

Peter K. Mills
Kevin M. Snyder

Service Science: Research and Innovations in the Service Economy

Knowledge Services Management

Organizing Around Internal Markets

 Springer

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Preface

It is the purpose of this book to present the fundamentals of designing knowledge service organizations. Like many others, including Jay Galbraith, J.D. Thompson and Robert Dubin, we believe that the architecture or design of the organization is the manager's most important job. The fundamentals related to design of the work landscape are therefore essential to all knowledge services. Our belief is that while solutions to customer priorities may vary, all knowledge services must first get their architecture in place for the efficient attainment of value added solutions.

The book responds to a need for different approaches to the challenges faced by managers in designing knowledge services. Rapid technological changes along with changing economic conditions have had significant influence on the work landscape for workers and management as well. What is most significant about this changing environment is that the means of production are controlled by workers themselves. In light of this, there is growing awareness that the work landscape for knowledge services cannot be readily managed by reliance on traditional approaches such as 20th century hierarchies.

Given this new reality, the design framework presented in this book is based on internal market principles along with customer integration into the boundaries of the organization. This framework initiates new and realistic ways of designing knowledge services for sustained competitive advantage. By adopting an internal market perspective the firm can integrate the science and art of management with the design realities of contemporary knowledge services. It is the intent of the book to provide ideas that are useful and relevant to managers of knowledge services along with students in this field.

We are most grateful to Mindy Moreland who took on the task of initial editing of the book. Our special thanks to Martha Carpenter for her numerous insightful comments. The authors wish also to acknowledge and thank Phil Ferranto for his invaluable assistance in creatively coordinating and managing the manuscript with the publishers and other contributors.

Peter K. Mills
Kevin Snyder

CHAPTER 1

DEFINING COMPETITIVE ADVANTAGE IN KNOWLEDGE SERVICES

Abstract

This chapter examines the profound and widespread evolutionary transformation of the workplace as the economy shifts from one based on manufacturing to knowledge services. 20th century managerial approaches for competitiveness are becoming a relic, the result of a broader transformation to knowledge services and the need to focus on the building of tacit knowledge stocks for sustained competitive advantage. The chapter outlines the emerging knowledge based work landscape and the challenges it presents for managers. In this chapter, the “proventure” worker is introduced and the new and complex contract in the relationship between management and worker in the workplace. The nature of knowledge service solutions to customer priorities is presented with the focus on collective cognitization along with the active inclusion of customer as co-creators of value-added solutions. The chapter concludes by highlighting a big-picture framework to provide guidance for managers of knowledge services interested in understanding and improving the performance of their organizations.

“All I talked about was the drive to get into services. We are in the services business to expand our pie. Our job is to sell more than just the box.”¹

-Jack Welch, Former General Electric CEO

As Mr. Welch’s quote suggests, we are becoming a predominantly knowledge-based services economy. The facts bear this out. Over the last twenty-five years, there has been a dramatic transition toward the “**cognitization**” of work, or work requiring copious reasoning and judgmental activities.² In the growing economic evolution that is currently taking place, the shift in employment to knowledge-centered services is the most forceful driver transforming 21st century firms and the way things get done in the world of work. Emerging knowledge service organizations are generally organizations that use intellectual capital—a body of ideas—to diagnose or address customer priorities and recommend a course of action or solution. Services are the engine driving the expansion in the U.S. economy.

Currently, about 80% of Americans are employed in the services sector. The number of manufacturing jobs had fallen dramatically over the past several years. From 2000 to 2005, the U.S. lost approximately 17% of manufac-

turing jobs (dropping from 17.3 million to 14.3 million). This illustrates an ongoing trend within the American workforce, as the manufacturing sector has dropped from 35% in 1955 to 10% in 2005. Agriculture continues to make up a very small portion of the economy, representing only about 2%. Similar to the shift from agriculture to manufacturing during the Industrial Revolution, the current shift is changing the workforce from emphasis on manufacturing excellence to the quality of services solutions.

The activities of many successful companies have mirrored this shift, from manufacturing to services. Former president and CEO of General Electric (GE), Jack Welch, has been a visionary in management design for decades. In 1996, Welch unveiled the “New GE for the Next Century.” The plan reorganized GE in terms of service functions, transplanting traditional product-market units that had once been the legacy of innovation, progress, and sustained profitability. The transformation of GE from manufacturing to services—where the margins are generally 50% higher—had been an obsession for Welch. This transformation has taken GE from a \$79 billion firm in 1996 to a \$173 billion firm in 2007. Meanwhile, its overall profit margin increased from 9% to 13%.³

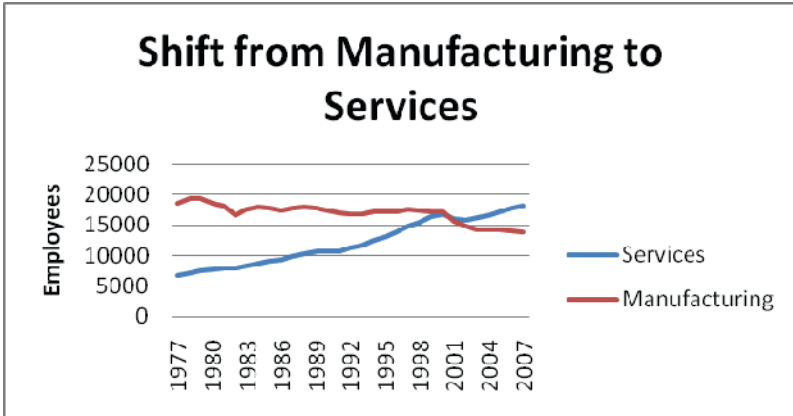
International Business Machines (IBM) was another company to successfully make the shift. When IBM acquired the PriceWaterhouseCoopers (PWC) consulting practice in 2002 for \$7.5 billion, it added 33,000 service workers to its ranks, signaling a dramatic change in the company’s strategy and future profit potential.⁴ IBM has continued to move in this direction by focusing on providing business solutions through IT consulting, a move that has increased overall revenues by 22% since the PWC acquisition. Many other large manufacturing companies are taking notice and have followed IBM. Hewlett Packard’s (HP) recent acquisition of Electronic Data Systems (EDS) and its 140,000 service employees doubled HP’s workforce at a cost of \$13.9 billion, indicating further emphasis on services over manufacturing.⁵

While this movement by IBM and others underscores the radical transformation of the work landscape over the recent years, the effects of shifting to a service-based organization are profound. In this chapter, we will discuss the departure from 20th century organizational landscape and some of the daunting challenges facing managers with the rise of knowledge-based service organizations.

Knowledge-based services are at the epicenter of workplace evolution. Services such as business-to-business services; high-touch, high-tech support services; technical-software services; accounting and financial services; advertising, marketing, and public relations; engineering; medical and health-care; management consulting; and legal services comprise the most rapidly expanding segment of the labor force. The paramount impetus for growth in this economy is these services. Whereas manufacturing ruled the economy only a few decades ago, employment in these industries has plummeted and continues to do so under pressure from lower costs. Economic census data

show that between 1977 and 2007, the number of employees engaged in manufacturing activities decreased by about 25% while service employees increased by 168%. The graph below illustrates the dramatic shift from manufacturing to a service based economy.

Table 1-1. Shift in Labor Force from Manufacturing to Services in the United States (1977-2007)⁶

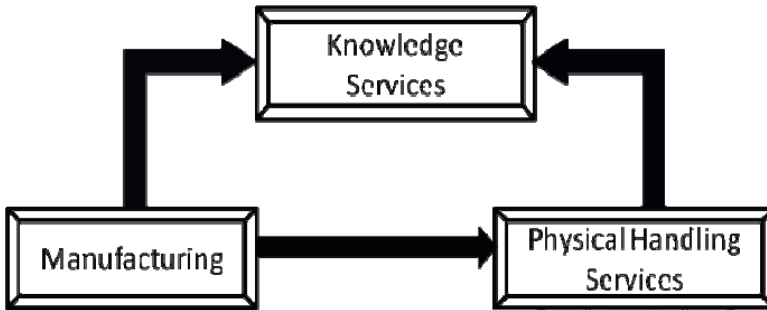


The most rapidly expanding segment of the economy is knowledge services. Economic census data show that while the number of establishments engaged in manufacturing activities increased by around 2 percent from 1968-2005, establishments in the knowledge services increased by 26 percent during the same time period.⁷ This movement to knowledge services appears to be far from a temporary shift but rather a permanent one and is not without precedence. There appears to be a pronounced link between economic evolution and commoditization of services. At the core of the movement to a knowledge-based work force is a trend towards the commoditization of low-level white-collar services jobs such as wholesale, call centers, basic level technology jobs (such as billing services and resetting passwords), and other service work activities. Margins are generally much lower for these services as they tend to have little to differentiate them from each other. What is of historical importance about the commoditization of contemporary low-level white-collar services is its striking similarity to the experience manufacturing workers underwent well over a generation ago. It is this commoditization of low-level services that is, to a large extent, fostering much of the change in the newly evolving knowledge-based service sector.

Marketers have long recognized that customers of low-level, white-collar services have tremendous buyer power. By this we mean that the customers of commoditized services care only about prices, which in turn force firms producing these services to compete on costs.⁸ As a commodity, low-level white-collar services along with physical-handling services (e.g. retail ser-

vices) lend themselves readily to technological innovation, which invariably results in cost efficiencies and consistency in service delivery to customers. Rising productivity of these service firms, along with widespread outsourcing to cheap locations abroad, have created labor imbalances. As a result, excess or redundant workers from both manufacturing industries and low-level white-collar services have flowed to the emerging knowledge services sector as Figure 1-1 shows.

Fig. 1-1. Employment Flow to Knowledge Services



In addition, economic and technological drivers such as productivity enhancement and outsourcing in both manufacturing and low-level white-collar services have given rise to a new kind of organizational landscape; one that accentuates jobs requiring rich cognitive skills for continuing innovation and creativity, particularly in the so-called customer- or client-facing jobs. We label this work environment the **proventure workplace**.⁹ For the most part, this is a rapidly emerging work landscape that reflects the nature of its workers and the complexity of their jobs. Proventure workers or proventurers are individuals who seize opportunities to make sense of chaotic and uncertain situations. Not knowing whether the outcome they are striving towards will be the one they attain, proventurers act with abandon, displaying fewer defenses and reservations than more traditional workers. Proventurers operate both within and outside of their organization's boundaries particularly in their interaction with customers, on behalf of themselves and their organization. In essence, the consistent and pervasive cognitization of work is what markedly distinguishes 21st century organizations from the workforce landscape of the previous century.

MANUFACTURING MAKE OVER TO SERVICES

What is most remarkable about the transition to proventure workplaces is not so much the emergence of new service organizations, but rather the growing makeover of traditional, mainline manufacturing organizations into

knowledge-based services. Over the past decade, there has been a distinct and pervasive morphing of manufacturing sector organizations as they gravitate toward knowledge “service” lines of business where opportunities for new and more promising markets abound and profit margins are significantly higher. This makeover is essentially a flight from low-price competition. At IBM, for example, business-related services in 2002 accounted for 66 percent of revenues as the company’s dependence on tangible product lines rapidly shrank. It is clear that IBM’s shift to a knowledge-based service firm has improved their profitability. After the acquisition of PWC’s consulting practice in 2002, IBM’s firm wide gross margins increased from 37% in 2002 to 42% in 2007. IBM saw similar growth in net income over the same period, increasing from 4% to 10%.

The Proventure Workplace: Its Nature

The shift to knowledge services and the significance of the change in the contemporary work landscape creates new concerns and challenges for managers. There is mounting competitive pressure on how best to manage organizations in this rapidly expanding sector. It seems reasonable and intuitively clear that to use traditional manufacturing models, ideas and techniques to run the emerging knowledge sector organizations makes as little sense as the use of agricultural techniques to run manufacturing organizations. How best to manage and structure an emerging knowledge-based landscape which challenges the fundamental relationship between management and worker is problematic. As Peter Drucker perceptively noted, unlike traditional workers, knowledge workers control the means of production.¹⁰ This shift in control of the means of production and its effect on the relationship between management and worker essentially and profoundly alters the contemporary workplace. Traditional approaches for developing strategies and structures would be ineffective in this developing services work environment, where talent is the differentiator of 21st century competition.

Having workers control the means of production places a premium on acquiring talented employees. Pixar, the successful movie animation studio, has found this to be of particular importance. In attributing the studio’s success to its people, Pixar president Ed Catmull states, “The view that good ideas are rarer and more valuable than good people is rooted in a misconception of creativity...If you give a good idea to a mediocre team, they’ll screw it up. But if you give a mediocre idea to a great team, they’ll make it work.”¹¹ While talent is important in any industry, it becomes vital for knowledge service firms because of its connection to the production of the firm’s output.

This metamorphosis of the workplace presents formidable challenges both in terms of performance and managerial-governance impact¹² and threatens to adversely disrupt long-standing methods of organization coordination, in-

tegration, and overall strategic activities. It is in recognition of the need for new conceptualization and thinking regarding the management of services that IBM's Research Center in San Jose launched its so-called "Service Science" initiative in 2004. The initiative encourages research in service innovation with the goal of addressing the key challenges that service managers are now facing. As a result of this new center, IBM is committing over 25% of their R&D budget to services research. This amounts to over \$1.5 billion spent on research, including work performed by over 550 people firm wide. Traditional service firms are also beginning to see the benefits of investing in R&D. The consulting firm Accenture has committed over \$250 million in R&D funding over the next three years to help their clients find novel solutions.

To address the daunting challenges facing those who manage the 21st century organization, we need to understand just what proventure work means and what workers in these services organizations actually do. First, solutions to customer priorities require judgment and calculation. The proventure workforce is cognitive-centric, meaning that employees within these organizations largely understand and manipulate complex ideas through reasoning and that they spend a lot of time and effort processing large amounts of information at high levels. Further, these employees have undergone extended, prolonged specialized training and exposure to a body of recognized knowledge.¹³ Proventure workers generally make claims over a unique body of expertise, knowledge, and skills, allowing each worker the right to develop value-added services or solutions to customer priorities.¹⁴

In knowledge services, generating novel solutions to customer priorities is complex and requires a lot of interaction with others since, as Leonard-Barton noted, few, if any workers in these organizations are capable of coming up with new ideas without incorporating knowledge or ideas from others.¹⁵ Effectively delivering value-added services to customers is thus a cognitive process with reliance on high degrees of skill, knowledge, and expertise. There is heavy dependence on other knowledge workers and customers, not only for vital input but also to accurately assess performance and the quality of solutions to customer priorities.¹⁶ It is primarily for these reasons that we see the extensive rise of teams in contemporary proventure service organizations and the widespread use of colleague consultation and evaluation. The intent of these teams is not only to share knowledge but to create a sort of collective cognition to address issues as well. But while there is dependence on interaction with others to generate novel value-added services, employees generally perform their tasks with more autonomy and a strong independence without undue pressure from customers, the employing organization or workers outside their the area of expertise.¹⁷ All this leads to a more dynamic and complex work landscape than traditional work environments; a landscape where employees cannot readily be programmed to do their tasks.

Knowledge as Energy Substitution

A crucial question in the movement to knowledge services and the proventure work force is: How is the move toward this emerging service environment different from previous workplace transitions? After all, economies have seen dramatic changes in the workplace before. In order to address this question, it is necessary to understand the underlying fundamentals of earlier transitions. The shift to services in general and to proventure workforce in particular has clearly accentuated knowledge as a vital source of energy in 21st century organizations. This is a radical break from previous economic transitions. In earlier economic developments, people were replaced by machines and automated systems as a more productive source of energy. This was what the industrial revolution was all about. In the 21st century work world, knowledge and those in possession of it are substituting systems as the predominant source of energy for organizational efficiency and competitive gain. Talent is the fuel that drives the current transition and defines it as well. While talent is a scarce resource, it is of the utmost importance in advantageous differentiation for knowledge services.

In contemporary services and the proventure environment, knowledge is not only a source of energy, but also a commodity of trade. All these service organizations tend to possess a large degree of explicit or codified knowledge, as the educational training of their employees is a vital part of the business' survival. Competitive advantages for these emerging service firms are realized by actively exploiting those unique knowledge competencies that are relatively difficult to imitate by other service organizations.

While it is now quite clear that the type of knowledge possessed by contemporary service organizations is of the utmost importance for fueling competitive gains, the mere possession of explicit knowledge alone is not enough to yield a sustainable advantage. Explicit knowledge can be codified and more easily copied or duplicated by competitors. What is needed for effective and sustained competitive advantages is knowledge of the "tacit" kind, which is more difficult for competing service organizations to imitate. Tacit knowledge is defined as knowledge residing in the employee's head, which cannot be quantified or systematized, and which is largely based on an abstract set of concepts, ideas, ingenuity, and theories applied to particular situations.

In the cognized landscape of emerging services, employees develop tacit knowledge through the use of discretion and personal experiences in the process of coming up with value-added solutions to situations dictated by customer priorities.¹⁸ What sets workers in knowledge services apart from those in traditional types of organizations and makes them truly unique is the tacit knowledge they possess. Capturing such knowledge is most difficult under traditional hierarchies and creates major challenges for managers.

IBM experienced such difficulties in its attempt to address this issue with its development of Web. 2.0, a networking mechanism to create internal blogging and knowledge sharing within the company.¹⁹ IBM seems to be altering its structure on the fly in the face of an increasingly complex work landscape. Such cosmetic tactics may indeed foster the sharing of predominantly explicit knowledge, but will hardly get at meaningful tacit knowledge in peoples' heads because of the basic constraints inherent in traditional hierarchies. What is needed to take advantage of tacit knowledge is a radical shift in the way proventure workers must be organized, which is the basis for this book.

Proventure Work: A New Management Relationship

To get a handle on how best to manage knowledge services and the proventure workplace, it is imperative to understand the emerging relationship between the worker and the organization. As we noted earlier, tacit knowledge is primarily a source of energy that gives contemporary services their distinctiveness. Tacit knowledge is the firm's main inventory to be traded for competitive gain, presenting a fundamental challenge for the management of these expanding service organizations.

We know that tacit knowledge resides largely in workers' heads and cannot be easily separated from the workers' skills.²⁰ As such, this is a situation that lends further credence to Drucker's observation about knowledge workers owning and controlling the means of production in these organizations.²¹ Unlike their traditional manufacturing counterparts, where management controls the means of production, knowledge and proventure workers are much more independent of such governance as reflected in the rise of itinerant workers in this segment of the economy.²² Knowledge-service workers have greater mobility primarily because the knowledge in their possession is a form of capital asset, one enormously valuable and tradable both inside and outside the firm. Workers control their knowledge, particularly the tacit kind. Thus, they exert control over the means of production. This workplace situation radically shifts and alters the balance of power to proventure employees and those firms in need of them.²³ Whereas the relationship between the traditional manufacturing employee and his/her management was one of subordination, the employment contract between management and proventure worker is now at least more balanced.²⁴ As Peter Drucker notes, "Contrary to manual workers in modern industry, the knowledge-based organization and its workers have a symbiotic relationship in which they need each other in equal measure."²⁵ This new relationship is one of the foremost challenges facing managers in the knowledge services theatre. The situation cries out for new ways of thinking on how to effectively address the proventure work landscape.

