STEP 1
Getting started

STEP 1 GETTING STARTED
1. Goals

STEP 2 STRATEGY
2. Strategy
3. Environment

STEP 3 STRUCTURE
4. Configuration and complexity
5. Geographic distribution and knowledge exchange

STEP 4 PROCESS AND PEOPLE
6. Task design
7. People
8. Leadership and organizational climate

STEP 5 COORDINATION AND CONTROL
9. Coordination, control, and information systems
10. Incentives

1 Define the scope of the organization and assess its goals

Introduction: The executive challenge of designing the organization

In today's volatile world, organizational design is an everyday, ongoing activity and challenge for every executive, whether managing a global enterprise or a small work team. Globalization, worldwide competition, deregulation, and ever-new technologies drive the ongoing reassessment of the organization. The executive response has been many new forms of *organizational design*: virtual, learning, modular, cellular, network, alliance, or spaghetti – to name a few. New organizational forms challenge old ways of organizing for efficiency and effectiveness. Yet fundamental design principles underlie any well-functioning organization. Organizations still require a formal design. The fundamentals are: what are our goals? What are the basic tasks? Who makes which decisions? What is the structure of communication, and what is the incentive structure? Fenton and Pettigrew (2000, p. 6) state that "a closer inspection of the literature reveals that many of the new forms are not entirely new but reminiscent of earlier typologies, such as Burns and Stalker's (1961) organic and mechanistic forms and Galbraith's preoccupation with lateral relations." Thus fundamental concepts and principles of organizational design remain very important for the modern organization of today and tomorrow.

IBM has been through five major organizational design changes recently. It has moved from country organizations to global business units, toward a more multi-dimensional matrix, and increased collaboration both within IBM and between IBM and other organizations. Many organizations overlook the

importance of redesigning their organization. IBM has been very aware of the importance of continuing redesigning the organization for many years. However, top executives frequently neglect the need for a new design because of organizational inertia. This neglect to get the design right is very costly for the firm. In this book we provide a way to diagnose the need for a new design, as well as an approach to choose the most appropriate design.

To address the challenge of designing the organization we adopt a multi-contingency information processing view (Burton and Obel, 2004). Based on a large body of research, this view says that an organization's design should be chosen based on the particular context, and further that the description of the context should be multi-dimensional, including both structural and human components. Structural components of organizational design include goals, strategy, and structure. Human components include work processes, people, coordination and control, and incentive mechanisms. Together, these components provide a holistic approach to the organizational design challenge.

Organizational design starts with the organization's goals, and from there we work from the top to the bottom, considering strategy, structure, process, people, coordination, and control. This is a top-down approach to design. We could start the design process using the reverse approach, that is, by specifying how we want to coordinate and control work tasks and then designing the organization from the bottom to the top, designing tasks ahead of strategy; but such an approach would eliminate some possible good designs because the tasks of the organization can be affected by its goals and strategy. So we recommend a top-down approach that is complemented by iterative incorporation of lower-level issues on the top-level design. Political and implementation issues may suggest that the organization be designed bottom-up. Here again the top-down approach may have to be done in an iterative fashion, and further caution has to be exercised to ensure that lower-level design and choice of tasks do not eliminate some good alternative designs.

Overview of this book

In this book, we keep to the basics of organizational design. Organizational design involves two complementary problems: (1) how to partition a big task of the whole organization into smaller tasks of the subunits; and (2) how to coordinate these smaller subunit tasks so that they fit together to efficiently realize the bigger task or organizational goals. By complementary, we mean

that the smaller tasks must be defined and arranged in a way that allows effective coordination. We consider these issues for "older," classic organizational forms as well as "newer," modern organizational forms.

We present a step-by-step approach which is a "how to" method for designing an organization. Each step and its subcomponents provide fundamental building blocks for any organization, and we guide you through the process of assessing each building block as well as planning for change. To simplify and show continuity in our approach, the components of each building block are mapped onto a series of two-dimensional graphs that clearly illustrate managerial options. The graphs are interlocking, such that a specific quadrant in any one graph corresponds to the same quadrant in all other graphs. In this way, you can visualize the relationships among the organizational design components and readily identify where there are *misfits* in your organization's design. Misfits are misalignments within the organizational design components that can lead to deterioration in the firm's efficiency and effectiveness.

Misfits lead to a decrease in organizational performance, either today or in the future. Misfits thus are the starting point for the implementation of change. As such, misfits are the engine of the organizational design process. If your organization changes in response to design misfits, rather than waiting for financial or other performance problems to arise, goal attainment is more likely to be achieved.

The graphs that we will provide for each design component will allow you to visualize and plot the current location of an organization and then identify the desired point to which you would like the organization to move. In this way, you can see where you are and where you want the organization to be in the organizational design space. While diagnostic questions and the two-dimensional graphs give you an easy way to get an overview, the ideas of the book have also been included in the OrgCon® software.[1] This software presents a more elaborate version of the approach presented in this book and provides a set of analytic and graphical tools that will ease the process of design. Meanwhile, you can use this book on its own, and the software is not required to complete the step-by-step approach and design your organization.

