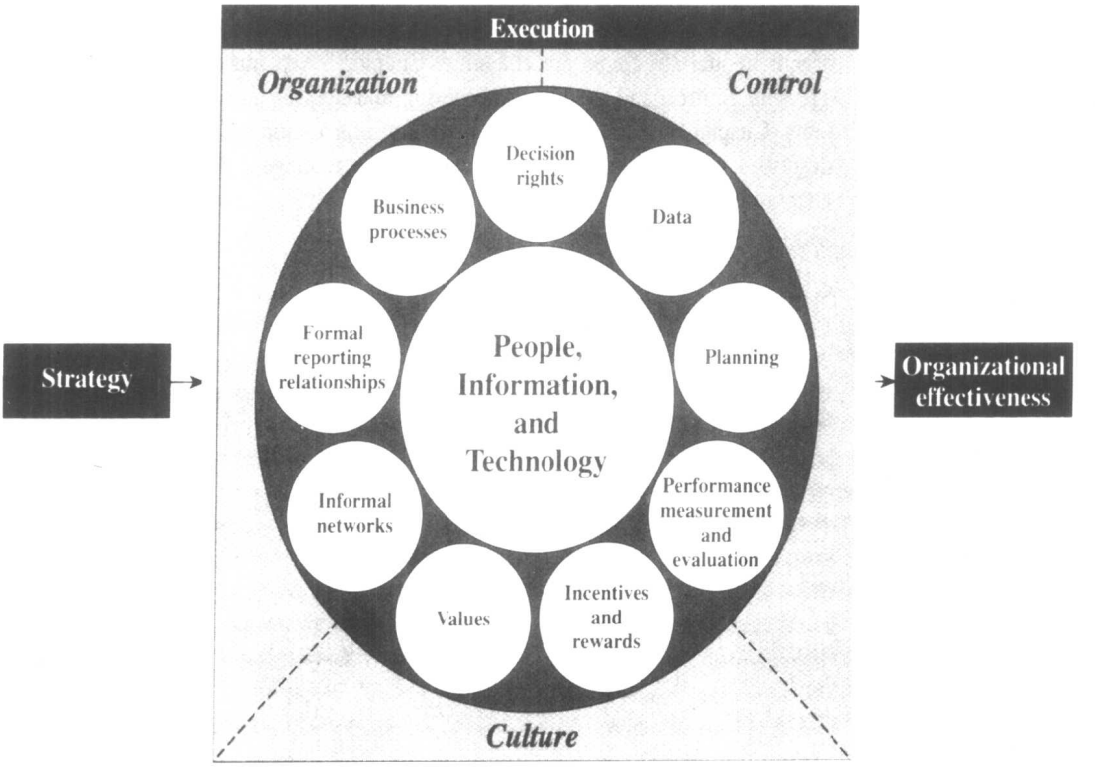
Chapter 1

Basic Concepts and Tools



INTRODUCTION

Today's managers need all the help they can get. Their firms are being buffeted on all sides by strong, frequently shifting winds of change. Organizations' *strategic objectives* (chosen markets, product strategy, expected outcomes) and their *business processes* (such as research and development, production, cash-flow management, and order fulfillment) are undergoing significant and volatile changes, placing great pressure on firms and their managers.

Strategic Objectives

Globalized Markets. The world is shrinking. Companies are expanding their reach, targeting new markets throughout the globe. Improvements in transportation and distribution time and costs are helping mass marketers such as PepsiCo and Coca-Cola Co. expand beyond their saturated domestic markets. Niche-marketers such as manufacturers of custom computer chips and electric compressors are also thinking "global," yet giving their customers "local" attention. Even professional-services firms, such as consulting and advertising agencies, have gone global.

Shorter Product Development Cycles. *Fast response* is the name of the game in many industries. Those firms that take the lead in identifying a new customer need and delivering a response to it are capturing impressive market shares. Some of them are using that early lead to lock in patent protection or drive down the learning curve to ensure higher profits over the long haul. Other firms are becoming effective practitioners of "fast followership," especially where patent protection is not a critical element of success. These firms are learning to profit from the leaders' work in defining new markets. No firm can afford the luxury of a leisurely product development cycle.

Higher Performance Hurdles. In addition to getting products out faster, firms are upping the ante for customer satisfaction, thanks to pressure from both more knowledgeable and demanding customers and tougher competitors. Today's customers expect higher and more consistent levels of product quality and safety. They are increasingly impatient with delivery delays and broken promises. They expect every interaction with a firm to be pleasant and productive. When these expectations are not met, the customer usually has another firm to which to turn.