UNIQUENESS OF KNOWLEDGE SERVICES

Knowledge Production

The fundamental objective of knowledge services organizations is the generation and trade of solutions to customers' priorities. In these organizations, knowledge is their stock in trade and is largely actualized in the form of potential value-added services or solutions to unsolved business problems.²⁶ In this largely cognitive work environment, the technology necessary to generate such knowledge, particularly tacit knowledge, is almost exclusively worker-based skills. Workers in these organizations use intellectual capital—a body of ideas—to generate value-added solutions to customer priorities.²⁷

In most knowledge services, tacit knowledge is the primary raw material, and the source of creativity and advantage. Tacit knowledge entails know-how. It is knowledge that proventurers use in their tasks not only when they are unsure about what to do, but when they don't know how to do the task. Much of the tacit knowledge in service organizations is generated out of interaction and dialogues between and among employees and other stakeholders, particularly customers. It is therefore more accurate and realistic to view proventure work settings as systems of persuasion²⁸ wherein the technology of communication, exchanges, and alliances among workers take on new and increasing significance to the organization. IBM's new so-called "knowledge sharing" approach seeks to use technology to foster systems of persuasion and interaction in its diverse global knowledge base.²⁹

When we examine the task of proventurers in knowledge services, we discover tasks requiring the use of knowledge with a lot of cause-and-effect relationships "that have generally been verified by some objective means and therefore 'known' to one or more employees with some degree of certainty."³⁰ It is the ability of the employee in these work settings to use their cognitively leveraged information to make decisions that render knowledge a potentially valuable and competitive asset to the service organization.³¹ Leveraging is all about the transfer of knowledge to others to build new knowledge that is specific to employees. This is where the process of generating value-added solutions in emerging knowledge services breaks with traditional production processes. Value-added solutions in knowledge services are quite analogous to the finished goods in traditional production. In traditional production, popularized by Fred Taylor's scientific management, much of the emphasis is placed on value chain efficiencies, which invariably calls for a separation of the stages or activities and responsibilities beginning with the incoming raw material and ending ultimately in the hands of the customer. In stark contrast are the requirements of knowledge services, where the emphasis is on uniting activities in the worker's job. Whereas manufacturing separates the production process to gain efficiency, knowledge servic-

es gain this efficiency by having workers devise and complete unique solutions. This has a profound impact on the process of generating valued-added solutions because it allows for integration of the thinking and doing aspects of the job.³² It is precisely this inseparability of thinking and doing in the production of knowledge services that give rise to the need for proventurers in order to generate value-added solutions. When we think about knowledge creation for value added solutions and competitive advantages, we are mostly talking about change. Novel solutions are, by definition, assimilative, constructive processes in which it is necessary to incorporate information from different sources in order to create or build the service organization's stock of knowledge.

Building Inventory or Stocks in Knowledge Services

In knowledge service organizations, workers are, for all practical purposes, human capital assets because they are in possession of specialized skills and tacit knowledge. These mental assets are vital to the generation of value-added services or solutions to customer priorities.³³ Given the unique nature of tacit knowledge residing only in people's heads, employees in knowledge services are themselves repositories of inventory. Employees become essentially "current" assets because they are expected to provide solutions to be sold to customers at the time of the solution creation. Value-added solutions, therefore, are "knowledge stocks" possessed by workers and are matched with the customer's needs and priorities. Presented with this new work landscape, a large challenge for managing these services is motivating human assets in order to maximize the value of these resources. This is where these firms can gain competitive edges. Workers in these organizations need to be highly energized to assist in the building of the organization's inventory of mental assets, its knowledge stocks.³⁴ As potential solutions, the building of knowledge stocks within these organizations and the expansion of these assets are directly dependent upon workers themselves. Without employees, there is little or no valuable inventory in these service organizations to address future customer priorities, since tacit knowledge is often difficult to separate from those who possess it.³⁵ This idea of workers as human capital dictates new approaches in strategy, management, and motivation of workers for sustained competitive advantages in knowledge services.

The building of knowledge stocks is heavily dependent upon the following factors:³⁶

Table 1-2. Determinants of Knowledge Stocks.

-
- *Worker Autonomy*: Responsibility for the generation of knowledge stocks is imposed on the individual proventurer. Proventurers manage themselves.
 - *Continuous Innovation*: Innovation is a part of the work, the task and the responsibility of proventurers.
 - *Continuous Exchanges*: The work of knowledge services requires continuous learning and teaching on the part of proventurers in the process of leveraging information with other stakeholders.
 - *Quality of Problem Solutions*: Knowledge is not just concerned with quantity. The quality of solutions is equally important.
 - *Customer as Assets*: Both customers and workers are treated as participants with invaluable assets in the co-creation of knowledge stocks.
-

All of these factors are crucial to the generation of knowledge stocks for competitive advantages and serve to distinguish emerging service organizations from traditional manufacturing organizations. A pressing challenge in knowledge services is to understand the balance of power between these service organizations and their talent. Granting more flexibility to proventure employees, who control the means of production, allows for the widespread dissemination of the decision-making process in the required co-creation of solutions. Employees are granted a much broader scope of power than would be possible or required in traditional manufacturing organizations or for low-level white-collar service activities. In the knowledge services work context, employees must be permitted real autonomy to perform their tasks and to assume more responsibility.

Knowledge Services Output: The Intangible Attribute

What is the nature of the activities that employees in these emerging organizations actually perform? One of the attributes that distinguishes services from their manufacturing counterparts is the intangibility of what is produced. Services are deeds, performances or efforts that are rendered by one party on behalf of another and are thus intangible.³⁷ Knowledge creation and solutions to customer priorities are based on actions on the part of workers. Such actions and their outcomes are essentially intangible. Tacit knowledge, the indispensable attribute of complex services, is an abstract thing and can only be stored in peoples' heads. This feature of knowledge services is in radical contrast to the tangible objects produced by a manufacturing business. The intangible nature of task activities and the accompanying uncertainty around output of knowledge services is not, in most cases, as readily measur-

able as the tangible output of a manufacturing production. Even attempts to set standards within knowledge-based services under these intangible conditions tend to defy traditional control procedures.

One of the difficulties with knowledge services is the issue of storage. In a manufacturing firm, outputs can be easily inventoried because they are usually independent from the producer. This is not the case in knowledge services. Tacit knowledge stock does not wait around to be consumed. This is in stark contrast to a tangible product or even explicit knowledge which can indeed be produced at one point in time in traditional organizations and consumed at some later point, independent of workers. Even well-intentioned knowledge services sometimes display this manufacturing attribute. IBM's recent focus on explicit knowledge inventory is a case in point. The company's Blog Central along with its so-called QED WiKi environment allows workers to aggregate comments and contents from a central database. This makes it possible for workers to see all sorts of explicit knowledge such as resumes, projects others are working on, with whom workers are talking, and so on.³⁸ IBM's Blog Central also allows employees to determine who may have needed tacit knowledge. By reviewing resumes, projects, and backgrounds of co-workers, IBM employees are able to determine who may have experience with a certain type of project or who may have tacit knowledge that could be of assistance. This form of internal signaling is a way for employees to promote their ideas within the internal structure of the organization (see Chapter 7 for further information). Unlike traditional organizations, the most important inventory in knowledge services is the tacit knowledge stocks which are stored in the heads of workers and are heavily guarded by those in possession of said knowledge. In a traditional manufacturing context, goods are consumed as they are used, thereby providing decreasing returns over time.³⁹ In contrast, consumption of knowledge services provides increasing returns: the more knowledge is exchanged, the more valuable it becomes as ideas expand.

There is an important managerial concern regarding the intangibility of knowledge services which affects the competitiveness of the organization. The pervasive intangibility of knowledge services output often has the effect of impairing the customer's ability to meaningfully determine the value of the service offering prior to purchase⁴⁰ as well as to make useful distinctions between the outputs of competing service firms.⁴¹ In healthcare, one of the largest and most troubled service industries in the U.S., mental health problems such as depression and schizophrenia can be treated by psychotherapy or drugs by managed health care providers. A drug-friendly regime may indeed be effective for patients who may not respond well to psychotherapy. To the patient, the value of the treatment or services offered in getting better is difficult to determine. It may take months or even years for psychotherapy to achieve results, and drugs like Prozac may have unintended side effects.

Conditions have to be created in these service organizations such that customers' expectations of solutions are fully optimized. This is problematic.

Further, challenges around intangibility of output or value added services are not restricted solely to customers. Managers of knowledge service organizations face similar challenges with their employees as well. It is difficult for these service organizations to determine with any degree of certainty the quality of performance and productivity of employees. It is an onerous undertaking for the organization to know for sure just how much tacit knowledge exists in its workers' heads, or the value of such knowledge. As a result, both customers and the management of knowledge service organizations invariably experience what is generally referred to as information asymmetry. Workers, but neither the organization nor the customer, know the extent and nature of the effort a worker intends to make in providing value-added solutions. Take for instance our healthcare example above. Patients are never quite sure that the physician is developing the best treatment solution since their doctor's choice of which medication to prescribe may be affected by cost pressures. The managed care firm is always disadvantaged in choosing traditional psychotherapy, as financial and even emotional incentives to prolong the talk therapy may exist, which can be very costly to both patient and firm. This is inevitable given the variability of outcomes under uncertain conditions. These fundamental issues profoundly complicate the management of knowledge services and appreciably increase our awareness of the unique challenges facing these organizations.

People-Intensiveness and Co-creation

While there have been a lot of platitudes by managers in the past regarding the importance of people in organizations, nowhere are people more vital to the very existence of the firm than in knowledge services. People provide the raw material from which value-added services are produced. In knowledge services, there is little or no accumulation of tacit knowledge stock or inventory within the organization independent of employees themselves. This is what makes people as human capital so important, which invariably gives rise to a workplace that is highly people-centric.⁴² However, the nature of tacit knowledge is not the only reason for the heavy labor intensiveness in these services. Another important reason for the relatively heavy focus on people in knowledge services is the process by which solutions are generated in these organizations. In manufacturing firms, goods typically are produced, inventoried, sold, and then consumed. This is not the situation for knowledge-based organizations. In knowledge services, output or value-added solutions to customer priorities are usually sold first, then produced and consumed simultaneously because they cannot be easily inventoried.⁴³ Thus, relative to their manufacturing counterparts, knowledge services are instant-

ly perishable, which precludes these firms from employing traditional manufacturing tactics to smooth out the production process by increasing inventory during slow periods in order to meet periods of high demand.⁴⁴

Since knowledge services' output cannot be easily inventoried or sold at a later date, buyers and sellers must interact at the production level in order for solutions to be rendered. The separation in space and time that invariably exist between production and consumption in traditional organizations reduces external disturbances and allows for the establishment of efficient methods of production.⁴⁵ This sort of manufacturing production rationality, in contrast, is greatly diminished in knowledge services organizations.

In knowledge services, employees themselves are the inventory because workers are repositories of the all-important tacit knowledge stored in their heads. Moreover, the simultaneous production and consumption of knowledge services suggests that in order for customers to receive solutions, they must interact with the production process.⁴⁶ Customers have crucial activities to perform in the production of solutions because of the resources in their possession.⁴⁷ Customers have long been recognized as "partial employees" of service organizations.⁴⁸ Co-creation is an indispensable part of knowledge services, serving to recognize and accentuate the active involvement of customers as important in value creation for these organizations.⁴⁹ Customers become potential sources of vital information and even knowledge itself for these organizations and are thus co-creators of solutions.⁵⁰ The challenge here for managers seeking competitive advantages is to develop a work setting that maximizes this critical juncture of co-creation in the generation of solutions to customer priorities.

The co-creation feature of knowledge services further serves to demonstrate the customer's interaction within the boundaries of the organization in another important way. The active involvement of customers suggests not only the altering of the traditional "passive" role of customers as meek recipients of value-added services or solutions, but, more importantly, provides greater strategic latitude for these emerging firms to leverage knowledge from customers by forming "**downstream alliances**".⁵¹ To miss the pivotal role of such alliances in building tacit knowledge stocks and solution is to fail to capture the essence of knowledge services organizations. This is where these service businesses must differentiate themselves from the competition. The nature of customer alliances in the development and leveraging of knowledge can be altered by the firm so as to achieve strategic advantages and important contributions to firm performance.⁵² Co-produced output can be seen in a number of knowledge service firms, particularly among database design consultants. While the individual consultants possess the tacit knowledge of building databases, they must work closely with the customer to understand the functionality and features needed. The customer will be involved in testing the new system as well as directing the consultant as to how the data will be used.

Centrality of Customer Alliances

It is clear that knowledge services cannot readily escape the incursion of customers into their activities and operations. Such incursion is in the nature of these services. Customers aid in the production of service offerings; they help produce the service through direct alliance with the firm. It is therefore not too surprising that different types of alliances can yield different experiences for the organization. Given that tacit knowledge is created through personal experience, as human thought is cognitively employed in the formulation of ideas, the nature of the alliance can be expected to impact the generation of knowledge which is so vital to addressing customer priorities. In essence, customer alliance is a form of collective cognition, the quality of which precedes or determines value-added solutions.⁵³ Thus, the development and building of tacit knowledge stocks within the organization depends in part on the complex characteristics of customer alliances and the organization's ability to manage the challenges created by this essential relationship.

There is little question that knowledge-based organizations produce and sell products high in both intangibility and heterogeneity because of the myriad of ways to satisfy customer priorities. Intangibility means that the knowledge that is leveraged and exchanged involves an action or a deed by someone rather than a physical product.⁵⁴ However, the problem with intangibility is that it has the effect of clouding the customer's ability to determine the value of the knowledge offering prior to the purchase.⁵⁵ This clouding effect is not restricted to customer satisfaction. Even from a competitive stance, intangibility creates problems because customers cannot easily make distinctions between the output of competing knowledge services firms.⁵⁶ The intangibility of solutions makes the issue of quality inherently subjective. This applies to the heterogeneity of solutions as well. Services heterogeneity means a high degree of variability in process and solution outcomes because knowledge-based resources will tend to be more flexible and less specific. These factors allow a larger set of possible solutions to problems.⁵⁷

For example, imagine an IT consulting firm that has been hired to build an internal computer network for a customer. The client is unfamiliar with the information technology infrastructure and even what solutions could be possible. As they select a firm to complete the project, it is difficult for them to discern which proposals are better suited to their needs. Once a firm is chosen and the project completed, there is no way for the customer to determine the quality of the service. The network may be functional but the client's lack of expertise prevents them from knowing if the contracted consultant built an excellent system or should have done better. While there are methods for assessing performance (time spent, ability to communicate, personal feelings), the customer is unable to make a proper judgment without more knowledge.

It is therefore paramount that useful measures be taken to ensure that the firm's services create value for the buyer. One important way to accomplish

this is to signal a firm's competencies. The position a firm takes in the market can provide invaluable information to customers concerning the competency that that firm possesses in a given area.⁵⁸ Knowledge service firms must pursue heightened signaling because the intangibility of the service output and information asymmetry prevents potential customers from assessing the quality of competing firms. The best way to accomplish such signaling is by building alliances with customers. By so doing, these alliances signal quality and serve to differentiate one firm from another.

Customer alliance is a partnership or collaboration between knowledge-based service organizations and their customer-clients to strategically leverage information and knowledge for solutions and mutual gain. Customer alliances provide a pivotal framework for creating value. They are a germane conduit through which competencies are shared and knowledge is generated and/or transferred in attempts to creatively satisfy customer priorities. One important advantage of the customer alliance is that it offsets the clouding effects of information asymmetry – disparity in information between two parties engaged in an exchange – which is inherent in knowledge production. The alliance serves as an important vehicle to reduce ambiguity and potential dissatisfaction in meeting customer expectations. For example, PriceWaterhouseCoopers (PWC) maintains a customer list that includes large Fortune 500 companies such as IBM, the Walt Disney Corporation, and ExxonMobil. This suggests to potential clients that PWC has the knowledge to complete audits of large, complex companies. A smaller auditing firm may pursue only smaller, local companies, signaling an expertise in a particular region or industry.

What is unique and valuable about customer alliance in knowledge services is that these partnerships invariably create open systems in the organization's task environment by extending the boundaries of the firm to actively include customers. By so doing, knowledge service organizations are directly influencing and being influenced by the market segments in which they compete as information about the organization's competencies easily permeates the customer alliance. Thus, customer alliances not only become a surrogate for determining the quality of solutions, but more importantly, the organization is in a better position to determine which knowledge stocks will create future value for customers and a potential for sustained competitive advantage. Information asymmetry and ambiguity around the intangibility of outputs still remain high in knowledge service organizations. For instance, buyers still cannot adequately determine solutions' quality and value. Customer alliances can be used as an invaluable mechanism to circumvent and temper the effects of information asymmetry or any ambiguity surrounding the service output particularly because of customer involvement and feedback.

By allowing the service firm to maintain an indispensable attachment to its customers, customer alliances provide strategic problem-solving mechanisms not only to transfer tacit and explicit knowledge to address customer priori-

ties, but also to expand the firm's potential to build knowledge stocks specific to that organization. Such knowledge is difficult to imitate by competitors—particularly knowledge of the tacit kind—because it tends to be subtle, hard to understand, and because cause-effect relations in the generation of solutions are not apparent.⁵⁹ Tacit knowledge that is specific to these service organizations is therefore the most valuable asset the firm can possess. The crucial part played by the customer alliance in the generation and development of such assets will determine the extent to which the firm can compete in a sustainable way.

Table 1-3. Fundamental Aspects of Knowledge Service Firms.

-
- *Intangibility*
 - *Workers control of means of production*
 - *Co-production*
 - *Mobility of workers*
 - *Informational asymmetry*
 - *Instant Perishability*
 - *Heterogeneity*
 - *Labor Intensive*
-

PROVENTURE WORKPLACE: THE NEXT ENTERPRISE

While both intangible (tacit) and tangible (explicit) knowledge contribute to the overall quality of solutions in knowledge-based service firms, it is far more advantageous for these organizations to focus on the impact of tacit knowledge, as this type of knowledge is relatively more unique and difficult for competitors to imitate or duplicate.⁶⁰ Tacit knowledge is scattered throughout all reaches of the organization.⁶¹ It is often difficult to locate or measure, and even more difficult to separate from those who possess it. As result of this, an asymmetric relationship in favor of the worker is created. This is a major problem for the management of knowledge services. Management can never be quite sure that workers have located all the dispersed knowledge they require to address customer priorities, or that workers are leveraging all the tacit knowledge in their possession. It is the nature of this problem that gives rise to the observation that workers in knowledge services control the means of production.⁶²

This shift in the control of production creates enormous challenges for the management of these organizations on many important fronts. The major issue confronting 21st century knowledge based services is the establishment of sound management strategies and organizational architectures that facilitate the location, generation, and transfer of tacit knowledge. This tacit know-

ledge allows for the development of quality solutions to customer priorities and the building of knowledge stocks that the firm can leverage for future opportunities. Unfortunately, sound strategies and structures for effectively managing these emerging organizations are at a relatively underdeveloped stage when compared with the vast progress made in structuring their manufacturing counterparts and low-level white-collar services. Operational factors of knowledge services—the vagueness of tacit knowledge, the often mysterious nature of value-added solutions, maintaining customer alliances, employees controlling the means of production, heterogeneous work itself, highly subjective and qualitative evaluations—have dictated the necessity for new architectures to effectively and efficiently manage this radically different work landscape.

The traditional hierarchical architecture of management in firms was established during the industrial revolution era⁶³; a design that is most effective and efficient, even today, for manufacturing or low-level white-collar service organizations where standards are concretely determined. Traditional hierarchies are well suited for a workforce that operates under highly centralized conditions with management clearly in control of the means of production and where there is close scrutiny given to the imposition of controls with relatively strict adherence to pre-established work behavior. However, the application of old-line traditional hierarchy to knowledge services makes little sense.

In the emerging knowledge service organization, the effective use of information and collective cognition is a primary source of competitive advantage. The focus is largely people-centric because workers are in control of tacit knowledge and thus the means of production.⁶⁴ This work landscape requires, and indeed currently cries out for, different architectures and ways to manage. The many possible outcomes inherent in solutions to customer priorities along with the need to employ tacit knowledge to such solutions strongly dictate much more radical governance models.

New architectures are called for that foster continuous ingenuity and reduce asymmetric information between worker and management. Unlike its old-line 20th century manufacturing and low level white-collar services predecessors, the emerging knowledge services organization requires an architecture that encourages workers to give up or invest the tacit knowledge residing in their heads and to become “perpetual proventurers” because of the continuous need for the organization to be creative in order to remain competitive. Knowledge service firms desire to have their employees constantly asking questions and learning new techniques and strategies (increasing their tacit knowledge) to engage in risk taking in order to create better solutions for a wider variety of customers. It is the current realization of these factors that accentuates the need for better ways to structure and manage knowledge service workers in order to assist these organizations in productive and competitive gains. Superimposing traditional manufacturing management models

on knowledge services is counterproductive and only serves to undermine talent within knowledge firms. The issue is not so much a matter of finding entrepreneurial high-level talent but of discovering a structure that will foster entrepreneurial behavior within the organization.

A TEMPLATE FOR SUSTAINABLE COMPETITIVE WORTH

In order to compete advantageously, knowledge services must be engaged in a continuous process of creative solutions to customer priorities and the building of knowledge stocks within the organization. The pervasive need for generating unique solutions to heterogeneous customer priorities is invariably determined by the ingenuity of management and the organization architecture that is established. It is therefore imperative that attention be focused on strategies and structural designs that will provide sustained competitive advantages for these service organizations.