Organizational design is an ongoing executive process that includes both short-term, routine changes, as well as intermittent, larger-scale changes. We will address the dynamics of design, including misfit management, for both routine and larger-scale changes in the context of organizational design throughout this book.

[1] OrgCon can be obtained from www.ecomerc.com.

Our step-by-step approach is based on an information-processing view of the firm. This provides you with a framework and a toolkit for understanding a wide range of organizations in product and service industries across global boundaries. The approach helps you to interpret the history of organizations, assess and redesign complex organizations of today, and plan for the more information-rich organizations of tomorrow. We next describe the information-processing view and then move on to defining the scope of the organization and assessing its goals.

The information-processing view

The information-processing view uses the following logic. An organization uses information in order to coordinate and control its activities in the face of *uncertainty* where uncertainty is an incomplete description of the world (Arrow, 1974, p. 34). By processing information, the organization observes what is happening, analyzes problems, and makes choices about what to do, and communicates to others. Information processing is a way to view an organization and its design. Information channels "can be created or abandoned and their capacities and the types of signals to be transmitted over them are subject to choice, a choice based on a comparison of benefits and costs" (Arrow, 1974, p. 37). Both information systems and people possess a capacity to process information, but "this capacity is not, however, unlimited and the scarcity of information-handling ability is an essential feature for the understanding of both individual and organizational behavior" (ibid.). Work involves information processing; individuals conduct information- and knowledge-based activities. They talk, read, write, enter information in databases, calculate, and analyze. Various media are available to facilitate information processing – from pens and face-to-face conversation, to computers, networks and video meetings. Innovations in information technology affect both the organization's demand for information processing and its capacity for processing information.

The step-by-step approach presented in this book is based on the fundamental assumption that the work of an organization can be seen as information processing: observing, transmitting, analyzing, understanding, deciding, storing, and taking action for implementation. These issues may be labeled with other words like learning, tacit versus explicit knowledge, knowledge management, and data mining, but the basic idea is the same. Organizations are

information-processing entities. Therefore, we want to design organizations so that they process information effectively and efficiently.

The basic design problem is to create an organizational design that matches your organization's demand for information processing with its information-processing capacity. Galbraith (1973, 1974), in his seminal work, put it this way: "the greater the uncertainty of the task, the greater the amount of information that has to be processed between decision makers" (Galbraith, 1974, p. 10). Task (or work) uncertainty can arise from a firm's technology and the business environment in which the firm operates (Thompson, 1967) as well as other sources. If the information-processing demand comes from many routine and predictable tasks with an efficiency focus, then formalization in the form of rules and programs can increase the number of tasks that can be handled. As an example, an online retail store in which the shopping and purchase process is rather routine can use rules and programs to increase the number of customers it processes per day. Task uncertainty is low, so the rules and programs are used to manage exceptions. When there are uncertainties associated with the tasks, then information processing is referred up the hierarchy to a level where an overall perspective exists. This is the traditional use of exception-based hierarchical decision-making. Unfortunately, such hierarchical decision-making can handle only a limited amount of uncertainty. If the uncertainty demands exceed the capacity of the hierarchy, then targets or goals have to be set for the various tasks, making the tasks somewhat independent. Coordination of work has moved from an efficiency orientation to an effectiveness orientation. Organizations thus face a tradeoff: they can either reduce their need for information processing or increase their capacity to process information (Galbraith, 1974). These are the two managerial options.

The first option is to reduce the organization's need for information processing by increasing slack resources. For example, if the organization uses a just-in-time (JIT) inventory approach, which requires precise coordination, then the organization might shift to having buffer inventory. Buffer inventory replaces the need to process the information required for JIT. As another example, information-processing needs can be reduced by creating self-contained tasks that do not require coordination among them in order to deliver the firm's product or service. For example, a two-product firm can create two self-contained single-product divisions that need not communicate in order to meet their customers' needs. Of course, this strategy of reducing the need for information processing may incur high opportunity costs from loss of coordination of interdependencies. Single-product divisions may ignore interdependencies

in production or marketing, which may be costly in terms of lost opportunities. Thus, reducing information needs must be balanced with the returns from coordinated activities.

A second option is to increase the organization's capacity to process information. For example, in a hierarchical organization, the hierarchical processing of information can be increased by investment in a vertical information system. An information system may increase the speed and amount of information that can be exchanged. The introduction of satellites, information computer networks, the Internet and integrated CAD-CAM systems can increase the information-processing capacity of the organization. Upgrading the skills of the workforce, hiring more educated people with broader abilities, using mobile communication devices, or holding face-to-face meetings where people can share information are other ways to increase information capacity. Information-processing capacity can also be increased by creating lateral communications across the organization. Direct contact, liaison roles, task forces and permanent teams are other examples of strategies that will increase the firm's information-processing capacity.