Business Processes

Tighter Cross-Functional Linkages. In order to achieve faster response, produce higher-quality products, and present a unified face to the customer, firms are seeking ways to achieve tighter linkages between functions, for example, research and development (R&D), engineering, marketing, and manufacturing; or between geographically dispersed units. This is in marked contrast to the approach many firms successfully employed a few decades ago, in which each functional area was encouraged to maximize the efficiency of its activities, and senior general managers provided the necessary coordination. Many organizations today are faced with higher complexity and are moving too fast for the old "stovepipe" approach to continue to be feasible.

Work Force Diversity and Changing Career Paths. The Organization Man of 1955 was white, male, and had a western European name. Today, the homogeneous White Male Club has given way to unprecedented work place diversity, a trend that will continue. Today's organizational members speak a variety of languages, draw from a variety of experiences, and represent a far richer mix of talents, skills, and potential. In addition, today's aspiring manager no longer expects to remain in the same organization his/her entire career, and has different expectations about balancing work, family, and leisure than the prototypical post–World War II employee.

Globalized Operations. Even where a firm chooses not to compete in global markets, it may nevertheless engage in global operations, in order to take advantage of a superior national infrastructure, lower labor costs, or a highly skilled labor pool. This adds further complexity to the work force diversity issues mentioned above, as well as to the coordination costs necessary to sustain cross-functional and cross-border linkages. The general manager in this environment juggles a complex set of financial and human resources measures in response to a complex set of global capital markets, government regulations, and societal norms.

Rapid, Unpredictable Technological Innovations. The rate at which knowledge doubles is accelerating, placing increasing burdens on managers trying to keep up with changes in the technologies that affect their business. Furthermore, technological breakthroughs in materials science, information technology, biotechnology, and other arenas can be unpredictable, making it difficult to plan for improved manufacturing and other processes.

Technology changes can be *incremental* or *discontinuous.* Some incremental technical innovations can be readily absorbed into a firm's production and distribution processes; others render these processes obsolete. For example, the computer industry is being completely transformed by the microprocessor. Giants of the industry, such as IBM and Digital, are sustaining heavy losses at the hands of trendsetters like Microsoft and Apple. Developments underway in biotechnology may cause similar upheavals in the pharmaceutical and agribusiness industries.

Many of the above-mentioned pressures on strategic choice and tactical execution are driven by new capabilities for storing, processing, and transmitting information, a phenomenon that ups the ante for management education. Today's general manager needs to understand the increasing importance of information technology as a management tool for engaging in global operations, achieving cross-functional integration and rapid product introductions, developing future managers from a more varied pool of skills, and other managerial tasks. Organizational structures and management control systems, long a part of every general manager's tool kit, are taking new forms, in response to both these pressures and the unique enabling capabilities of networked information technologies.

As illustrated in Figures 1–1 and 1–2, this book addresses how managers translate *strategy* into day-to-day *business processes* (or execution) in an environment that is becoming increasingly complex and interdependent. Managers work with four highly interrelated components:

People, the primary resource, who must be supported and leveraged with appropriate structures, systems, and processes to achieve organizational effectiveness.

Organizational structure and structuring processes, which are contingent upon varying internal capabilities and external conditions.

Management control systems, for planning, monitoring, influencing, and evaluating individual and organizational performance.

Information technologies, for supporting data acquisition and flexible decision making and communication under conditions of change and uncertainty.

Organizational structure, information technologies, control systems, and human resources enable skillful general managers to extend their reach and to affect their organizations' destiny. Effective managers understand these tools and resources, and know which to use for what purposes and under what circumstances. The primary objective of this book is to ensure your familiarity with and understanding of how to effectively manage these components.