Fig. 1-2. A Sustainable Framework for Knowledge Based Services

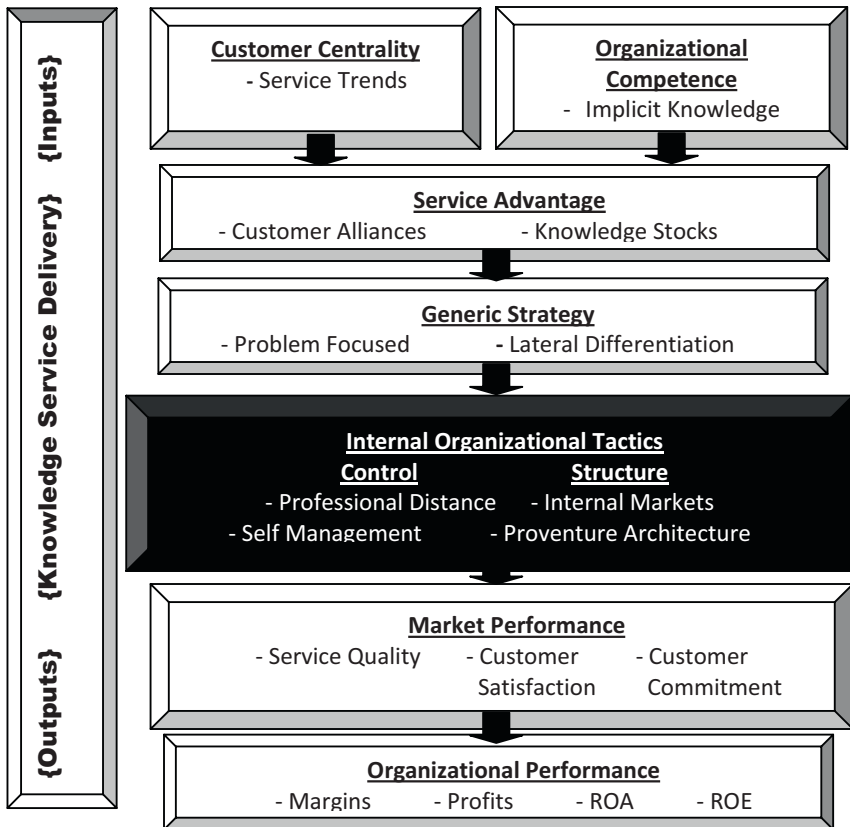


Figure 1-2 shows the “big picture” of the interrelated parts of a competitive model for knowledge services organizations. This model illustrates the inner mechanisms unique to a knowledge service firm and how they relate to other aspects of the market environment. These internal organizational tactics will be discussed, along with the market environment in later chapters. The primary focus of the model is on the architecture best suited to managing a cognitive, nontraditional workforce and the building of knowledge stocks. In order to optimize the generation of knowledge stocks and solutions, it is of the utmost importance to arrange activities around customer alliances. The model radically deviates from traditional organizational architecture by strongly advocating quasi-internal markets to more effectively foster collaboration among workers who control the means of production and the inclusion of customers as an indispensable part of the co-creation of value-added solutions.

Although customers are an integral element in the generation of solutions, their very presence in the operations of these service organizations has the potential to generate uncertainty, especially in terms of process time, the quality of the solutions, and in the difficult task of accurately determining and fully accommodating their own priorities. But even more significant is the need to fully realize the active participation of customers as partial employees within the boundaries of knowledge services. Failure to realize the potential of customer as a valued operational resource or asset can be a costly fault in the organization’s overall performance. The proventure architecture, with its dynamic internal markets, develops customer assets and contributions within the boundaries of knowledge service organizations and apprehends customer uncertainty usually through internal organizational tactics such as alliance building. The object is not merely to understand the nature of the customer’s priorities and the uncertainties surrounding solutions, but to transform this to a state of predictability⁶⁵ or competency, thereby facilitating and building service advantages.

The most valuable resource at the knowledge service organization’s disposal is its human capital. This resource is reflected in employees, particularly the engagement of personnel in person-to-person contact with customers and their crucial role in the customer alliance. The organization’s overall competencies emerge from the tacit and explicit knowledge of the employees. Knowledge service organizations are, at their very core, information processing entities. These service firms are in the business of leveraging information and knowledge to create unique solutions. Thus, the flow of knowledge and access to it—especially knowledge of the tacit kind—are crucial factors in generating solutions and building knowledge stocks in these complex services. The proventure architecture and internal markets facilitate the leveraging of human capital in the development of the knowledge stocks so vital to the service firm’s effectiveness. The unique position of those workers in person-to-person contact with customers—engagement personnel—as

proventurers in the alliance, and even the alliance itself, profoundly impact the strategies and internal organizational architecture necessary for market and organizational performance, as Figure 1-2 shows.

THE CASE FOR KNOWLEDGE SERVICES

Much has been written about the decline of manufacturing and the advent of a service economy. Many have criticized the U.S. economy for not producing or “making anything.” As service firms collapse (Bear Stearns, Lehman Brothers, Wachovia, Arthur Anderson), there are no tangible assets to liquidate, furthering the criticism of the shift to a services economy. However, these arguments fail to consider the advantages of this shift. Remember, as the U.S. economy shifted from agriculture to manufacturing, many openly questioned, “Who will feed us if the economy becomes based on manufacturing?” While this seems like a silly question now, it is analogous to the complaints of the most recent economic shift.

The U.S. service economy has provided many benefits to consumers, including through increased efficiencies in manufacturing that led to its decline. In comparison to thirty years ago, there is less redundancy throughout all firms. Through telecommunications, services has allowed for the dawn of a global economy, opening up access and an increased standard of living for millions around the world.

The life of a worker in the service economy is significantly better than that of a manufacturer. The day to day duties are more meaningful and a worker has more control of their career. The services economy has refocused the view of a worker as a human being, rather than as a tool to make a product. An emphasis on human emotions has also led to an expansion of human capital. Workers have the ability to take their knowledge and move to another company, without having to become a technical expert in its manufacturing processes. Increased mobility of the workforce has also added flexibility to the worker’s daily routine, allowing them to become more productive in their work and home lives.

Finally, it is clear that the service economy has provided many benefits to consumers, workers, and businesses. There are clearly potential dangers as the economy shifts, as organizational structures and strategies have yet to catch up to the development of the new work place. The phony mortgage backed securities and global credit crisis beginning in 2008 are an example of this. However, firms will learn from these painful experiences and adapt their architectures to prevent a similar occurrence in the future. In the long run, the benefits of a service economy are clearly an improvement from manufacturing. Just as the U.S. economy adapted from agriculture to manufacturing to services, it will continue to evolve. Eventually, the service economy will be replaced, with a more efficient, more worker friendly workplace than before.

SUMMARY

The remaining chapters of this book focus on the service delivery advantages for knowledge service organizations and the important role of customer alliances in giving the firm a strategic and structural competitive edge. We show how knowledge is leveraged for the generation of solutions and building of knowledge stocks for the organization through internal markets. One of the underlying tenants of the book is that for these emerging services, knowledge has to be sought, surrendered, and consumed in order to create new knowledge in the form of solutions. The book explores organization architectures and tactics that strongly encourage the proventure employees to embrace and leverage knowledge willingly. Doing so provides increasing returns to both the individual and the organization. Further, an internal market within the organization is given much attention as a primary architecture for proventurers to fulfill “operating inventiveness” as they experiment with new approaches to solutions.⁶⁶ For firms operating in a dynamic knowledge service economy, the lifespan for solutions to customer priorities with high cognitive requirements is relatively short. The heterogeneity inherent in solutions to customers’ priorities gives rise to constant operating inventiveness by employees so that the effectiveness of a solution is its own obsolescence. However, conventional wisdom says, “If it isn’t broken, don’t fix it.” One of the premises adopted in the book is just the opposite. If solutions are effective in addressing customer priorities then it is precisely the time for the firm to seek new knowledge and solutions. The challenge of developing architectures for a cognized work landscape is a direct spinoff from this notion: “If it *isn’t* broken, fix it.” If a solution to customer priorities appears to be effective in generating value, it is crucial for the service firm to seek new value-added solutions for competitive sustainability in dynamic and changing environments.

The transition from manufacturing and low-level white-collar services to knowledge services has created great disturbances in the traditional relationships between worker and management, resulting in the demand for new architectures in the coordination and organization of these firms. This book focuses on internal organizational control and governance structures in order to address this issue and increase workers’ worth as invaluable assets to the organization.

CHAPTER 2

UNDERSTANDING THE LOGIC OF KNOWLEDGE SERVICE SUSTAINABILITY: CUSTOMER ALLIANCES

Abstract

A central theme in knowledge services is the critical role of customer alliances play in the competitive sustainability of these firms. In this chapter, the focus is on the particular nature of customer alliances and its advantages for reducing the clouding effects of providing services solutions to customers that are of high heterogeneity and intangibility. A classification of customer alliances – problem focused and lateral differentiation – is presented as strategies that are vitality important for developing novel solutions to customer priorities and building knowledge stocks. The distinct strategies are discussed as adaptive mechanism for anticipating customer priorities and the sustained viability of knowledge services.

“If it isn’t broken, fix it.”

This is the mantra for knowledge services and cuts to the heart of sustained competitiveness for these firms. If a solution to customer priorities appears to be effective in generating value, it is crucial for the service firm to seek new value-added solutions for competitive sustainability in dynamic and changing environments. IBM’s alliance with customers, such as Mayo and Boeing, has become a model for developing joint value-added solutions based on the notion that if a solution is providing value, it is imperative to develop new solutions. IBM does not wait around for its customers to arrive bearing priorities but instead encourages its engineers to dream up exotic and innovative services in anticipation of future customer priorities and peddle them to their customers. IBM’s alliances with customers allow the company to peer into the future and generate solutions for impending customer priorities and not rely on current solutions despite their added value.⁶⁷

It is essential to continuously improve processes and offerings within a knowledge service firm. New innovations are easily copied by competitors and unlike in manufacturing, cannot be protected by a patent. Therefore, soon after a successful service is launched, it is no longer unique to its innovator and the time for which it serves as a competitive advantage is limited.

The cycle of continuous innovation must continue, replacing services that are performing well if a firm is to stay ahead of the competition.

By partnering with their customers, managers of knowledge services such as IBM are better able to understand the environmental elements unique to their value constellations, and to exploit those elements. The object is to gain some understanding of salient activities that can create opportunities or generate threats. Addressing these activities will go a long way toward sustaining competitive advantages, while a failure to do this may condemn the firm to market irrelevance. In order to get a handle on how to apprehend environmental elements in knowledge services organizations, the place to begin is the firm's knowledge stocks. These are their commodity in trade and emerge from a complex network of stakeholders, primarily workers, customers, competitors, sanctioning bodies, and educational institutions as suppliers. The participants in this network are claimants with varying degrees of input into the service firm's production of knowledge and solutions. By network we mean a set of relations based largely on self-interested gain.

Network relations are essentially value constellations which are fundamental to the competitive sustainability of knowledge service organizations because they provide a way for the firm to understand the big picture of its role in its competitive environment while distinguishing itself from rivals. The network is useful because it creates a framework that focuses the manager's attention on the overall performance of the firm. This is directly reflected in the satisfaction of various claimants.⁶⁸ Achieving meaningful competitive sustainability within networks is basically a leveraging process; a process of co-production among key participants as each claimant provides resources along with varying expectations around solutions or value-added service outputs. If we observe the accounting service firm PWC for a moment, we can see that it provides expertise to be leveraged but also expects a steady stream of revenues as an auditor for the Xerox Corporation. The Securities and Exchange Commission provides oversight governance to both Xerox and PWC with the expectation that both organizations comply with GAAP (Generally Accepted Accounting Principles). Xerox, as customer, is not only a critical source of revenue for PWC, but serves as an indispensable element in the development of knowledge stocks and expected satisfaction with solutions or value-added service outcomes.

To gain a competitive edge, managers of knowledge services must identify the relevant claimants and determine just how much leverage these co-producers have in the building of knowledge stocks within the organization. The goal of such an analysis is to determine the claimants to whom the organization should be most sensitive because these parties will have a greater influence on the firm's competitive sustainability. It is of the utmost importance not only to determine the significance of the demands and expectations of claimants, but also to determine the implications inherent in satisfying

some claimants at the expense of others. This claimant analysis leverages the full value of the network in the services business context and reduces dissatisfaction among those claimants who could have the potential to adversely affect the organization's performance.

Balancing the demands of claimants for sustained competitive advantage is not an easy undertaking because it places managers in a delicate relationship with their constituents. Management has to assess just how its actions impact the overall stakeholder network. In a very real sense, knowledge service organizations are actively engaged in bargaining or exchange relationships within the network and, in order to meet expectations and realize continued gain, the organization must understand the dynamics among the participants within the network so as to maximize the development and generation of knowledge stocks. At the very least, managers of knowledge services must conduct some sort of claimant analysis and minimally satisfy their interests to ensure the supply of critical inputs. While the heterogeneity of the network may pose a myriad of problems for knowledge services, the most pressing challenges facing managers of these firms are the following:

- (1) Predicting the major changes taking place in the network of claimants.
- (2) Determining just what impact such changes will have on the firm's knowledge-stocks.

For example, HealthSouth Corp. (medical industry) undertook an ambitious, if risky, venture into consolidating rehabilitation services and outpatient surgery, two of the most profitable niches in the healthcare industry. In so doing, Richard M. Scrusby, former chairman and executive officer of HealthSouth, attempted to build a network of diagnostic centers, clinics, and hospitals in the 300 largest cities throughout the country. Going against the popular trend, HealthSouth's view was that the company had to be bigger in order to survive. HealthSouth expanded in the inpatient-rehabilitation business just when the industry appeared to have reached maturity. By not attempting to accurately predict the changes within the network of claimants, HealthSouth failed to identify nursing homes as new competitors, some of which offer the same services at lower prices.⁶⁹ Integrating the various services within outpatient rehabilitation clinics so that the company could realize synergies in its knowledge solutions in the face of both competition and shrinking markets was indeed difficult to predict and determine.

From 1993 to 1998, in terms of facilities operated, HealthSouth grew by almost 375% and operated in 1,900 locations in 50 states. Managing the colossal infrastructure created massive problems for the company, which resulted in the company being forced into bankruptcy in 2003. HealthSouth was faced with two of the fundamental issues of the network: uncertainty or

the difficulty of predicting how medical providers as competitors would extend themselves to hold on to customer-patients, and the effects of health care reforms on the company. It is clear that HealthSouth was forced to be more productive and efficient and was betting that its knowledge stocks, particularly the knowledge the firm had built on acquisitions and integration of outpatient-rehabilitation clinics, would reduce the uncertainty in the network of claimants. However, HealthSouth was unable to recognize the need for the wealth of knowledge stocks necessary for running a large organization. Their growth outpaced their ability to build knowledge stocks in areas of internal communication and organizational design. While they may have possessed the knowledge stocks to serve their patients, the organization became too large to control.

It is important to keep in mind that it is not any one force or claimant that leads to competitive advantage, but rather the coalescing of claimants. It is therefore incumbent on managers of knowledge services to spot the coalescing of environmental forces in order to position the firm favorably. It seems clear that the coalescing of claimants for IBM's recent successes involve (1) the decline of traditional manufacturing sector (2) the rise of knowledge services with profit margins higher in software than in hardware businesses to generate greater financial resources for the firm (3) the commoditization of its main product lines (4) a shift toward a younger workforce who control the means of production and are comfortable with being proventurers (more than 43% of IBM employees work remotely).⁷⁰ Combined, all of these factors forced the company to overhaul its business services with a series of acquisitions and, to a large extent, help explain the firm's recent first mover advantage into knowledge services.

CLAIMANT ANALYSIS

Given the heterogeneity of claimants on the sustainability of the firm, it is imperative that managers take into account the claimants who are most important, since not all claimants can be equally satisfied. Firms do not have unlimited resources. In order to isolate significant claimants that may impact and be impacted by the firm's activities, an analysis needs to be undertaken to prioritize which claimants are most important to the firm. When conducting such an analysis, many important elements have to be taken into account. However, a good guideline for knowledge services managers is to consider the following four germane factors as shown in Table 2-1:

Table 2-1. Claimant Analysis

-
- Claimants affected by the firm's knowledge stocks.
 - Claimants with an interest in the firm's knowledge stocks.
 - Claimants in a position to affect the generation of knowledge stocks.
 - Those with the potential to become claimants.⁷¹
-

Identifying each of these claimants and evaluating their influence and power is crucial. Failure to identify and rank claimants is setting the firm on a less than desirable course. Use of this general framework can assist managers in spotting the coalescing of environmental forces for sustainable competitive advantages. While knowledge service firms must be concerned with claimants both internal and external to the organization's viability, the paramount focus should be on the activities of the most critical of its claimants—the engagement personnel or front-line worker—and on the customer.

THE LOGIC OF CUSTOMER ALLIANCES

One of the central purposes of knowledge service firms is the creation and transfer of ideas and information—knowledge—as value-added outputs. This means that these organizations operate under conditions wherein what they produce is highly intangible. The ever-present intangibility and variability of solutions to customer priorities in knowledge services makes it important that measures be taken to ensure that solutions create value for the buyer. One important way to accomplish this is to signal a firm's competencies by building alliances, particularly with customers. In so doing, the firm becomes highly sensitive to market demands which, in turn, allow managers to quickly address and stay focused on customer priorities. The most effective way to address market demands is for the service organization to establish alliances with customers that directly and indirectly impact the generation of solutions and thus the firm's performance. Customers are an integral part of the internal operations of knowledge services and this is what makes these organizations unique from other types of industries. Customers are a vital and indispensable part of the knowledge-generation equation.

Within knowledge services delivery, the customer acts as a supplier of information, assists in the solution, and is a consumer of the output.⁷² Hence, the notion of customers as “partial employees”, because they actually do per-

form task related activities in the generation of value-added solutions. In the healthcare industry, for example, customers or patients are becoming more assertive in offering doctors their own opinions and more often than not they have done quite extensive homework by making use of medical literature and references services. This trend is an outgrowth of rising customer activism and consumerism which have spurred direct involvement in the service output.⁷³ The net result is the creation of a complex interdependency which serves to elevate the customer to a co-producer and an active participant in the leveraging and generation of value-added services and the development of knowledge stocks within the organization.