The development of new information technologies, methods for organizational learning and technologies for knowledge management require a revisit of traditional strategies for managing a firm's information-processing capacity. Interactive information networks, multimedia systems, and generally the speed and amount of information that can be processed all have served to increase the information-processing capacity of firms. At the same time, the volume of information that firms must process continues to increase. There are more things we want to know about our customers' buying behavior, more research to be gathered for product development and production, more details in the service we want to provide, and so on. So the challenge of designing the organization in a way that best meets demands for information processing remains.

Without doubt, organizations are information-processing entities, and both the information-processing capacity and demands on firms have surged as the cost of information-processing technology has decreased. Along with this trend, there has been a reduction in slack resources in most companies, a slight increase in the use of self-contained units, a large investment in computer-based technologies, and a large increase in lateral communications. All this has led to "leaner and meaner" organizations, less inventory, less equipment, and fewer employees, particularly middle managers. Those who remain use information

much more quickly and efficiently. This introduces the issue of information management by the human resources in the organization. Many organizations have invested in the technical side of knowledge-management and other information systems without getting the benefits, often because the human side was neglected. For this reason, we will emphasize the human side of organizational design in our step-by-step approach.

Select an organization for analysis

Let us get started with our step-by-step approach. For the purpose of analysis you should think about the definition of an organization in theoretical terms. In such terms an *organization* can be defined as "a consciously coordinated social entity, with a relatively identifiable boundary, which functions on a relatively continuous basis to achieve a common goal or a set of goals" (Robbins, 1990, p. 4). Thinking about your organization in these terms will allow you to manage its design and not be overwhelmed by the many, extensive set of activities involved in managing your organization every day. As you will see, this definition corresponds well to the components in our five-step approach.

Now select a specific organization for your use throughout this book. We will walk through the design of that organization in a step-by-step fashion. The organization can be a team, department, division, an entire company, or even a set of companies (such as a holding corporation or a strategic alliance). Your choice of an organization becomes the *unit of analysis* for the entire five-step design process. It is important to stick with the same unit of analysis as we go through this design process. At the end of each chapter we will state a number of diagnostic questions for you to answer that relate to the organization you have chosen. Your answers to the diagnostic questions will be the basis for the organization's design.

Define the scope of the organization

Let us start with a brief explanation of how you should scope your organizational design problem. This is a necessary starting point for analysis. We use the term "organization" or "firm" in the generic sense to refer to the team, business unit, company, or larger enterprise. For most readers the organization

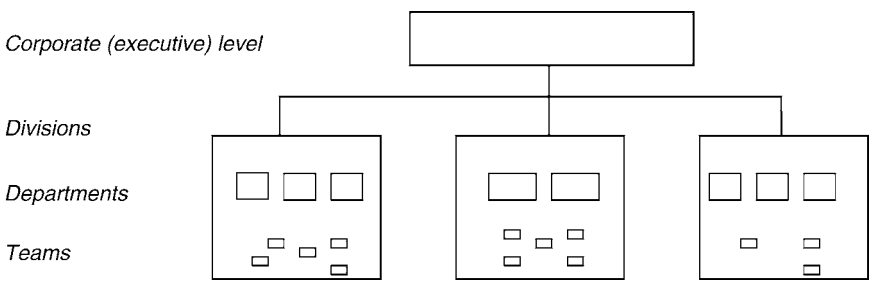

Figure 1.1 Levels in the organizational design process.

is a business firm, but the method we present applies to nonprofit firms, partnerships, joint ventures, educational institutions, hospitals, churches, government agencies – any type of organization in practically any kind of setting.

As stated earlier, organizational design involves two complementary problems: (1) how to partition a big task into smaller subunit tasks, and (2) how to coordinate these smaller subunit tasks so that they fit together to efficiently realize the bigger task and organizational goals. The smaller tasks must be defined and arranged in a way that allows effective coordination. For example, the big task of General Motors or IBM is broken down into divisions and departments. For a project team, the project task must be broken into individual tasks. These smaller tasks are then integrated so that the large corporation or project realizes the desired goals. In all organizations, these fundamental, complementary problems of breaking down big tasks and putting smaller ones together are repeated again and again in many forms.

You should think about the design process as a set of cascading organizational design tasks where you go through the step-by-step process for each task (see Figure 1.1). Often the best place for you to start will be at the corporate level: you should design the upper echelons first. Once that part has been designed, move on to the next levels, which could be departments or divisions, as we shall discuss in subsequent chapters. For example, you first design the divisions in a divisional organization and then you determine how the divisions should be coordinated with one another. Each division can be different from the other – one functional, another matrix. In the cascading process, it is important to consider only one "organization" at a time; do not mix the design of the whole organization as a set of divisions with the design of any one division. More formally, keep the unit of analysis consistent. This process may be replicated in an iterative fashion. The idea of equifinality (Doty et al., 1993)