FIGURE 1–1 The Management Challenge: Successful Execution of Sound Strategy

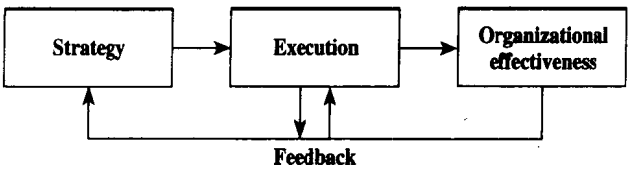
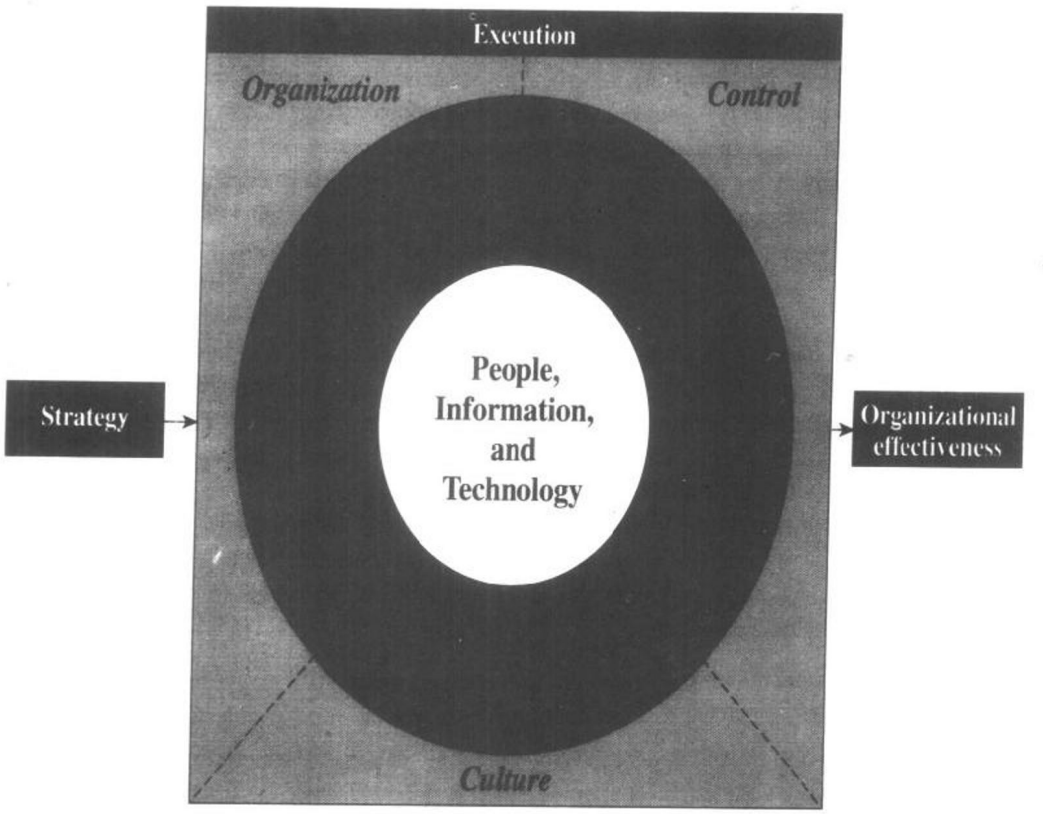


FIGURE 1-2 Managerial Levers: Overview



This book comprises three parts, summarized in Figure 1-3. Part I, composed of this chapter as well as Chapters 2, 3, and 4, introduces the basic concepts and tools for designing and effectively using organizational structures, management control systems, and information technologies. Part II examines the impact and evolving roles of IT on individuals, organizations, and relationships between organizations. Part III examines how, by effectively deploying information resources to support organizational structure, management control systems, and people, business transformation can be achieved.

PART I OVERVIEW

Organizations exist to enable groups of people to effectively coordinate their efforts and get things done. The structure of an organization is the pattern of organizational

FIGURE 1-3 Book Overview

Part I IT Foundation Concepts
1. Basic Concepts and Tools
2. Introduction to Organization Structure
3. Introduction to Control Systems
4. IT Architecture

Part II IT and the Organization
5. IT and the Individual
6. IT in Organizations
7. IT between Organizations: Interorganizational Systems

Part III IT and Business Transformation
8. IT and Business Transformation
9. Information Technology and Tomorrow's Manager

roles, relationships, and procedures that enable such coordinated action by its members. *Organization structure* serves the following functions:

- It enables the members of the organization to undertake a wide variety of activities according to a division of labor that defines the specialization, standardization, and departmentalization of tasks and functions.
- It enables the members of the organization to coordinate their activities through integrating mechanisms such as hierarchical supervision, formal rules and procedures, and training and socialization.
- It defines the boundaries of the organization and its interfaces with the environment or the other organizations and institutions with which it must interact.

Shaping an effective organization structure is a central function of general management. While only those at the highest levels have the ability to change or redesign the overall structure of an organization, all managers have to get things done within this framework. Moreover, most managers must structure those activities that fall within their own sphere of responsibility. Therefore, understanding how organizations are structured is vital to being an effective manager.

Chapter 2 provides an introduction to principles of organizational structure and structuring processes. Three cases are presented—Appex Corporation; Hill, Holliday, Connors, Cosmopulos, Inc., Advertising; and Jacobs Suchard. All are examples of firms coping with change and uncertainty. One is growing rapidly, one is coping with an economic downturn, and one must deal with political and economic changes in Europe. General managers in each case modify organizational structure as a means to improve organizational effectiveness in these changing environments.

After management has adopted a specific strategy and basic implementation plans are developed, the next task is to take steps to ensure that day-to-day execution of business activities leads to desired outcomes. Systems that are established to ensure consistency of effort and achievement of desired outcomes must also be capable of

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