Kaiser Permanente, the largest nonprofit health maintenance organization in the U.S., is a case in point. Kaiser allows its customers-patients to control their personal health records electronically through the use of Microsoft's Health Vault personal health record service. The patient is in a co-creator position, working to improve the quality of their medical care and contain costs. In the customer alliance, Kaiser patients, as co-producers of value-added solutions, have the ability to pose health related questions to doctors or other engagement personnel and even request prescription orders online. By linking consumer-controlled health records with Kaiser records, an information-sharing collaboration is established which makes it possible for the consumer to be more actively involved in the management of their health, particularly for chronic ailments such as diabetes, hypertension, and heart disease, which contribute significantly to health care costs.⁷⁴

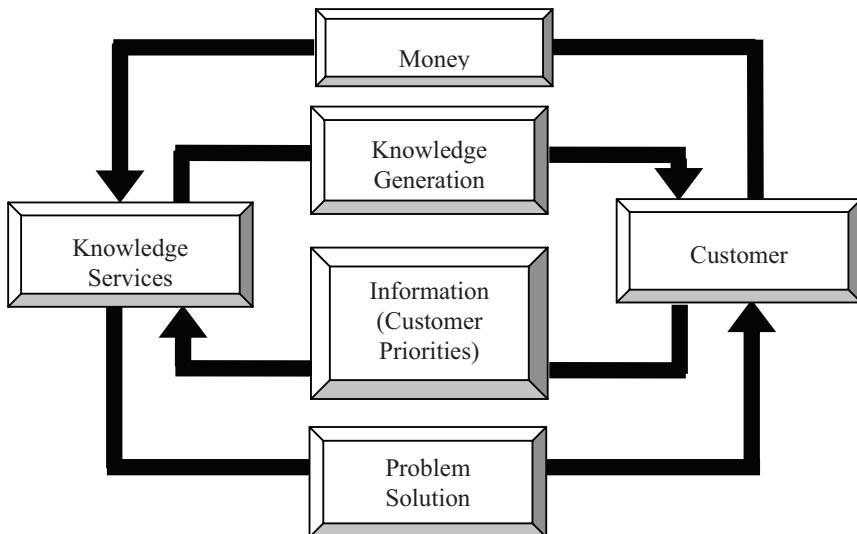
It has long been recognized that customer alliances are critically important to the activities of service firms and the overall competitive sustainability of these organizations.⁷⁵ In the generation of knowledge and solutions, both the organization and customers are in possession of resources—information, knowledge, skills—simply because of their positions as claimants both formally and informally. To the extent that resources are valued, scarce, and asymmetrically distributed in alliances, both the knowledge service organization and customers will have a vested interest in solutions, and will be induced to engage in mutually beneficial exchanges. It is paramount, therefore, for managers of knowledge services to recognize that customer alliances are partnerships or collaborations of the highest order which the firm can use to strategically leverage knowledge for value-added solutions. Put simply, the customer alliance is the focal point on which the success of the firm hinges. What distinguishes customer alliances from other types of customer relations is that customer alliances are first and foremost marketplace-based relationships⁷⁶ in which buyer and seller can negotiate and nurture the development of accumulated knowledge into exchanges for mutual gain. Thus, as cooperative problem solving relationships, customer alliances are implicit contracts between customers and knowledge service organizations in the rendering of solutions or value added services.⁷⁷

The agreement in such alliances provides a strategic framework between largely symbiotic parties to create value through which competencies are shared or transferred in attempts at knowledge creation and problem solving. This framework increases the switching cost of moving to another service firm for customers and makes it difficult for them to readily move to competitors. Customer alliances, therefore, have the potential to bind customers to the organization. It should be made clear that, strategically, customer alliances are not so much about managing or automating customer relationships as exemplified by the well known Customer Relationship Management (CRM). Instead, they set forth an evolving network mechanism to both connect and focus these service firms' resources with the environment in order to produce and leverage knowledge. As a result, the customer alliance becomes a most formidable competitive mechanism in its potential to create value from the transfer of competencies between claimants.

Customer alliances will only continue if there is mutual benefit or value for both the knowledge service firm and its customers. It is this potential for mutual gain that unites these two claimants or groups. As such, the knowledge resources transmitted are meaningfully expanded as the activities of one claimant become the inputs of the other. This exchange is pivotal and fundamental to knowledge service production. At the center of the firm's production is the customer alliance which is the core driver of all production activities. In this basic and complex relationship, attempts are being made to secure valued resources at the cost of others that are relinquished. When done well, the end result is greater satisfaction than existed before the parties took any action.⁷⁸

A strategic model of customer alliances in knowledge services firms is depicted in Figure 2-1.⁷⁹

Fig. 2-1. Customer Alliance: A Cogeneration & Exchange Model



The outer square of the diagram represents external markets of completed knowledge services. Here, customers and the knowledge service firm interact by exchanging money and knowledge in the form of solutions. The inner square of the diagram represents internal exchange of knowledge production resources. Here, information about customer priorities is the raw material that flows from the customer to the service firm. It is also here that knowledge or solutions are returned to the customer. One of the primary factors connecting the flow of resources (money, information, knowledge, effort, etc.) in alliances between knowledge service firms and customers is the value of such resources⁸⁰ or the firm's potential to create value for customers. In customer alliances, there is always an underlying assumption that the price being paid by customers will be equal to the value of the firm's knowledge solutions. This can be illustrated, for instance, in the alliance between healthcare organizations and their patients. Healthcare firms are well aware that health insurance policies often exclude the cost of certain tests which may indeed be useful in assessing the overall well-being of the patient. Because hospitals are not in business to lose money, doctors will often refuse to perform such tests because they will not be paid.⁸¹ The doctors are simply adjusting their solutions to what the patient can realistically afford. Such adjustment is done in spite of ethical concerns and potential abdication of responsibility.

Advantages of Customer Alliances

Strategic Advantage: Customers are in possession of valuable information from which knowledge can be leveraged by the organization. With this as a backdrop, alliances with customers provide strategic problem-solving mechanisms not only to transfer tacit and explicit knowledge to consumers but for the organization to build firm-specific knowledge stocks as well. By being linked directly to the most important claimant in the value constellation—the customer—knowledge services can focus on building a more accurate strategic profile of customer priorities. Customer alliances provide a mechanism for knowledge services to make strategic decisions for the long-term future of the whole organization as a viable competitive entity. From this perspective, the knowledge service firm is capable of taking strategic actions to maintain its strengths while offsetting its weaknesses in order to exploit opportunities and counter threats.⁸² Such strategic decisions emerge from knowledge that is difficult for competitors to imitate. This is particularly the case in knowledge service industries where competencies tend to be subtle, hard to understand, and cause-effect relations in solutions are not apparent.⁸³

Consequently, strategic decisions for the firm can emerge from bold and insightful direction at the firm's lower levels by engagement personnel who are actively involved in customer alliances.

Fig. 2-2. Strategy from a Bottom-Up Approach



This is a bottom-up approach to strategy within the firm, as Figure 2-2 shows, which allows the firm to maintain its sharpness and uniqueness with little need to react to competitors. Instead, the firm maintains a competitive edge by seeing further into the future.

By focusing extensively on customer alliance for competitiveness, managers of knowledge service firms now have the potential to escape the insidious trap that these services often fall into: formulating their strategy reactively in attempting to keep up with competitors. Customer alliances keep the firm focused on customer priorities, resulting in the firm's ability to sustain a unique, competitive edge. These alliances afford the firm an opportunity to make strategic decisions that are more creative and forward-looking⁸⁴ as the firm is now capable of choosing just how best to fit its competencies and resources to the priorities of its customer. It is within this context that a comprehensive strategic plan can be developed for the generation and building of knowledge stock within the organization. Further, and more importantly, strategic decisions emerging from customer alliance create an overarching

guideline for subsequent subordinate decisions that are made within these service organizations. Solutions generated by knowledge services can become obsolete and perishable, particularly if the information defuses rapidly or loses its value.⁸⁵ Customer alliances create opportunities for increased and continued profitability by reducing outdated services and encouraging unusual insights by both engagement personnel and customers.

Signaling or Marketing Advantages: One of the inherent consequences of knowledge production is information asymmetry wherein engagement personnel, as proventurers, are in possession of more information than their customers. This creates a moral hazard as customers find themselves in a disadvantageous position because of the engagement personnel's potential to exploit the situation. A case in point is the recent (2003) Securities and Exchange Commission clampdown on tax shelters marketed by accounting firms. A 1991 change in the rules governing these organizations made it possible for accountants to charge performance-based fees similar to investment banks instead of the traditional hourly rate. Customers of the accounting firms offering the shelters contend that they were quite ignorant about tax law complexities along with the effectiveness of these shelters, and that they depended on the expertise of the engagement personnel and the reputation of the organization. Predictably, disadvantaged customers filed suits against their accounting firms.

There is an inherent credence factor in rendering knowledge services. Even after the customer's priorities are addressed, uncertainty still remains about the quality of the outcome. How can the customer be certain that the engagement personnel have appropriately addressed the customer's problems, particularly where quality and quantity of effort and skills are difficult to verify? For example, patients do not know if their physician is providing complicated, unnecessary tests. The patient is "uncertain" about the efficiency of the physician's performance. The same applies for programmers and contractors. When quality and quantity of outcome is difficult to determine the effort exerted by engagement personnel will serve as a reasonable substitute for output or assessing performance.⁸⁶ In other words, it is not so much the *solution* that is important, but the appearance of *effort* in the generation of solutions.

Customer alliances can serve to offset the clouding effects of information asymmetry and credence factors by making it possible to more closely observe and monitor the effort of the engagement personnel in signaling and presenting the firm's competencies and abilities to create value for the customer. The mutual potential for gain in customer alliance creates a framework through which both the firm and the customer can understand, gauge and exploit the efforts and performance of the other. Further, intent may be monitored as it pertains to the fulfillment of contracts and value creation.

Though information asymmetry still remains high (i.e., buyers still cannot adequately determine the value of knowledge), the alliance becomes a surrogate for ascertaining service quality and a potential source of competitive advantage because of the inherent vested interest of both firm and customer.

Tension Resolution Advantages: Anyone who has studied knowledge recognizes its hidden tension. Knowledge production—and by extension service solution—is largely created out of dialogue between peoples' tacit and explicit skills and experiences.⁸⁷ Under such conditions, conflicts and disagreements among claimants will inevitably emerge as new approaches to address customer priorities are attempted. Under conditions of such mild production turmoil, a degree of stability is accomplished by having some sort of mutual agreement between the knowledge service firm and its customers. This gives rise to gain-sharing in outsourcing contracts. For example, customers may base the perceived effectiveness of their lawyer's services by contracting on the outcome of the case while being unsure about the solutions proposed. The lawyer receives a bonus or a percentage of the settlement if the litigation is successful.

The same scenario can be seen in the relationship between a headhunter – employment recruiter and his/her clients. The recruiter finds qualified candidates for job openings and is typically paid a percentage of the new employee's first year salary. The headhunter has an incentive to find better-qualified candidates since these employees will be better compensated. This also benefits the newly hired employee since the recruiter is better off when they are able to place these individuals in better jobs. Conflict is reduced in the alliance because the recruiter and the lawyer have a vested interest in the outcome and all the consequences ensuing directly and indirectly from the generation of solutions to customer priorities.

This widely used approach of contracting on the outcome in customer alliances in order to reduce conflict provides a useful framework for mitigating goal incongruence or disagreement about expectations while simultaneously fostering the leveraging and generation of knowledge for addressing customer priorities. Both the knowledge services firm and the customer are afforded some degree of comfort in the alliance as a sense of equilibrium is realized. Further, and what is of strategic importance, the customer alliance, as an independent strategic unit, now undertakes a form of "franchising" (one party, franchisor, gives another party, franchisee, the right to be represented). This can again be seen through a lawyer-client alliance. Since the client is not well-versed in the legal system, the alliance or "franchise" is represented through decisions since they will be paid based on a percentage of the financial award determined in court. In so doing, contracting on specific outcomes, performances or agreements can serve as a quasi-control mechanism in providing knowledge service when customers would have difficulty moni-

toring the heterogeneous activities of engagement personnel. By sharing in the outcome, knowledge service firms and their direct representatives, engagement personnel, will be motivated because the outcome creates an incentive to be effective in those activities and skills the firm can control. Thus, by having a vested interest in the outcome, knowledge services firms will be less inclined to exploit their advantages and create conflict in customer alliances. Put simply, customer alliances emerge as a critical framework for reducing disparities in understanding by encouraging greater information exchange for mutual gain.

Social Capital Advantage: Customer alliances are social occasions because this is the way knowledge services allow new groups of people to interact.⁸⁸ At a very fundamental level, engagement personnel and customers, as buyers and sellers, can negotiate and nurture the generation and development of knowledge in an exchange relationship. What is quite important and implicit in customer alliance is a social contract consisting of a basic set of mutual expectations specifying the rights and obligations of customers and engagement personnel. As a community concerned with the generation and transmission of knowledge, customer alliances themselves become mechanisms for social action and therefore social capital.⁸⁹

While it is well recognized that there may indeed be challenges in creating this social capital such as communication barriers and physical distances between providers and customers, both engagement personnel and customers are in a position to learn about each other. Social capital can be advantageous to the firm because it provides access to contacts that may have vital information, skills, and knowledge for adaptive efficiencies. Stock research analysts at investment banks such as Morgan Stanley must develop a retail network of brokers who can provide a stream of commissions to pay for the analysts' advisory knowledge. Brokers and analysts are well aware of analysts covering stocks in particular sectors and the quality of knowledge they can generate. Knowing who knows what in alliances and having access to that information is social capital because such contacts will not only aid in reducing the amount of time and investment required to gather information for knowledge creation,⁹⁰ but will also aid in the firm's ability to adapt by making use of opportunities.

Bargaining Advantages: No organization can satisfy all its claimants. The resources to do so are simply not there. For sustained competitiveness, the firm must quickly realize that not all customers' priorities can be addressed. To believe otherwise would simply deplete scarce knowledge stocks and undermine the firm's capacity. Further complicating this issue is the subjectivity and heterogeneity surrounding output to customer priorities, which

invariably creates different versions of reality regarding the quality of service solutions.

These confining and restricting factors place knowledge service organizations in a constant trade-off between externally defined criteria for effectiveness of good services rendered to customers and the firm's internally defined criteria for rendering effective quality solutions or services. Generally, the customer perspective and the knowledge service firm's perspective are not in sync. This incompatibility is partially due to differences in the kinds of indicators that are used to generate the two perspectives. Knowledge service firms develop internal indicators or criteria based largely on measures of "objective knowledge input," while external indicators are based essentially on "subjective" measures of problem solutions from customer-client experiences and perceptions.⁹¹

Take a hospital for example. There is a growing recognition that a disconnect exists between the way medicine is viewed by doctors and how their patient-customers see it. Doctors in hospitals are rigorously trained to diagnose disease and treat it – internal indicators. In contrast, patients are mostly concerned with being tended to, being listened to, and being made well – external indicators.⁹² Some of these internal indicators can include screening mechanisms such as professional certifications and or college degrees.

In an effort to provide more of these objective measures, there has been an increase in the number of certifications available to service workers. A firm or employee who can demonstrate additional knowledge through these certifications stands a better chance when negotiating terms for a job or project. Contrasting subjective indicators with objective indicators when examining how effective knowledge services are rendered is sure to create incongruence between the two. The customer alliance has the potential to reduce such incongruence. Providing complex value-added services to customers entails a lot of bargaining as different views are leveraged. Customer alliances serve as an indispensable mechanism to reduce quality and effectiveness issues.

Competitive sustainability is all about using the organization's competencies and resources to address customers' evolving demands. This means that competitive sustainability, for knowledge service organizations, is a constant trade-off between what is critical by external definition and what is critical by internal definition, since the two are largely incompatible. Customer alliances can smooth the trade-off. Alliances provide a mechanism to facilitate the bargaining among claimants whose demands are continuously evolving as the firm builds knowledge stocks and competencies that are consistent with demands for sustainable advantages.

CLASSIFYING KNOWLEDGE SERVICES

Customer alliances are not all the same. They differ significantly in complexity and uncertainty, and are established to reflect the evolving priorities of customers. It is therefore not in the service organization's best interest to address all alliances in the same manner. Regardless the nature of the alliance, relationships are long lasting and must be addressed. The use of formal models to codify the alliance between customer and organizations are becoming increasingly necessary.⁹³ For strategic effectiveness and profitability, managers of knowledge services must instead segment and develop particular alliances with customers based primarily on the organization's knowledge stock and the particular priorities of its customers. What this means for knowledge services is clear. If emerging knowledge-based organizations are to continuously meet desired expectations and realize competitive sustainability, customer alliances have to be classified so that the organization can create value through the transference of matching competencies between buyer and seller.

Strategically, the types of customer alliances will impact the kinds of tacit knowledge-stock generated within the firm. A classification or typology of customer alliances is an important analytical tool to help better understand the demands and priorities of different customer niches and thereby to optimize value. Since tacit or firm-specific knowledge stock is a most valuable asset in emerging service organizations, the type of alliances from which such knowledge is generated becomes important. This has led to a rise in the number of highly specialized firms. Consider all of the law firms available for different types of cases. There are firms that specialize in insurance claims, personal injury, family law, criminal defense, and a large number of other detailed areas. This allows each law firm to be very strategic in selecting which lawyers to hire and which customers to pursue. The specificity allows the firm to generate deep knowledge stocks and become expert in one area.

Besides its analytical potential for managers, a classification of alliances focuses the knowledge service organization's investment in the leveraging and development of tacit knowledge. Consistently greater returns from investment in knowledge stocks can be expected from such expenditures. For knowledge-based firms, a classification of customer alliances is essentially based on four factors, as shown in Table 2-2. These features of the customer alliance define the value of the services to customers. For example, the ease with which one engagement personnel can be substituted for another reduces the costs of producing solutions and makes it possible for the service organization to offer its services to a larger number of customers at a lower cost.

Table 2-2. Classification Criteria for Customer Alliances

-
- The complexity of the information leveraged in knowledge generation.
 - The dependence of the customer on the engagement personnel as reflected in:
 - a. Criticality of solutions
 - b. Degree of interaction intensity
 - c. The duration of each contact episode
 - d. The frequency of transaction reoccurrence
 - The nature of the problem solution as this pertains to:
 - a. Problem Resolution
 - b. Solution Ratification
 - Substitutability of engagement personnel in addressing customer priorities.
-

Based on these criteria, knowledge service firms can generate two fundamental types of customer alliances: **Problem Focused** and **Lateral Differentiation**. These types of customer alliances reflect different types of expectations between the organization and customer at the primary operating core or workflow in knowledge services. Workflow has to do with the interdependencies of key processes and people directly involved in the production of knowledge and the delivery of solutions to customers. One simple way to tease out the workflow in knowledge service organizations is to determine the activities necessary for knowledge generation and the delivery systems that have the largest number of engagement personnel.

Problem Focused Customer Alliances

Problem-focused customer alliances are customer relationships brokered to devise a solution to a very specific problem. These alliances emerge from short term interactions with engagement personnel and exist for a limited period of time. The duration of the interaction is just long enough for the service firm to satisfy a customer's specific priorities. CVS Caremark Corp., the large retail pharmacy, exemplifies this alliance. CVS focuses on inexpensive solutions for the treatment of restricted health ailments such as sore throats

and rashes. The clinics generally prescribe basic drugs to customers. In order to provide the convenience and quality of care that customers desire, CVS focuses on providing a few services to a large number of patients. Volume is critical in the company's problem-focused alliance.⁹⁴

Problem-focused alliances entail a high degree of uncertainty and complexity. Customers in these alliances are generally quite knowledgeable about their priorities, but less certain about the knowledge needed for solutions and desired results. Customers of a brokerage firm know what sort of return on their investment they would like and expect the firm to use its expertise and knowledge stocks to fulfill the customers' expectations. Similarly, customers of an insurance firm expect agents to process and update policies and provide solutions to claims. The main intent of problem-focused customer alliances are to develop specific knowledge and skills for addressing recurring customer priorities along with the delivery of solutions to meet customers' demands and expectations. In problem-focused alliances, the service firm is in possession of explicit reusable knowledge stocks that are not generally accessible to the customer.

Since customers in problem-focused alliances are well aware of their priorities but lack the knowledge to solve their problems, engagement personnel rely heavily on innovative scripts to leverage and develop tacit knowledge for solutions. The alliance between Charles Schwab and its customers is a case in point. The alliance requires brokers, as proventurers, to spend time creatively assisting customers who are faced with many investment possibilities or alternatives. Using computer-generated stock ratings, Schwab provides full service investment advice at relatively lower cost than firms employing human analysts.

Once the problem is solved within defined constraints, the alliance is terminated or consummated. The firm is now in a better position to lower costs and realize gains, either through reduced competitive prices or increased margins. Cost efficiency is enhanced when certain solutions can be delivered to multiple customers. By focusing their services, firms meet the prior expectations of customers: speed and consistency of services. Value is realized when customers are served in the shortest period of time and at the least possible cost.⁹⁵ Thus, problem-focused alliances foster large numbers of customers and such alliances are repeated frequently.

As engagement personnel interact with multiple customers, they will gain experience over time in producing tacit knowledge in a variety of settings. This variety will give employees a greater understanding of their own potential services as they learn how to adapt them to solve the problems of individual customers. As such, the service firm will acquire tacit knowledge for a group of customers with a common set of problems. By focusing on developing tacit knowledge concerning the underlying problem which customers are

experiencing, customers with similar problems will respond similarly to various knowledge mix factors.

Recall the previously mentioned example of tax shelter devices developed by large accounting firms during the 1990s that produced a vast market of potential customers. What made these tax maneuvers so attractive to customers and profitable for accounting firms was that once they were devised, the firm could sell these instruments to a vast number of customers. The firm realized lucrative and efficient economies by simply selling the same transaction to a wide array of customers. In so doing, commonly understood implicit problem statements in the firm's customer alliances serve to economize on contracting time. This in turn allows the firm to increase its margins and to concentrate on leveraging and developing problem-based tacit knowledge.

Organizations in problem-focused customer alliances are characterized by power relationships in which much of the knowledge that is generated is concentrated on problem "resolution": addressing customer priorities. In this context, the engagement personnel occupy a relatively more powerful position in relation to the customer. The knowledge controlled by engagement employees, and thus their general power in the alliance, can be viewed as a function of valued skills, experiences, or desires by customers.⁹⁶

Lateral Differentiation Alliances

A lateral differentiation alliance seeks to create a "total solution" to the customer's needs. While there may be a specific underlying problem, the service worker is engaged to assess an entire department or organization, rather than simply one small issue. The customer's demands in lateral differentiation alliances generate a different set of expectations for knowledge service organizations. The relative complexity and breadth of problem solutions create demands such that the service organization in lateral differentiation alliances may be limited to a few, or in some situations, a single customer over an extended period of time. For example, it is not unusual in the banking industry for knowledge services to develop advisory relationships that typically drag on for years with customers concerning tax investment tactics. Some marketing agencies have long-term accounts with customers. This is exemplified in the advertising agency McCann-Erickson's 60-year alliance with Coca-Cola Co., which turns out to be one of the most enduring alliances in the annals of advertising.⁹⁷ Unlike problem-focused alliances, knowledge services adopting lateral differentiation alliances will not be exposed to enough variety to develop tacit knowledge regarding a set of underlying problems. While some learning regarding a customer's underlying problems may indeed occur, such understanding will be relatively small.

Knowledge service organizations with stable lateral differentiation will leverage and generate a different type of tacit knowledge because these alliances entail greatly varying contingencies. As these service organizations have repeated and prolonged exchange with a restricted set of customers, their knowledge production regarding the customers themselves will also expand. The knowledge gained from lateral alliances will allow the organization to better understand their customer's idiosyncrasies and in so doing, develop and generate new and other service solutions for such contingencies. The value to the firm is that this knowledge increases the switching costs for customers as it is now much more difficult and costly to purchase the services from competitors. Both parties have invested heavily in each other.

Consequently, the firm is now in possession of increased knowledge stock on how best to address the customer's current priorities as well as other customer-related issues. From this advantageous position, managers can anticipate the customer's future needs and develop solutions for such contingencies. In lateral differentiation, the intent is to provide total service solutions to customers. For example, the so-called "adaptive enterprise" tactic, undertaken by technology companies such as Hewlett-Packard Co., IBM, and Sun Microsystems Inc. to make their corporate customer more responsive to change, is an attempt to develop future solutions and new value propositions. The adaptive enterprise tactic seeks to generate total service solution tools which will enable customers to evaluate their IT systems and to identify how well those systems can adapt should there be unexpected demands placed on them.⁹⁸

Laterality is the incorporation of various aspects of the customer into a total or holistic product that is taken into account in the generation of knowledge and solutions.⁹⁹ For example, a financial advisor may have to consider not only a customer's financial status but also such factors as the customer's emotional state, physical health, familial situation, desires, consumptive patterns, personal relationships, and so on because these factors may affect the long-term investments in order to satisfy customer priorities. As the engagement personnel's laterality to the customer increases, a greater variety of alternative behaviors will be required. The laterality allows for the leveraging and generation of knowledge based on a wide array of activities in the customer's interest. This stretches the boundaries of possibilities when it is necessary to do so. Consequently, lateral interests in which the customer has to be considered as a whole adds complexity, scarcity, and costs to knowledge creation and solutions, which increase the cost to the customer in switching to a competitor.

In contrast to problem-focused customer alliances where the emphasis is predominantly "problem-based," laterality differentiation alliances are more "total customer-based." The requirements for fulfilling lateral differentiation or laterality are far from simple, and managers must be unconventional in or-

der to prevail. Laterality requires an understanding not merely of current priorities, but being able to anticipate what might be of future interest, primarily through peripheral offerings. CareGroup Healthcare System, a hospital company in Boston, has collected valuable information on its 2,500 doctors so that managers of CareGroup who work with doctors can spot trends and suggest ways for improving the rendering of medical services such as recommending certain prescriptions. Thus, lateral differentiation alliances provide an important opportunity for the firm to develop tacit and creative skills not only to leverage current customers' desires, but to anticipate future needs. This provides a competitive advantage for these service firms to create knowledge stocks in response to emerging market trends.¹⁰⁰

A distinguishing feature of lateral differentiation alliances is the concern in these relationships not only for problem resolutions but solution ratification as well. As an active participant or co-producer of tacit knowledge, customers often generate their own solutions to satisfy their priorities. When customers provide their own solutions, the role of the service organization is far different from problem resolution situations. The service firm is needed only to ratify or provide certification that the customer's problem solution is viable and appropriate. Frequently, customer-generated solutions often stretch the boundaries of what is generally recognized, because they have never been tried before and may be subject to scrutiny of some governing body. For example, in order to access the 40 million people without health insurance, many insurance companies have come up with the novel solution of selling low premium policies through associations. However, many states require that associations offering policies be formed and maintained for purposes other than the sale of insurance. The appropriateness of associations and health markets under the law is a debatable issue and has begun to attract the scrutiny of insurance commissions in many states, including California.¹⁰¹ In this case, knowledge service firms would provide certification to the insurance companies. The firms would verify the legitimacy of the association and provide "permission" to sell the insurance policies. This is an important service, given the legal issues and the fact that this tactic had never been tried before.

Lateral differentiation strategies have a lot of output heterogeneity; one factor that is potentially destabilizing. This is a result of customers' ignorance of both goals and processes and the uncertain vigilance of front-end service employees. This places crucial importance on the nature of the transactions throughout the initial and subsequent phases of the alliance. This is where professional distance by the engagement personnel comes in. Negotiations inherent in professional distance provide the forum to define meaning to objectives and expectations. Within this frame, evaluation is a merger of responses where claims, concerns, questions, and issues raised by the parties become the focus of attention.

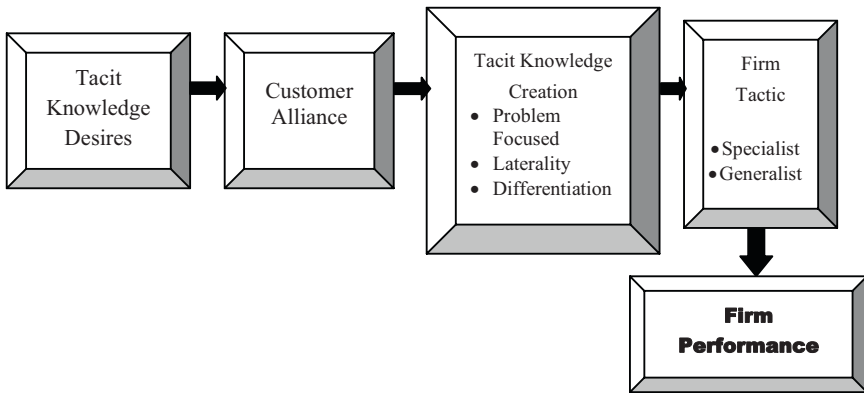
Given that lateral differentiation strategies require a holistic view of the customer and heavy dependence of the front-line engagement personnel, vast opportunities are created to generate total solutions and in the process generate knowledge stocks for future customer priorities. One of the advantages of a lateral differentiation strategy is that the entrepreneur can adopt a generalist approach while innovating, taking risks, and exploring new service opportunities through expanded service lines. To sustain the momentum, the lateral differentiation strategy must be focused on three goals: exploiting the laterality of services, developing proprietary services, and maintaining a good reputation.¹⁰²

CUSTOMER ALLIANCES AND TACIT KNOWLEDGE STRATEGY

To create value and therefore competitive sustainability, knowledge service organizations must establish some sort of strategic framework that will creatively guide the firm in meeting desired expectations. For these organizations, the formulation of knowledge strategies is necessary for sustainability as the firm seeks to align its knowledge stocks and other capabilities with customer priorities in ways that would be clearly superior to those offered by other competitors.

It seems clear that customer alliances in knowledge services are important for competitive advantages because alliances are forms of collaboration that allow these service firms to cope, adapt, and anticipate environmental changes. The collaborative skills required and the resulting knowledge production process is not readily copied by competitors. Tacit knowledge, because of its tangibility, is developed from repeated experience, particularly by engagement personnel as they collaborate with customers. Tacit knowledge is therefore unique to these service firms. It is not easy to imitate since it tends to be subtle, hard to understand and cause-effect results are not apparent.¹⁰³ Furthermore, such knowledge creates competitive advantages because tacit knowledge is difficult to purchase.¹⁰⁴ Customer alliances provide a strategic problem-solving mechanism to leverage knowledge in building knowledge stocks that are specific to the particular firm in the alliance and thus sustain the firm's profitability.

Fig 2-3: A Model of Competitive Strategy in Knowledge Firms



Since tacit knowledge stock is the most valuable asset in knowledge service organizations, we can reasonably expect that the type of alliances from which such knowledge is generated becomes paramount in profitability and competitive sustainability. This is shown in Figure 2-3. The types of customers and the alliances in knowledge service firms have will impact the kinds of tacit knowledge the organization will generate. It is also important to note here that the importance of customer alliances in gaining competitive advantages for knowledge services organizations makes it extremely important for the firm to develop the ability to persuade customers of long-term alliances.¹⁰⁵ Further, such long-term alliances would be a clear signal not only of the firm’s ability to address customer priorities, but just as importantly, it would also enhance the firm’s reputation. Managers can use this reputation to build the firm’s brand image for competitiveness and use it to create entry barriers for competitors trying to enter the industry. Long-term alliances provide for a more sustainable competitive advantage and the potential to generate more tacit knowledge: the more tacit knowledge a firm has in its possession, the more the firm has the potential to learn.¹⁰⁶ This, in turn, will create high switching costs for customers, which places the firm in a better position to charge a premium price for the value-added services generated.

Problem Focused Alliances and Knowledge Tactics

Given the high intangibility surrounding knowledge production and solutions to customer priorities in knowledge service firms, buyers have great difficulty ascertaining service value. Though the firm may be especially adept at producing solutions, customers may not be able to recognize this superior quality because of information asymmetry. In problem-focused customer alliances, where the emphasis is on a specific set of problems and an interaction with a variety of customers, information asymmetry can be reduced and competitive advantage realized by specializing in a particular kind of problem around which tacit knowledge is generated. In so doing, the knowledge service firm focuses not so much on a reduction of customer in-

put to the co-creation of solutions, but on the firm's ability to address a specific number of unique buyer needs.

Knowledge services in possession of problem-focused tacit knowledge for common customer priorities can realize economies of scale in the specificity of knowledge stocks, reducing costs which can then be passed on to customers in the form of lower prices. This production configuration creates a competitive advantage for these services firms because the organization is now in a better position to tailor its offering to the unique demands of a variety of customers. In so doing, the service organization has essentially adopted a **specialist** tactic wherein the firm possesses an advanced knowledge of how numerous knowledge solutions can address customer priorities. While advanced knowledge of this nature may indeed be generally the same for competitors in level, scope, or quality, the specific tacit knowledge content can be expected to vary among competitors, thus giving rise to tacit knowledge differentiation.¹⁰⁷

Consequently, a specialist tactic provides an opportunity for knowledge services in problem-focused alliances. New areas of knowledge stock are formed within the confines of a common set of underlying customer problems by developing and leveraging tacit knowledge to address these gaps. Because of the newness of these gaps or services lines, managers can sustain a competitive advantage. We can therefore expect that knowledge service firms in problem-focused alliances will develop tacit knowledge as they engage in customer priority specialization and limit the array of services they offer to those in the alliance from which their knowledge is generated.

Lateral Differentiation Alliances and Knowledge Tactics

In lateral differentiation alliances, the primary focus is on laterality in which the customer is given a total or holistic service. The firm is concerned with the generations of solutions to address a totality of customer priorities. Thus, these knowledge service firms are focused on total customer-based tacit knowledge that requires relatively more customized service offering. What is significant about total customer-based knowledge is that such knowledge is generated according not only to what the customer wants, but in anticipation of what is in the best interest of the customer.

Service firms in lateral differentiation alliances that possess total customer-based tacit knowledge face a different kind of challenge. Their competitive advantage does not lie in the production of a particular service, but rather in their intimate knowledge of the customer. The types of knowledge being alluded to here do not emerge from just going beyond expectations in satisfying the customer's immediate problems and priorities, but more importantly, they grant the service organization insight as to the future requirements of the

customer. Thus, service organizations with total customer-based tacit knowledge may be able to predict future problems that the customer is likely to encounter. In response, the service firm can construct a repertoire of knowledge stocks for value-added solutions (i.e., services) that can be sold to the customer in the event of, or even prior to, the occurrence of a problem. What is being generated and developed here is **advanced** or **anticipatory** tacit knowledge the content, scope or quality of which will create variation among competitors thus giving rise to what can be viewed as knowledge differentiation.¹⁰⁸ The seller is now capable of raising prices and realizing greater profitability.

However, managers of knowledge service firms in possession of total customer-based tacit knowledge may be confronted with another issue. Customers often cannot readily determine what is in their best interest, and therefore may not appreciate the quality and value of solutions. Customers, as buyers, will therefore look to other factors for gauging the quality of knowledge solutions and will focus particularly on secondary activities.¹⁰⁹ For total customer-based knowledge development, customers will make attributions based on the development of solutions for peripheral services or customer problems. For example, while a buyer may be able to ascertain the appropriate value obtained from a managerial consulting service, he or she may make attributions of value based on accompanying or secondary services, such as computer programming and hardware acquisition assistance.

For knowledge services in lateral differentiation alliances, competing successfully means developing knowledge stocks on several fronts with the possibility of providing a total solution that would include both primary and secondary customer priorities. This will provide “increasing returns”¹¹⁰ for the service organization and sustain its competitive knowledge advantage. What this does is place the knowledge service organization in a position of knowing more about its customers along with solutions to their priorities. It would take a vast amount of investment for competitors to develop such knowledge stocks in order to catch up. (e.g., IBM’s lead over HP in the business solutions services market and HP’s failed expensive attempt to acquire PWC in 2000 in order to build knowledge stocks in this market, or HP’s recent attempt to acquire EDS to catch up with IBM)

It is clear that in order to develop total customer-based knowledge stocks for sustainability, a **generalist** tactic provides these service organizations with a competitive advantage. Many customers’ needs and priorities would be well known in these lateral differentiation customer alliances, thus making it possible to provide a wide array of solutions and services to address such needs. As a result, the service firm is now in a more advantageous position to distinguish itself and charge a premium above competitors’ rates.

Table 2-3: Problem Focused vs. Lateral Differentiation Alliances

	Problem Focused	Lateral Differentiation
Generic Strategy	Low Cost	Differentiation
Skill Set	Specialist	Generalist
Target Focus	Economies of Scale	Holistic Service
Duration of Engagement	Short Term	Long Term
Increase profitability by	New service lines	Value added solution
Sample engagements	Corporate logo design	Ad agency on retainer to manage brand

THE SIGNIFICANCE OF GOOD ALLIANCE

It seems clear that strong alliances – aligning the interests of stakeholders or claimants – can be of immense benefit to the firm such as building knowledge stocks, gaining new customers and enhancing reputation. It is also the case that misalignment of alliances carries great risks. Poor alignment of alliances will create inappropriate strategic direction for managerial behavior with adverse effects on the firm’s performance and threaten the very existence of the firm. While some firms may adopt both a generalist and a collective of specialist, these tactics will be treated quite distinctly because each requires different managerial approaches for overall organizational effectiveness.

SUMMARY

We began this chapter with the perspective that possessing tacit knowledge is of the utmost importance to knowledge service organizations and that certain characteristics of the customer interaction can lead to challenges in developing and leveraging this resource. Knowledge services gain competitive advantages by engaging in various kinds of alliances with customers in order to build capabilities. Using the vantage point of these service organizations as leveraging tacit knowledge, a model was presented of knowledge services strategy and performance, suggesting that alliances with customers create knowledge competencies that these organizations can leverage particular tactics to achieve competitive advantage.

One of the important implications of the model is the importance of the two broad types of alliances, problem-focused and lateral differentiation. On one hand, these alliances create different forms of tacit knowledge. On the

other hand, alliances may also provide some understanding about the service organization's choice or knowledge strategy: to spread its resources across a broad spectrum of service offerings, or narrow its focus in the generation of tacit knowledge and thus the potential of value creation. Essentially, these alliance types may serve as a signal to customers regarding the types of knowledge solutions that the service firm possesses.

CHAPTER 3

BUILDING ADVANTAGE: MANAGING CUSTOMER ALLIANCES BY PROFESSIONAL DISTANCE

Abstract

One of the crucial factors in customer alliances is maintaining independence in the generation of value-added service solutions. Much is known about customer relationship management (CRM) but there is a lack of understanding on just how to effectively engage or manage customers in knowledge services. In this chapter, “professional distance” is presented as a relational mechanism for effectively balancing the competing tensions of intimacy and objectivity in customer alliances. Professional distance is critical in knowledge services relationships for maintaining engagement personnel independence and optimizing the alliance. Professional distance discussed in the chapter extends the well known customer relationship management (CRM) which does not adequately address the complex issues in customer alliances.

“Over time we and Anderson will probably mesh our systems and processes even more so that they are more seamless between the two organizations.”¹¹

-Jeffrey Skilling, former Enron president

This is precisely the wrong method of establishing a customer alliance. The failure of Enron and Arthur Anderson illustrates a vital point about how members of a customer alliance should view their business partners. While cooperation can lead to tremendous benefits, too close of a relationship can bring both firms down. Throughout this chapter, we will use the example of Enron and other failed financial institutions to illustrate the hazards of customer alliance, while explaining the appropriate way to structure and manage these relationships.

It is clear that customer alliances are critically important to competitive advantage and sustainability in knowledge service organizations. A particular concern to contemporary managers of these organizations is how best to manage customer alliances for competitive advantages. In fact, this has long been a major issue for knowledge service organizations. Contemporary managers are well aware that a failure to manage customer alliances can have devastating effects on the overall performance of the firm as was made clear by

well known corporate debacles including the collapse of the Arthur Andersen accounting firm in which muddled alliances with customer (e.g. Enron the energy firm) were most instrumental in bringing about the demise of Andersen. Other examples of ungoverned alliances include the questionably deep alliance between Citigroup and its Solomon Smith Barney securities-firm unit and Mr. Bernard Ebbers of WorldCom Corp. and the defiant alliance maintained by the bankrupt Adelphi Corp. executives, the Rigas family, with their Deloitte & Touche auditors.¹¹² Additionally, the Roman Catholic Church and other religious institutions confused attempts to maintain the integrity of the ministerial relationship under a surge of malpractice lawsuits against clergy over the past decade that threaten several major dioceses in the United States with bankruptcy. While these examples represent three well-publicized failures associated with customer alliances, numerous other cases exist where the lack of understanding of alliances with customers and the proper management of such has led to organizational disruption and potential disaster.

When an alliance is successfully managed, it can lead to tremendous benefits, as seen through IBM's work with Lufthansa Airlines. In 2003, Lufthansa came to IBM to help create a customer relationship management (CRM) system that would improve customer retention and allow the company to gain a better understanding of its customers. IBM helped create this CRM system through the use of Oracle's products and its extensive IT consulting practice. As a result, Lufthansa is able to present a single face and brand image to the customer and as of 2006, had seen a 50% increase in online bookings.¹¹³

It has long been widely recognized that customers play a crucial role in the operations of knowledge service organizations.¹¹⁴ This recognition of customer participation has led to the questionable and even dangerous assumption that in order to gain and sustain competitive advantages it is necessary for the engagement personnel to "get close to the customer." As such, closeness is thought to generate vital knowledge and thus has a direct bearing on the quality of value added services and firm performance. Even the term itself, getting close to the customer, is one that connotes a virtue that has been alluded to in the "excellence" literature¹¹⁵ as well as in other specialized areas such as health care.¹¹⁶ However, the problem with this sort of alliance is that it is more accurately viewed as psychological attachment¹¹⁷ which is a positive sentiment exercised by the engagement personnel or expert to create a warm and comfortable atmosphere in the relationship in order to solicit customer cooperation and information.¹¹⁸

But issues surrounding close customer alliances remind us that an orientation towards attachment - "getting close" - is associated with the risk of affect or emotional attachment for both customer and knowledge service firms. Being too close with customer relationships may undermine the ability to make decisions and even threaten the long term viability of the organization as

companies may become so blinded that they fail to see emerging markets.¹¹⁹ Being close to customers is an involvement in ordinary emotional exchange which blurs the lines of influence¹²⁰ and reduces not only the service firm's legitimate status, but also depreciates its expertise and knowledge as an exchange commodity.¹²¹ This type of emotional generosity can lead to massive complications and entangle the long-term viability of customer alliances. Thus, managing customer alliances by psychological attachment does not seem useful under current conditions of consumerism, litigation and fiscal constraint.

A countervailing idea now gaining some loft as a control mechanism that is crucial to management of customer alliances is what we will label "**professional distance.**" In a departure from 20th century close relations with customers, the notion of professional distance involves the engagement personnel use of authority, concern and detached objectivity in interacting with customers in generating value added services.¹²² Professional distance reflects the complex tension in balancing behaviors associated with displaying detachment and concern in customer alliances. In working with customers to create value added services, engagement personnel involvement is at a distance. Professional distance can be viewed as involvement at a distance. Thus, professional distance is the paradox of getting "close" to the customer while remaining detached.¹²³

At issue is the way the organization manages its customers and from this perspective there is a fundamental need in knowledge services to balance the various activities and roles when alliances with customers are established and as they evolve. What's more, with this as a backdrop, the display of concern and detached objectivity implies an awareness of two seemingly opposite and competing attributes and the logic for making these attributes work together. It is the tension emerging from nearness and remoteness when interacting with customers in knowledge services that affects the quality of solutions to their priorities. More than anything else, the advantage gained from the balancing of this tension is one of sustained creativity because it liberates the engagement personnel from ties in the alliance that could bias their perception and how they leverage knowledge for value added services. To accomplish this balancing act, the model of professional distance is presented as a mechanism for understanding and governing alliances with customers. An outline of the dimensions of professional distance and some basic applications follows.

ENGAGEMENT PERSONNEL AUTHORITY (EPA)

The engagement personnel authority is the right of all service workers to make appropriate decisions in generating solutions for customer priorities.

One of the interesting features of rendering services solutions to customers is the fact that the customer hires the service worker and gives them the right to make decisions on their behalf. The customer surrenders a delimited set of rights to the service provider.¹²⁴ In other words, customers give the engagement personnel in service transactions the authority to generate solutions that are in the customer's best interest and the exercise of such authority is based largely on the engagement personnel expertise in knowledge services. This engagement personnel-customer compact is exemplified in the medical industry in the alliance between a physician and patient. The doctor offers to provide value added service to the patient in exchange for compensation and it is well understood that the patient-customer will adhere to the doctor's advice. Those patients who disagree with the doctor are at liberty to go elsewhere for services. It is also quite clear that the mutual contract gives the doctor the right to fire a patient for clear reasons such as not adhering to instructions, a failure to pay and so on.¹²⁵ In light of this, the equalization of status between knowledge service workers and customers is not inherent in customer alliances. The mutual understanding that emerges from customer alliances is important for outlining the boundaries for both engagement personnel and customers. Alliances such as these provide general agreements in deciding what to do, who has what power to act, the boundaries of actions, and mechanisms for dispute resolution when unexpected contingencies emerge.¹²⁶ Although the nature and extent of rights can be expected to vary from one customer alliance to another, all alliances will confer some degree of trust upon the engagement personnel in knowledge service organizations.¹²⁷

While proventure workers are given the right or authority to tell customers what to do or the roles they should play in the generation of value added services, the mere use of such authority to manage and optimize customer input is inadequate. This is mainly because customers also have a buyer relationship with the organization and therefore cannot be completely under the jurisdiction of the firm and the engagement personnel. The challenge for the knowledge service organization then is managing customer alliances within a fuzzy authority structure; a structure that is customer-provided and thus outside the formal organizational authority structure of the service firm. We refer to this as "market" authority.

It seems clear that in order to generate value added solutions and build knowledge stocks within the organization, it is crucial that the engagement personnel secure the compliance of customers since customers have important roles and task activities to perform in service operations. In light of this, several needs or requirements are vital in governing customer alliances as shown in the table below:

Table 3-1. Engagement Personnel Authority in Customer Alliances

-
- *Market Authority*: The right of the engagement personnel to make decisions for the customer
 - *Customers as Direct Reports*: Customers are under the supervision of the engagement personnel.
 - *Co-creation Skills*: Customers perform tasks in solutions.
 - *Relational skills*: There is approval and pleasure in having customers in the alliance.
 - *Professional and Ethical Obligation*: Doing what is in the customer's best interest.
-

One such requirement is market authority which is the right of the engagement personnel to be authoritative, that is, to make the appropriate decision, and only the appropriate decision in the generation of solutions for customer priorities.

A second requirement is the authority of the engagement personnel to direct customer activities and to generate value added services in the customer's best interest. We know from the engagement contract in customer alliances that customers delegate decision making authority to knowledge-based firms. It is also clear that the authority given to the engagement personnel by the customer is very crucial in the generation of tacit knowledge.¹²⁸

A third requirement for effective customer alliances is co-creation skills.¹²⁹ This need emerges from the fact that customers actually take an active part in the process of knowledge productions and solutions to their priorities. The engagement personnel must work closely with customers not only to determine the desired priorities but also to assist the customers in providing the necessary solution. In recognition of customers' vital contribution, it has long been argued that these participants should be viewed as "partial" or quasi employees within the boundaries of services firms.¹³⁰ Additionally, customers are under the supervision of the engagement personnel to whom they have given the authority (EPA) to direct customers' behaviors.

A fourth requirement for effective alliances is relational skills because of the interpersonal nature by which solutions are generated in knowledge service organizations. This is the social need for courtesy which means that the engagement personnel is perceived as giving immediate attention to customers priorities and signals to customers through both verbal and nonverbal cues that there is approval and pleasure in having the customers in the alliance.¹³¹

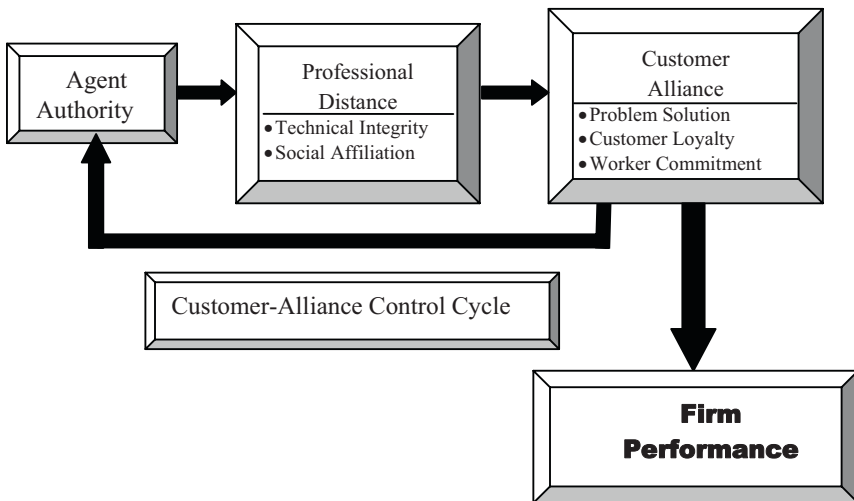
A fifth requirement in alliances is professionalism or the ethical dimension which means that the engagement personnel do what is in the best interest of the customer in addressing their priorities and not necessarily what the customers want.¹³² This can be seen through a patient/doctor relationship. Frequently, a patient will request medications or procedures that are not in

the best interest of their health. The doctor must make the best decision for the customer; independent of what the customer believes is best.

FUNDAMENTALS OF PROFESSIONAL DISTANCE

The primary objective of professional distance is to secure independence of the engagement personnel by balancing the competing tension between getting close to customers by displaying concern and, at the same time, remaining detached for objectivity in customer alliances. The main intent is to manage externally based customers in the internal market structure. Based on the preceding fundamental requirements in customer alliance, the management of customers by the use of professional distance requires two fundamental activities: concern and technical integrity or detachment as Figure 3-1 shows. Professional distance is viewed as the intersection of technical integrity and concern: two vital attributes which collectively affect decision making in customer alliances.

Fig. 3-1. A Model of Professional Distance



In knowledge services, value added solutions to problems are created out of interpersonal interactions. This is fundamental as few workers can generate knowledge without the interaction of others. Customer alliances are effective mechanisms for productive exchanges in the generation of solutions to customer priorities and for the building of knowledge stocks within the firm.

In any sort of relational exchanges, emotions are an integral part.¹³³ In addition, emotions impact people's perceptions and relations.¹³⁴ Engagement personnel in their interaction with customers may display such emotions through display rules¹³⁵ such as conscientiousness, courtesy and pleasantness, which, in turn, represent internal feelings. In general and with rare exceptions, this kind of display by the engagement personnel represents positive internal feelings which we call *concern*.¹³⁶

The goal of the concern aspect of professional distance is to create a bond which emerges between engagement personnel and customers in the alliance. To a significant degree, concern reflects an emotional affiliation¹³⁷ and is the display of empathy, and commitment by the engagement personnel toward customers in the alliance. It is the non-technical or relational aspect of alliances (courtesy, social ability, conscientiousness, pleasantness, tactfulness, and so on). In customer alliances, concern provides a state of assurance by the engagement personnel that inspires trust and confidence in the customer. This assurance, in turn, makes the customer feel welcome in the alliance.¹³⁸ This is critically important to the sustainability of the service firm because concern provides an opportunity to foster, and indeed encourages, dialogue and exchanges.

While concern may take many forms in professional distance, it is widely reflected through what Arlie Hoshshield calls "surface acting" by the engagement personnel in displaying empathy and commitment in the customer alliance.¹³⁹ The primary intent of such displays is to increase solidarity and durability in relations. Given the emotion being exchanged, the display of concern is mostly about self-interested behaviors by engagement personnel because it is a deliberate attempt to facilitate exchanges with customers for knowledge creation and value added solutions. Concern establishes a desirable interpersonal climate in order to get customers to view the engagement personnel in a more favorable light.¹⁴⁰ That, in turn, could have lasting effects on the alliance by sparking sharp increases in customer confidence. It is therefore not surprising that concern entails a relatively high level of worker self-interest because of the energy expenditure required to maintain social and interpersonal links in the alliance. As proventurers, the engagement personnel have a vested interest in the production and leveraging of knowledge. It is primarily out of this kind of calculative commitment¹⁴¹ by engagement personnel that concern often gives rise to commonly used attributes such as "caring about the customer" or "being customer oriented" in knowledge service organizations. In essence, concern is about the engagement personnel expressing empathy and is intended to create a respectful atmosphere in the alliance in order to encourage discourse, dialogue and exchanges from which knowledge arises and value added solutions are rendered.

Technical Integrity

Technical integrity is a second critical aspect of professional distance. As a core activity for knowledge creation and providing value added services. Fundamentally, technical integrity involves independently informed judgments by the engagement personnel in the generation of solutions and such judgment is undertaken in a detached way. What is interesting here is that such judgments are quite capable of withstanding reasonable scrutiny if they are questioned at a later time. Technical integrity entails the use of some recognized body of knowledge and skills that are based on abstract concepts and theories.¹⁴² Relative to concern, the other dimension in professional distance, technical integrity is the core or pivotal set of activities without which the engagement personnel would not be capable of rendering a minimal level of value added services to customers. For example, an auditor should have understanding about the auditing process; a software programmer should have a fundamental body of knowledge about software development and so on.

To a great extent, technical integrity is the use and display of mostly tacit knowledge in addressing customer priorities. It involves knowledge expertise as well as moral behavior. Technical integrity is important because of the way tacit knowledge is generated and leveraged within the service firm. Since tacit knowledge, as noted earlier, is an understanding gained from experience but is not easily articulated to others and is sometimes unknown to oneself,¹⁴³ the engagement personnel is in possession of a particular body of ideas and, as proventurers, are therefore afforded the discretion for creative problem solving because such work cannot be performed mechanically.¹⁴⁴ As a consequence, technical integrity is the process of using tacit knowledge or skills to adapt to different circumstances or as customers' priorities change and, in so doing, further generate what are essentially knowledge stocks.¹⁴⁵ Technical integrity is a high value-added activity because it focuses most directly on problem resolution and solution certification. Privately held knowledge is the basic source of sustained competitive advantage for knowledge service firms.¹⁴⁶ It is through technical integrity that engagement personnel in knowledge service organizations can be said to truly own the means of productions, the implicit knowledge in their heads.¹⁴⁷

An important aspect of technical integrity is rationality, which is a set of process patterns of knowledge that is not only logically derived but is done so in a detached way. By this we mean an arm's length relationship is created based on the right of the engagement personnel to be objective in decision making. In displaying technical integrity, the engagement personnel are essentially adopting an objective attitude¹⁴⁸ which is done with a sense of detached commitment to solutions. This is where the engagement personnel authority comes in. The detachment or distance inherent in technical integrity is based on the authority position of the engagement personnel and may be dis-

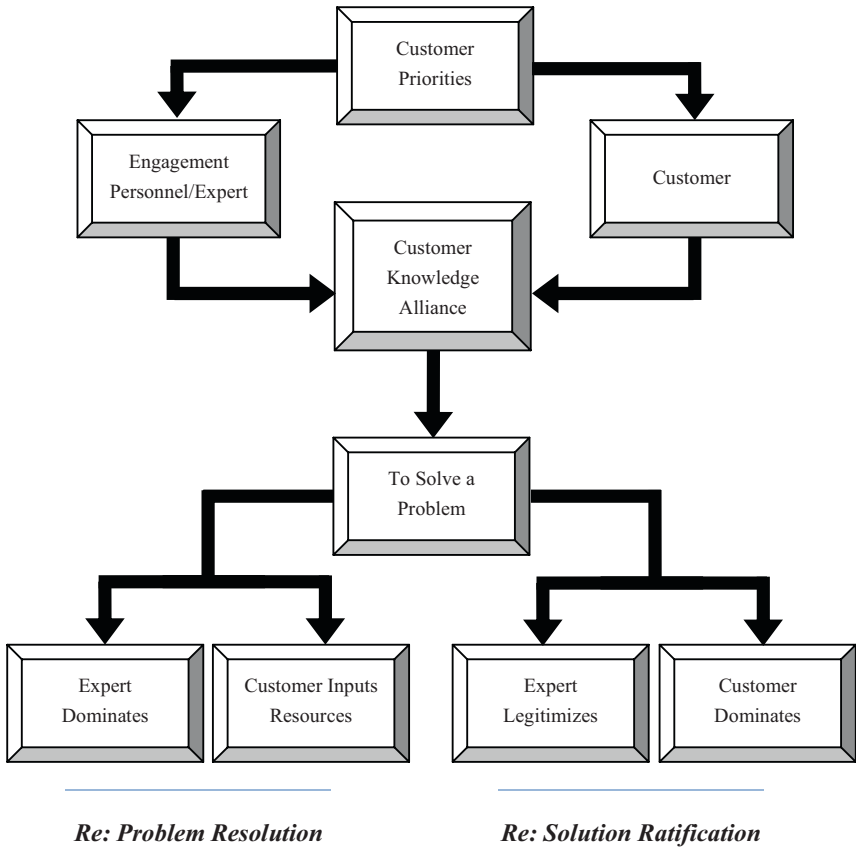
played in ways such as the engagement personnel mannerism,¹⁴⁹ language,¹⁵⁰ or clothing¹⁵¹ that visibly distinguishes and ranks engagement personnel from their customers. In so doing, the detachment of technical integrity establishes a gap of formality which affects the engagement personnel's opinions and objectivity. This is very instrumentally advantageous in assisting the engagement personnel in becoming less encumbered in their perception and assessment of customer priorities thus enabling independent decision making. Further, technical integrity provides engagement personnel with critical sets of standards that are general in nature and not confined by customs and precedent.¹⁵² Amid such a backdrop, it is not difficult for engagement personnel to become proventurers in all sorts of creative risk-taking that the generation of knowledge for quality, value added solutions generally requires in these service organizations.

GUIDELINES FOR PROFESSIONAL DISTANCE

It seems clear that the alliance between engagement personnel and customers is a very special kind of relationship because it involves asymmetry which means that "the service providers know – but buyers do not" – the extent and nature of the service solution.¹⁵³ In essence, asymmetry has to do with how informed the parties are about each other in alliances. As we noted in a previous chapter, a state of asymmetry gives rise to two different kinds of customer alliances – problem resolution and solution ratification. In problem resolution alliances, the customer has a problem in need of a solution. This is the classical alliance in which there is a lack of knowledge or ignorance on the part of the customer. In these alliances, engagement personnel dominate as Figure 3-2 shows and have the authority to do so.

This is not the case in solution ratification alliances. Here, the customer works out a unique solution to a problem and then seeks legitimization and certification for the solution. The customer has asymmetric information of a different kind and this knowledge can create a moral dilemma for engagement personnel. Take Arthur Andersen LLP, the accounting firm, and its close relationship with its customer Enron Corp., the energy company, before both organizations collapsed. Enron frequently took the responsibility of conceiving, initiating and approving the important Enron transactions. The auditors from Andersen had little or no involvement at all as critical information was frequently withheld from them by Enron. Since Enron only wanted solution ratification, Andersen was expected to reach the same conclusions and to endorse whatever it did. Although Enron failed to provide this crucial documentation, it was Anderson's responsibility to demand it, to issue a qualified opinion, or withdraw from the engagement altogether.

Fig. 3-2. Customer Alliances in Knowledge Service Organizations.



When customers seek certification of a solution that has never been tested and could eventually require some governing body, for example, the Securities and Exchange Commission (SEC), or American Medical Association (AMA) to have the last say in the matter, the engagement personnel may be faced with a moral dilemma. As Figure 3-2 shows, the customer dominates in the alliance by coming up with a solution. In this context, the customer would like to pursue a course of action for which there is little precedent. No one is certain what is right or wrong about the problem solution or how the engagement personnel ought to conduct themselves under conditions where ratification is needed. Thus, in both problem resolution and solution ratification alliances, there is an exchange of ignorance and knowledge to address customer priorities.

Professional Distance: Alliance Building Advantage

Balancing the tensions in professional distance plays a crucial role in the building of effective customer alliances and is heavily dependent on the relationship phase. During the exploratory phase of the alliance, the tension between technical integrity and concern is balanced, emphasizing both dimensions of professional distance. Take, for example, proventure workers engaged in loan workout activities. In banks and other financial institutions where loan defaults and credit card debts exist, workout employees are required to examine portfolio loans, isolate troubled ones and workout with the borrower, the bank and others to develop a repayment plan. The job of the loan workout employee balances technical integrity—negotiations and calculations—along with concern—empathy in witnessing the emotional hardship that financial problems have on default borrowers.¹⁵⁴ Both technical integrity and concern will be emphasized in order to arrive at a value added repayment plan solution.

The primary goal of professional distance during the exploratory stage of the alliance is to reduce uncertainty between the engagement personnel and the customer. During this phase, uncertainty reduction is done largely by increasing participants' knowledge about each other as assessments are made about the potential benefits of continued interactions.¹⁵⁵ This will invariably require the engagement personnel to demonstrate independent judgment through technical integrity as well as a reliance on concern in order to create a collaborative working relationship.

For future transactions, negotiated exchanges occur during the exploratory stage of the alliance between the engagement personnel and the customer. In these direct exchanges, both the engagement personnel and the customer negotiate explicit and implicit agreements and come to some kind of understanding about future expectations regarding value added services. Through technical integrity, the engagement personnel can exercise their authority in clarifying the roles and expectations in the alliance. In searching for and experimenting with potential partners during the exploratory stage, the concern dimension of professional distance is important. This is because the leveraging of knowledge for value added services requires an atmosphere that fosters discourse, dialogue and objective attitudes.¹⁵⁶ The display of concern by the engagement personnel is appropriate and critical in this context. Changing the levels of concern in customer alliances will affect the communication process, the sharing of ideas and hence, the internal marketplace of readily accessible ideas or knowledge stocks.¹⁵⁷

It is becoming increasingly clear that knowledge generation and value added solutions are nurtured in a proventure environment of discourse, dialogue and objective attitudes. The benefit that the engagement personnel derive from the display of concern is one of access to private information that cus-

tomers are likely to reveal.¹⁵⁸ By exercising concern, customers will be motivated to disclose sensitive information that can assist in the development of knowledge stocks for value added solutions. Furthermore, customers may be able to perform their required activities in a relatively non-threatening context as engagement personnel are perceived as supportive and encouraging.

During the buildup-maturity stage of the customer alliance, the parties become interdependent.¹⁵⁹ Because of the increased experience and the ability to evaluate each other’s behaviors, the benefits of each party to the alliance become more apparent, resulting in a reduction in uncertainty and apprehension by the parties. However, the great risk during the buildup-maturity stage is that the engagement personnel and the customer may become too close because exchanges over time result in familiarity and emotional affect. Technical integrity and detachment therefore become more critical for value added services in order to outline and maintain the roles of the participants in the customer alliance. The engagement personnel know more than the customer and have the authority to exercise judgment in the generation of solutions. When there is some sort of detachment in the alliance, engagement personnel achieve more independently reasoned decisions for addressing customer priorities. Thus, during the buildup-maturity stage of the alliance, the tension in professional distance favors relatively high technical integrity to facilitate customer compliance and simplify the process of generating quality solutions. See Table 3-2 below for further detail.

Table 3-2. Alliance Building Stages.

<p>Exploratory</p> <ul style="list-style-type: none"> • Engagement personnel negotiate explicit and implicit agreements with client • Roles and expectations clarified • Display of concern appropriate and critical for both parties
<p>Buildup</p> <ul style="list-style-type: none"> • Parties become interdependent • Reduction in uncertainty and apprehension • Risk that customer becomes too close, service provider must increase distance
<p>Maturity</p> <ul style="list-style-type: none"> • Engagement personnel achieve independently reasoned decisions • High levels of technical integrity and distance • Solution generation and customer-client relationship becomes simpler

Professional Distance: Customer Commitment Advantage

The exercise of professional distance by engagement personnel will invariably generate increased interaction which may serve to enhance the quality of knowledge. Under professional distance, customers have an opportunity to expand their required contribution to solutions which, in turn, increases customer commitment to the alliance. Customer commitment is of immense importance to the sustainability of knowledge services because it signals the bonding of ties to the engagement personnel and solidifies the customer alliance.¹⁶⁰ Furthermore, such customer commitment will generally be strengthened over time as the engagement personnel and customer invest and develop knowledge that is particular to the competences of the alliance. This is primarily how knowledge service firms build their knowledge-stocks for sustained competitive advantages as entrepreneurs anticipate more readily future customer priorities. With the exercise of professional distance, switching costs increase since such firm-specific knowledge solutions provided to customers cannot be readily secured from competitors without added costs and the loss of value to the customer. Consequently, in the exercise of professional distance, both customers and engagement personnel become tied or committed to the existing alliance.

The exercise of professional distance may enhance competitive advantages in another important way. Novel solutions to customer priorities require some amount of risk taking. The technical integrity of professional distance affords the calculative involvement that risk taking entails by maintaining the objectivity roles in the customer alliance. In addition, risk taking requires active involvement of customers in the generation of solutions because of their role activities which allows these participants to be more accurately viewed as “partial” employees of the knowledge service provider.¹⁶¹ As a crucial contributor to the quality of solutions, customer involvement in the process results in a greater vested interest and satisfaction, and thus increases the commitment of the customer to the knowledge service provider.¹⁶²

Professional Distance: The Performance Advantage

Managing customer alliances effectively requires balancing the tension between detachment in technical integrity and concern. However, the balance in this tension is heavily dependent on the types of customer problems or priorities that confront the engagement personnel as shown in Figure 3-2. In customer alliances in which the predominant goal is problem resolution, engagement personnel have very little difficulty determining their roles because of their objective attitude in the resolution of issues. The engagement

personnel are the experts and they dominate in this relationship. For the engagement personnel, professional distance focuses attention on ways to generate solutions to customer priorities by balancing objectivity in technical integrity with goodwill of concern. An imbalance in excessive concern will undermine reasoned judgment due largely to a shift to friendship and familiarity resulting in affection and dysfunctional loyalty taking precedent. In this context, the engagement personnel are deprived of the ability to make objective decisions. Healthcare practitioners, for example, are well aware of the potential detriment of such imbalance as engagement personnel will fail to ask embarrassing or sensitive important questions often resulting in their making erroneous judgments.

This is not the case for customer alliances characterized by solution ratification where customers realize their role in taking the lead in the development of their own solutions and only seek the engagement personnel's approval. In customer alliances such as these, professional distance of the engagement personnel focuses on ways to add certification and legitimacy to the customer's choice of a course of action for solving the problem resulting in both customer and engagement personnel identifying with solutions. In this context, the engagement personnel are essentially needed to validate the customer's initial solutions and this can create apprehension or even potential moral dilemma for the engagement personnel when asked to certify customers' untested proposals.

When Enron, the energy firm, deceived investors about its financial position, the company was able to pull this off because of the close relationship with its bankers. The banks were well aware that other Enron creditors were ignorant about Enron's true financial picture. Each banker did not, however, realize that Enron had other partners in deception and therefore did not know the total amount of hidden debt. Enron only disclosed its previously hidden loans shortly before it filed for bankruptcy. The bankers tried to shirk their responsibility by arguing, unsuccessfully before the Securities and Exchange Commission, that their customer, Enron, and Enron's accountants were responsible for proper accounting and disclosure. While the bankers knew what was going on, they pretended that it was not their business.¹⁶³ Had the bankers exercised professional distance, they would have realized the mutual benefit to themselves and Enron by holding themselves to a higher standard instead of helping Enron mislead its investors. Technical integrity of professional distance would have turned up the fictitious income by Enron that produced paper profits without any operating cash flow and would have saved the banks from engaging in such transactions without Enron making full disclosure.

One of the primary advantages of professional distance is that it allocates risk to both the engagement personnel and customer, because of the mutual dependence inherent in the development of knowledge and solutions. Value

added solutions in knowledge services organizations entail a lot of give-and-take between engagement personnel and customers. This is a basic part of the firm's operation. Since professional distance also fosters a reciprocal interdependence between the engagement personnel and customer, the eventual outcome from the alliance is a function of both participants' directed efforts. This serves to address the issue of goal incongruence or not being on the same page for value added solutions; an issue that is endemic in customer alliances. For the most part, goal incongruence is reduced by the exercise of professional distance because the technical integrity dimension of professional distance serves as a certification mechanism to assure customers that the engagement personnel have a dependent interest in the service outcome.

As a consequence of this, technical integrity is a primary reason that knowledge service firms will often select customers who are most likely to respond well to the kinds of knowledge stocks in the firm's possession. It is not unusual for healthcare firms to screen out "poor treatment risk" patients.¹⁶⁴ Other examples include lawyers selecting the cases they will litigate and schools fastidiously choosing students to enroll. Accounting and audit firms (e.g., Price Waterhouse Coopers, Ernst & Young, Deloitte & Touche) have terminated contracts with many customers rated as "maximum risk clients" or customers considered to be too risky to work with because of the Sarbanes-Oxley Act and new accounting rules instituted in 2002. Molex, a maker of electronic components, had a disagreement with its independent auditor Deloitte & Touche over an inventory accounting issue. Deloitte & Touche, in tightening up its risk procedures, ordered Molex to fire its chief executive and chief financial officer if it wanted Deloitte & Touche to continue their alliance. Molex refused to do so and Deloitte & Touche resigned. Shortly after Deloitte resignation, Molex hired Ernst & Young as its independent auditor after reluctantly getting rid of its top managers as Ernst & Young and earlier Deloitte demanded.¹⁶⁵ In being fastidious with whom they will choose as customers, knowledge service organizations reduce potential conflicts in alliances that would make it difficult to exercise professional distance or take steps that are appropriate for high risk customers.

As a critical process to generate quality knowledge and value added solutions, professional distance outlines and maintains the roles of the participants to the alliance. Such roles are mainly reflected and visibly distinguishable through knowledge attributes.¹⁶⁶ The engagement personnel, generally, know more than the customer. This asymmetry in expertise effectively establishes a gap of formality between the engagement personnel and customer and it is essentially through this gap that the engagement personnel can exercise their technical integrity in doing what is in the customer's best interest. By emphasizing the detachment of technical integrity, knowledge service workers can achieve more reasoned decisions for customer's priorities.¹⁶⁷ Emphasis on technical integrity of professional distance is par-

ticularly important in solution ratification situations where engagement personnel are often faced with moral dilemmas around the certification of customers' proposals when no one knows if such solutions will work because they have never been tested. Thus, the technical integrity of professional distance will facilitate objective reflection on customer priorities and simplify the firm's process of generating value added solutions.

Additionally, the dimension of technical integrity of professional distance affords the engagement personnel the right to be critical of the activities required of customers in an objective, impartial and non-indulgent manner.¹⁶⁸ They are in a position to demand high level contributions from customers in the generation of value added solutions and the building of knowledge stocks. In some ways, the technical integrity of professional distance motivates the engagement personnel to become a proventurer and thus behave as an active listener in order to interpret, leverage, and generate knowledge stocks. Of course the active exchanges that take place between customers and knowledge workers in customer alliances can and often does give rise to personal relationships or psychological attachment¹⁶⁹ by engagement personnel. Personal attachment to customers can adversely affect the nature of the alliance and the quality of solutions generated. A primary outcome of psychological attachment is its adverse effects on the engagement personnel's judgment in decision making and the solutions generated. The issue here is that in compromising the crucial criteria of judgment, the service worker is no longer a proventurer in the alliance because personal judgment is allowed to override the objective criteria. The detrimental effects of this kind of personal involvement may serve to create "biased" reactions by the engagement personnel.¹⁷⁰ Under these circumstances, psychological attachment of this nature reduces the status differences in the alliance and thus the ability of the engagement personnel to direct and influence the customer.¹⁷¹ This is not the case when professional distance is adhered to in customer alliances. In the use of professional distance, the engagement personnel can weaken the negative effects of psychological attachment because of the element of detachment that is inherent in technical integrity and the mutual benefit or vested interest in the outcome by the stakeholders in the alliance.

Professional Distance: The Self-Control Advantage

There is little doubt that knowledge service work entails high uncertainty. The tasks involved in knowledge production to satisfy customer priorities do not program the worker. There are just too many possible contingencies available to these service workers and so tasks cannot be readily routinized. In addition, contingencies for value added solutions to customer priorities often vary so much that workers must be allotted relatively large amounts of

discretion and autonomy in order to act like proventurers and adapt their knowledge to each situation.¹⁷² Under these circumstances, traditional hierarchies and control mechanisms that worked well in 20th century manufacturing context are now liabilities for proventure behavior in the exercise of worker discretion. Instead, workers must exercise self-control or self-management¹⁷³ in the analysis of situational factors for the formulation and leveraging of knowledge. Professional distance can play an important part in allowing knowledge workers to control themselves.

In light of the evolving knowledge work landscape, proventure workers are not only burdened with the awareness of uncertain solutions but also with the added realization that the feedback from their effort may not be immediate. This means that employees have to draw on intrinsic resources to satisfy their needs in complex alliances with customers. As a control mechanism, professional distance serves to influence the amount of effort and discipline displayed by engagement personnel within the framework of developing solutions to address customer problems. In searching and experimenting for novel solutions, social skills are important in performing the task activities associated with generating knowledge for overall competitiveness¹⁷⁴. We know that the leveraging of knowledge for value added services requires a social network that fosters discourse, dialogue and objective attitudes. The concern dimension of professional distance is important here because through display rules¹⁷⁵ by the engagement personnel of courtesy, conscientiousness, pleasantness, and so on, a climate is created that is less intense and more nonthreatening for the customer. This, in turn, entices the customer to develop stronger ties to the engagement personnel who are then viewed as providing positive feelings.

To a large extent, knowledge production emerges out of a process of resolving conflict and disagreements around the imposition of new approaches to solutions.¹⁷⁶ Such conflicts may often take the form of customer criticism that may sometimes be actualized in the form of unreasonable outbursts or even simple defiance because customers are also committed to the outcome when professional distance is exercised. A recent case in point entailed the customer alliance between Deloitte and Touche auditors and Adelphi Communications Corp. When auditors requested crucial information during the 2000 audit, Adelphi executives, the Rigas family members, refused and Deloitte auditors, in turn, acquiesced.¹⁷⁷ This is quite a display of role reversal. By acquiescing, the auditors violated technical integrity giving rise to a potentially detrimental role reversal of a resistant customer and an insecure knowledge worker.¹⁷⁸ In this case, the customer only wanted certification to a defined problem without scrutiny or questions.

Professional distance is crucial in these circumstances because it provides services workers with the awareness of how a personally identified goal is being realized.¹⁷⁹ The uncertainty associated with these solutions gives rise

to the need for much more questioning by the engagement personnel as they search for disconfirming evidence from the customer. To accomplish this, the engagement personnel will rely more heavily on the detachment inherent in technical integrity to exercise their authority in gathering information about the customers' priorities. As a proventurer, the engagement personnel will behave in a way that provides an accurate understanding of the situation (e.g., attentive listener in order to interpret complex often equivocal information, intolerance for errors and so on). Thus, the importance of knowledge service workers acting in the customer's best interest rather than merely providing what the customer necessarily wishes¹⁸⁰ is ensured by the factors inherent in worker professional distance.

Professional Distance: Customer Feedback Advantage

Customers can find the alliances with knowledge services quite challenging. Part of the reason for this is that there is no exact way to determine an appropriate solution where there is inherent heterogeneity around outcomes. But as temporary members of the firm, customers have three possible reactions in alliances when their expectations are not fully met—exit, voice, and loyalty.¹⁸¹ Customers can seek to exit their alliance with the service organization or transfer to other engagement personnel within the firm. This sort of voting with their feet by customers provides invaluable information for the knowledge service organization because it usually suggests some dissatisfaction with the actual service solution or the delivery of such. However, for customers, exit from the alliance may be costly because of the potential switching costs as this pertains to customer-specific knowledge generated from the alliance. Developing new alliances to address their priorities is expensive for customers particularly for customer-focused alliances with secondary differentiated strategies. This is partially because an increase in specialization has reduced the number of firms with the capability to perform each function. Ending a relationship with one may adversely impact relationships with others and raise the risk, and therefore the cost, of future engagements. Additional relationships will have to be made and additional personnel taught, costing the firm time and money.

Another reaction to alliances is customer voice. Instead of defecting from the organization, customers may actively voice their concerns about objectionable solutions.¹⁸² This overt reaction is a form of protest by customers particularly when there is substantial investment in the alliance. The third option for customers faced with questionable solutions is to show loyalty to the alliance. The option of loyalty emerges when customers do not exercise either exit or voice but remain attached to the firm and "suffer in silence" for a period of time before acting.¹⁸³

Even though all three reactions may have adverse effects on the firm's competitive sustainability, customers' voice is one factor that can actually make an invaluable contribution to the development of quality solutions when professional distance is exercised by the customer alliance. Customer voice through the prism of professional distance legitimizes voice and reduces its negative effects. Indeed, encouraging customers to voice their issues is a germane part in the production of value added solutions in knowledge service organizations. The biggest reason for this is that an important aspect of customer voice is criticism which has the potential of providing invaluable information for narrowing ambiguity in the process of generating knowledge for quality solutions and this, in turn, will go a long way in reducing conflicts and misunderstanding around goals. In this context, the exercise of professional distance is capable of transforming a negative into a positive through showing concern for customers so that they feel comfortable voicing their opinions and using technical integrity to develop value added services.

In knowledge service organizations, the production of novel value added services entails large numbers of possibilities and contingencies. As a result of this uncertainty, customers and engagement personnel will be continually engaged in all sorts of give-and-take. This is fundamental to knowledge creation within these firms and will also involve renegotiation of engagement contracts as the firm's knowledge stocks evolve over time. Customer criticism that is legitimized and fostered by the exercise of professional distance in the alliance may serve as an invaluable mechanism not only for signaling repurchase intentions but also a willingness of customers to provide word-of-mouth advertising to others. Since the process of customer criticism not only assists in the generation of quality solutions but also provides a mechanism to renegotiate engagement contracts, barriers to customers' analyses of engagement personnel actions can be expected to generate customer dissatisfaction in alliances. The alliance will be perceived as designed to maximize the payoff to the firm and not be in the best interest of the customer.

Generally, customers find it easier to exercise voice in problem resolution alliances when failure to reach expectations is perceived as being the fault of the engagement personnel. This is not necessarily the case in solution ratification alliances in which customers provide the solution. In solution ratification alliances where customers generate the solution, it is much more difficult and problematic for customers to be critical of themselves, although they may be partially responsible when outcomes are below expectations. Customer alliances that are devoid of professional distance will tend to dampen voice because there is less than full customer participation. For example, psychological attachment will inhibit criticism because customers are less apt to criticize employees for inadequacies and may feel obliged not to

do so. This may be largely due to the engagement personnel's effort to foster a compatible atmosphere in the alliance by providing emotional support to customers. While well intended, in doing so, the status distinction inherent in technical integrity is narrowed and the relationship shifts from market-based authority to a peer interaction or an alliance of equals and violates professional distance.

There may be some immediate gain to the customer for being treated or elevated as a peer in status as a result of psychological attachment in the alliance. As a peer, customers are afforded some degree of self-esteem and a state of well being in the alliance.¹⁸⁴ This, however, may come at a cost to the quality of solutions generated in the alliance. This is because in order to show their appreciation for the engagement personnel effort, customers are likely to be loyal, temper the exercise of voice and signal a reluctance to blame engagement personnel when poor solutions are provided to address their priorities. In other words, customers are likely to suffer in silence which will undermine the effectiveness of the alliance over time. The ability of customers to engage in criticism is crucial to the production of novel value added solutions in knowledge services because this form of voice serves as a way for customers to monitor activities in the alliance and to reduce disagreements around expected outcomes to their priorities.

It seems clear that voice is an important way for customers to invest in knowledge service organizations and professional distance is a vital conduit for this sort of customers' investment in the firm. Over time, such investment can be expected to give rise to customer attachment that, in turn, may generate long term commitment to the firm. Such advantageous outcome is most likely when the voicing of issues is perceived as being handled through professional distance where one of its goals is to effectively manage customer participation to its fullest. For example, patients often visit their doctor with written set of questions that are important to them and engage open dialogue about their concerns. This is particularly important because the engagement personnel in knowledge services such as doctors in hospitals are no longer the only source of knowledge as the internet continues to demystify some of healthcare solutions.¹⁸⁵

In addition, both the technical integrity and concern dimensions of professional distance require active involvement of customers in the generation of value-added service solutions. As the quality of solutions increases, customer involvement in the process becomes a greater vested interest along with satisfaction thus their loyalty to the organization will increase.¹⁸⁶ Bonding of this kind will generally be strengthened over time as the firm develops knowledge stocks through technical integrity and such stocks are particular to the needs of customers. Firm-specific knowledge stocks of this nature increases the exit barriers of customers because such knowledge and ensuing problem solutions cannot readily be secured from other organizations without added

costs to the customer. Consequently, customers become tied or committed to the existing alliance.

Professional Distance and the Credence Factor

One of the recurring issues in the generation of knowledge solutions and the dispensing of them to customers is their heterogeneity and intangibility which often create credence issues as it is difficult for customers to evaluate their quality with confidence even after services have been rendered to them. What is clearer to customers, however, is their capability of evaluating the interpersonal treatment and activities they receive in social interactions.¹⁸⁷ As such, customers may use their evaluation of concern in professional distance as a proxy for the quality of solutions and, this influences the extent to which they are committed to the firm.

Customers may frequently try to enhance personal relationships or seduce the engagement personnel in an attempt to better evaluate the quality of the service provided or to hide deficiencies within their organization. While this behavior may be innocent, it can be destructive to the technical integrity independence of the engagement personnel. It is imperative that the service provider maintain professional distance. By neglecting the professional distance in customer alliances, the engagement personnel are increasing the risk of subjecting their firm and themselves to litigation if errors are made during the engagement. Regardless of any prior personal relationship, judgments by others in the firms and in the courts will be made based on the quality of the work, not on personal feelings between the two parties. The engagement personnel must maintain their ability to question the customer and challenge statements and situations.

Engagement personnel must be careful to recognize situations when the customer is attempting to cut through the professional distance. While the provider can only be harmed from violating this distance, there are times when the customer stands to gain. In situations where a client is seeking ratification of a flawed solution, the customer may use a personal relationship with the service provider to obtain a favorable review. This was one of the primary reasons for the downfall of Enron and Arthur Anderson. By decreasing the distance between the two organizations, Enron was able to seduce the auditors into signing off on fraudulent statements. The lack of distance between the organizations would have made it difficult for Arthur Anderson to challenge the fraud, even if they wanted. In engagements where problem resolution is the goal, an inappropriate relationship clouds the judgment of the service provider, crippling their ability to identify weaknesses and opportunities for improvement. In the end, this type of relation-

ship hurts both parties. An objective, honest opinion is not given, preventing both parties from successfully completing the engagement.

SUMMARY

It has become something of a truism that competitive advantages are gained in service organizations by getting close to customers. There is an inherent implication that such closeness will provide crucial market segment information, generate tacit knowledge and thus will have a direct bearing on the organization's performance. The idea of getting close to customers takes on added meaning with the growing need in knowledge services to understand the process of production in generating value added solutions. A major problem of customer alliances is establishing and maintaining mutually satisfying behavior of two potentially conflicting and self-interested parties. As "partial" employees, customers are in need of direction as to their role in knowledge production and solutions. An important question for knowledge service firms is how can the customer involvement in knowledge production be effectively managed?

Professional distance is proposed as a "rational alliance" between customer and firm in order to arrive at reasonable agreements through the collaborative process of technical integrity. Professional distance provides a managerial strategy for fostering customer involvement and commitment in the production and leveraging of tacit knowledge for addressing customer priorities. The need for customer understanding as a competitive tactic makes professional distance an important tool for managing customers in knowledge services.

The concept of professional distance has several implications for managers. One implication is that professional distance reduces bias in problem solutions and facilitates the production of knowledge stocks within knowledge service organizations. Professional distance is relevant in alliances where it is necessary to solicit customer participation, coach, direct or lead in the generation of knowledge and rendering of solutions to satisfy customer priorities.

CHAPTER 4

BUILDING KNOWLEDGE ADVANTAGE: INTERNAL MARKET IMPERATIVES

Abstract

It is becoming increasingly clear that traditional ways of managing activities within knowledge services organizations are no longer appropriate. In a departure for 20th century models, this chapter develops an internal market framework for controlling knowledge centers, units and workers engaged in the generation of value-added solutions and knowledge stocks within the organization. In this chapter, market principles are brought into the firm as a nonconventional way of nourishing creativity within knowledge services and as a foundation for managerial control.

“Inside your hierarchy is a network. This isn’t about networks replacing hierarchies—we’re still going to have managers and promotions. But particularly for large companies, there’s a lot of value that can be unlocked by letting employees work with one another. There were two research groups at IBM separated by the Atlantic Ocean—one in Armonk and one in the U.K. They were working on the same problem, but of course they didn’t know that. They employed a tool IBM built called [DogEar](#), a tagging tool. These two groups discovered—without any managerial oversight—that they were working on the same problem. They said, “Why don’t we get together and collaborate?” That’s the kind of enterprise value that can’t be driven by the manager. In any complicated field, the people you’re managing know more about the problem than you do. This is a way of getting at that value.”¹⁸⁸

-Clay Shirky, referencing IBM on what CEO’s need to understand about collaboration.

DogEar, IBM’s social networking initiative, has been a successful attempt at coordinating the internal markets within a large knowledge service firm. DogEar is a program developed by the company to enhance social capital. On the company’s internal network, thousands of employees exchange useful websites along with corporate resources and may even rate the value of assistance from others. These ratings are quite visible and can affect the performance review of those providing assistance.¹⁸⁹ Transactions within an internal market are common yet frequently overlooked. Several knowledge services firms have begun to experiment with architectures that support the exchange and creation of knowledge through internal knowledge markets.

Hewlett –Packard, for example, developed such a market to collect and distill dispersed knowledge about likely future sales of HP printers. Employees using a starting portfolio of 20 shares were allowed to buy and sell their own predictions about future sales resulting in “remarkably accurate” predictions relative to official predictions according to Thomas Malone.¹⁹⁰ Another illustration of how the exchange of ideas through internal knowledge markets can facilitate the creation of new knowledge is Rite-Solutions. At Rite-Solutions, the information technology services company, any employee can propose a new technology acquisition, business entry or efficient improvement. The proposals become stocks, which employees buy or sell using an initial of \$10,000 in “opinion money.” Employees may also signal enthusiasm for a proposal by volunteering to work on it and volunteers share in any real proceeds generated by the proposal.¹⁹¹ Using a hospital as an example, this chapter will outline the details of the internal market structure and how transactions occur.

The importance of exchanges in the generation of value-added solutions and building of knowledge stock makes a compelling case for rethinking how we manage the workplace of emerging knowledge services. There is a vast network of employees and customers as co-producers contributing to the building of knowledge stocks within the firm. This is a far cry from the work landscape of 20th century firms, which were dominated by the manufacturing model where work is organized around more complete knowledge and silos. The generation or production of knowledge solutions emerges from reciprocal interactions as employees perform their tasks in a context of incomplete information. What this means is simply that the process of leveraging knowledge requires the assistance of others in the form of frequent information updates from other employees and customers, as attempts are made to use such information to develop and adjust knowledge solutions.¹⁹²

THE LOGIC OF INTERNAL MARKETS

What is most striking about the development and delivery of value-added solutions in knowledge services is the growing importance of internal transactions emerging from clusters of knowledge centers. These internal knowledge centers (e.g., managerial information systems, marketing, finance, legal, human resources, engineering, purchasing, testing facilities) are essentially value units that are intended to allow knowledge services to realize operational efficiency, minimize risk and maximize opportunity to gain competitive advantages.¹⁹³

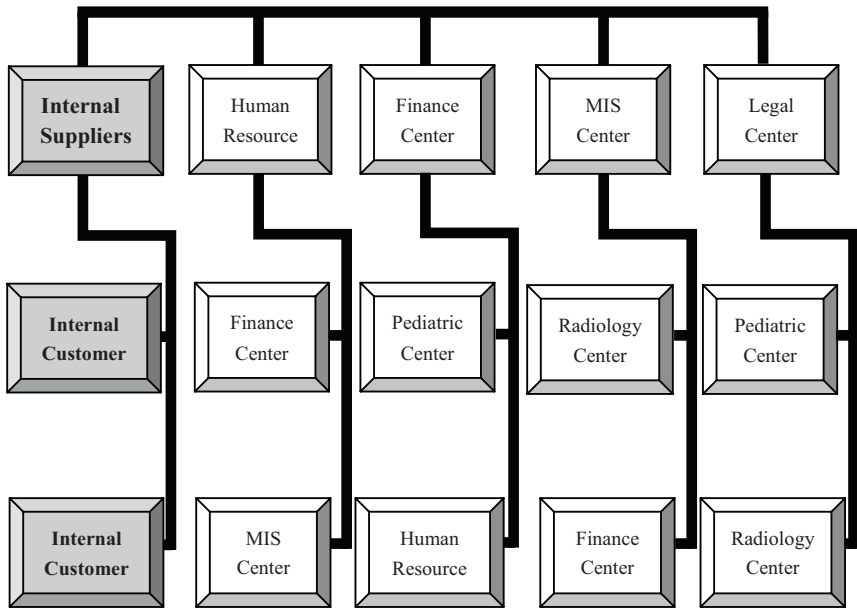
However, there are major problems confronting these organizations as the spread of knowledge centers expands internally. Contemporary managers have had little success in accurately determining the worth of their internal

knowledge centers mainly because of the difficulty of measuring the performances of these units. Issues surrounding how to measure, monitor, design and exploit these functionalities are of paramount concern to managers in the competitive environments of knowledge services. Thus, a critical issue for managers is how to determine the best design for organizing internal knowledge centers as a business driver for extracting value. Traditional hierarchies that once worked well in establishing routines and stability now may be seen as liabilities in creating new business capacities. This is primarily because traditional approaches for designing knowledge service organizations in the 21st century give insufficient attention to the unique features of activities performed by proventure workers within these organizations.

Given what is known about the nature of knowledge production—an effort, performance or deed in the leveraging of incomplete information¹⁹⁴-- the activities performed by proventure workers are frequently abstract, consisting only of knowledge, skills, or know-how. Unlike products that are possessed, knowledge generation is mostly intangible and experienced. This introduces varying degrees of uncertainty and complexity into the production equation.¹⁹⁵ These fundamental attributes of knowledge production and service solution delivery make it difficult for knowledge centers within the organization not only to clearly identify their outputs and contributions,¹⁹⁶ but determine their quality as well. Similar to the problems of external clients, these support activities are peripheral services within the organization. It is hard to completely separate their effects and their contribution to knowledge creation and value-added service solutions. Consequently, attempts at gaining competitive benefits from internal knowledge centers defy traditional methods of coordination and integration of formal reporting relationships and merit new organizational approaches and structures.

An approach that offers a way out of this dilemma for knowledge service firms is a quasi-internal market framework for managing knowledge centers.¹⁹⁷ In a radical departure from 20th century models, an internal market focus consists of clusters of relatively autonomous individuals, units or functions in the organization in which there are open exchanges of resources for leveraging knowledge and adding value to the firm.¹⁹⁸ Further, these clusters of knowledge centers are coordinated by quasi-internal market principles in an environment in which there is “somewhat orderly chaos.”¹⁹⁹ For example, within a hospital, the finance center may provide planning and forecasting for pediatrics, radiology, information systems (IT), and human resources (HR). The HR center may provide training and staffing for the emergency unit, IT and Finance; the IT center may provide desktop PC support for radiology, HR and Finance as Figure 4-1 shows.

Fig.4-1. Internal Knowledge Market Matrix

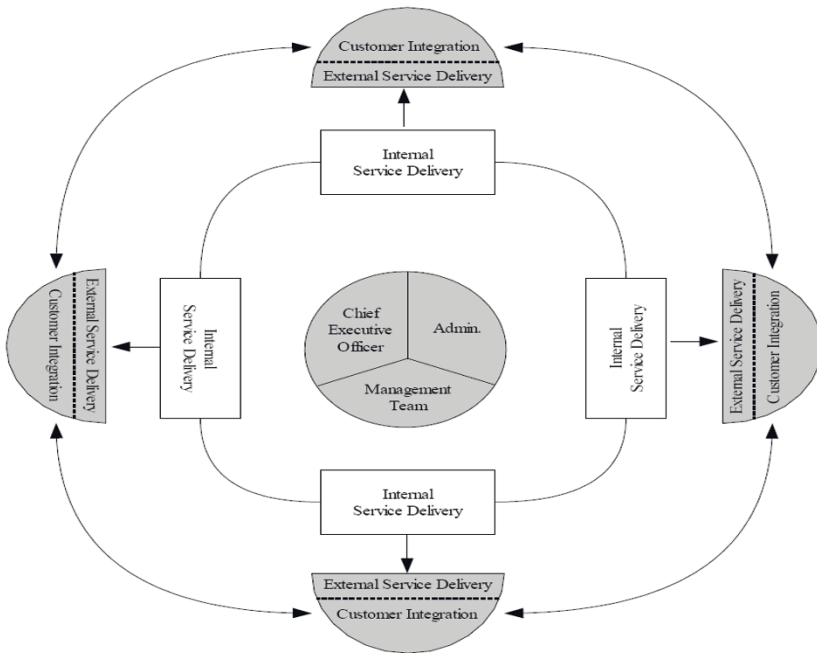


This knowledge matrix within these service organizations, as Figure 4-1 shows, provides the foundation of a quasi-internal market structure which can facilitate the development of value-added solutions and knowledge stocks. Further, knowledge centers and employees performing within internal market structures may have distinct customers both within and outside the confines of the organization. IT firms may have centers, for example, that provide internal services and may also sell services directly to the external marketplace. However, back office functions are not the only aspect to the internal market. For example, within a hospital, several healthcare teams would oversee the care of a patient who may enter the emergency room. Throughout the patient’s stay, they may also receive care from healthcare teams in the operating room, nursing floor units, radiology and anesthesiology. Although this is done without detriment to patient care, the internal market forces dictate which doctors and nurses provide primary care. If one department provides a favor to another by caring for a patient, the internal market dictates that the favor be reciprocated. Tradeoffs are made, coalitions are formed, and deals are brokered by departments and healthcare teams. The advantages companies can potentially gain from this unique arrangement are indeed huge. These internal organizational activities may exert a profound influence on the generation of knowledge in terms of specifications and resources, even though it is not immediately apparent.²⁰⁰

MARKET STRUCTURES FOR INTERNAL KNOWLEDGE CENTERS

We have noted that the development of knowledge stocks entails a network of employees, units, or functions providing problem solutions to other employees who are essentially internal customers. Within the work landscape of knowledge service organizations, there are two potential sets of customers, as Figure 4-2 shows. First, there is a set of internally based customers, usually engagement personnel. These are the critical boundary spanning employees dependent upon other employees for assistance in generating solutions. Second, there is a set of externally based customers responsible for providing the organization with a source of revenue.²⁰¹

Fig. 4-2. Classifying Strategies and Structures of Service



In addition, the work landscape of knowledge services is often accompanied by a high degree of variability of outcomes with little standardization. Against such a backdrop, it is not difficult to understand the enormous quality control problems presented to managers. The organization can only realize the delivery of sustained value-added services by decentralizing decisions and discretion to lower level employees. In so doing, there is a reduction in the reliance on traditional hierarchical control mechanisms. In a testament to how

the status quo has changed, what emerges is a hierarchy with role expansion for both the customer, as “partial” employee, and the knowledge worker.²⁰²

While decentralization became a prevalent buzzword in 20th century management jargon, it is far from clear, though, that this adds value in traditional manufacturing organizations. There is little doubt, however, that decentralization in knowledge service firms is virtually a necessity given the complexity inherent in knowledge creation. It is largely consistent with assigning accountability to those employees who are charged with direct responsibility to internal consumers—engagement personnel.²⁰³ The need for accountability and entrepreneurship are imposed almost exclusively by the requirements and priorities of external customers. This means that the coordination among knowledge centers, functions, or employees is not left solely to central management of these service organizations but governed by other internal forces as well. The internal market revamps reporting lines so that employees can react to customer priorities more quickly by means of local empowerment. The combination of central evaluation (management) and local autonomy gives rise to a network of relationships that link together independent employees, functions, or centers in alliances of greater or lesser degrees of permanency. These allegiances develop, produce, and deliver particular knowledge solutions to internal customers within the firm as well as external customers outside the firm.

The availability of numerous employees, seen as potential partners eager to apply their skills and assets to the needs of others within knowledge service firms, provides the vitality to internal networks of relationships. In effect, this system establishes a quasi-internal market structure to facilitate the exchange, leveraging, and production of crucial knowledge stocks. This internal governance framework ensures an ongoing distribution of exchanges and problem solutions among employees to accomplish and/or realize organizational goals.²⁰⁴ While each department is competing for internal resources, it is the challenge of managers to ensure that all units are still working towards a common goal. In effect, autonomy (decentralized accountability) and entrepreneurship (innovation) are components of internal market structures in the delivery of problem solutions to satisfy internal customer (engagement personnel) priorities. This enables local knowledge centers that have a more complete knowledge stock as well as information about their internal customers to respond quickly and effectively to changes affecting those customers. The hospital’s human resources center, for example, may develop compensation packages for the emergency room employees if there is an immediate need to attract and retain bright nurses in a tight labor market. In this way, the internal market is constantly evolving to optimize efficiencies by generating quality solutions to internal and external customer priorities.

Given the complex and uncertain work landscape in which proventure employees operate, a differentiated work setting can be expected primarily be-

cause internal customers and suppliers have different goals and resources. For example, the documentation center may be concerned with the safety and accuracy of explicit knowledge and access to such knowledge by the internal environment. Meanwhile, the finance center focuses on accounting, forecasting, and analysis. Assessment of the value added by different knowledge centers will be difficult. To help determine the value of the information exchanged, networks of heterogeneous exchanges develop between knowledge centers and their internal customers. By tapping into the knowledge sources that are scattered throughout the company, internal markets stimulate organic growth or expansion. In the process of so doing, surplus value in the form of knowledge stock is acquired by the knowledge center in the allocation of solutions within the organization.

Specifically, as far as knowledge service firms are concerned, value added by knowledge centers emerges from the perceived importance of their particular set of activities. Value is increased by the development or maintenance of knowledge stocks, and the exclusiveness with which these functions are executed by employees.²⁰⁵ If we assume for a moment that the demand for an internal knowledge solution is unknown, greater value will be realized when knowledge centers differentiate their knowledge stocks, i.e. develop an area of expertise around a set of customer problems. By so doing, centers cast a wide net for determining where solutions are needed and thus fill demand gaps. The organization benefits more when centers provide selective solutions to internal customers than by establishing uniform deliveries. For example, the hospital's risk management (insurance) service provided by the finance center to facilities should be quite different than the risk management service for patient centers. The variety of solutions needed for internal and external customers increases the need for proventure activity. These proventure workers must be versatile and knowledgeable and possess the ability to work well with different customer groups. Differentiated solution deliveries are situation-specific and act as signals which are relied upon by the organization to develop new knowledge stocks, particularly labor skills. In so doing, the organization keeps pace with changing demands and renews the firm's ability to maintain a sustained competitive advantage.

MANAGERIAL CHALLENGES IN INTERNAL MARKETS

It is well recognized that the leveraging and generation of tacit knowledge requires discussion and experimentation among participants. This process becomes a game of bargaining and compromise between conflicting parties.²⁰⁶ In the rendering of internal solutions, both the internal customer and supplier will seek to get as much as they possibly can from each other, i.e., maximizing their utility in the outcome. Each participant in the transaction tries to ac-

comply with this from a different perspective. For the internal customer, utility is derived from consumption of the service solution. For knowledge centers, no utility is derived directly from sharing the knowledge and these employees are therefore only indirectly concerned about the worth of the solution. This may give rise to an inherent conflict within internal markets for knowledge service firms.

The internal customer or engagement personnel consume internal market solutions that serve mostly to assist them in satisfying the priorities of the firm's external customers. These solutions are intangible and are directly related to the level of employee effort. It is therefore reasonable to expect that knowledge centers may be encouraged to minimize the cost of their effort in rendering solutions, while the internal customer, in turn, may be interested in maximizing his/her consumption. While such potential conflicts may indeed be inherent in internal markets, knowledge centers are generally guided by overarching organizational goals that are buttressed by employment contracts. Even so, such contracts may be problematic for the firm when there is a disconnect between central management and specific centers. It is vital that these organizational goals are aligned with both external and internal market needs. If an organization ignores the internal needs, it could discourage units from providing assistance to each other, crippling the internal market structure and raising internal costs. Because the internal "user" or customer is exchanging someone else's resources (the firm's assets) for the generation of knowledge, both the user and the supplier can collude in maximizing the utility of solutions. This may take the form, for example, of the pediatrics center in a medical firm securing more timely and possibly better quality lab support from the laboratory center while the latter builds a larger "empire." This suggests that the rendering of heterogeneous internal solutions is complicated by an important element: information asymmetries. Managers, therefore, must exercise oversight to keep the internal market from getting out of control.

As noted in Chapter 2, under conditions of asymmetry, traditional relational contracting breaks down and the internal customer is unable to ascertain and verify the quality and/or quantity of the knowledge provider's effort. The delivery of internal solutions may be adversely affected by limited knowledge about the nature of the priorities needed by other centers or departments.²⁰⁷ As a result, standards for such solutions become meaningless because they cannot really be enforced.²⁰⁸ For example, although the marketing center at IBM may devote an enormous amount of effort to developing a strategy regarding how best to market the firm's outsourcing services to blue-chip customers, there is no guarantee that this service line will be successful. If the outcome is unfavorable, the manager of the outsourcing services will be uncertain as to whether the failure was due to insufficient effort by the marketing center or was caused by changes in the economy or some other environmental factor. There is too much uncertainty surrounding the service

solutions being rendered by the marketing center. To a large degree, asymmetry is an intervening cause of incomplete coverage of risky activities within knowledge service organizations. Since limited information is much more of an issue among internal customers rather than for suppliers of the service solutions,²⁰⁹ knowledge service firms have to establish specific mechanisms to ensure the quality of the internal service solutions in order to reduce the loss of expected value. Under these conditions, the quality of solutions shifts to the tactic of secondary differentiators such as helpfulness, timeliness, reliability, and consideration.²¹⁰

EMPLOYEE POWER: INTERNAL MARKET CURRENCY

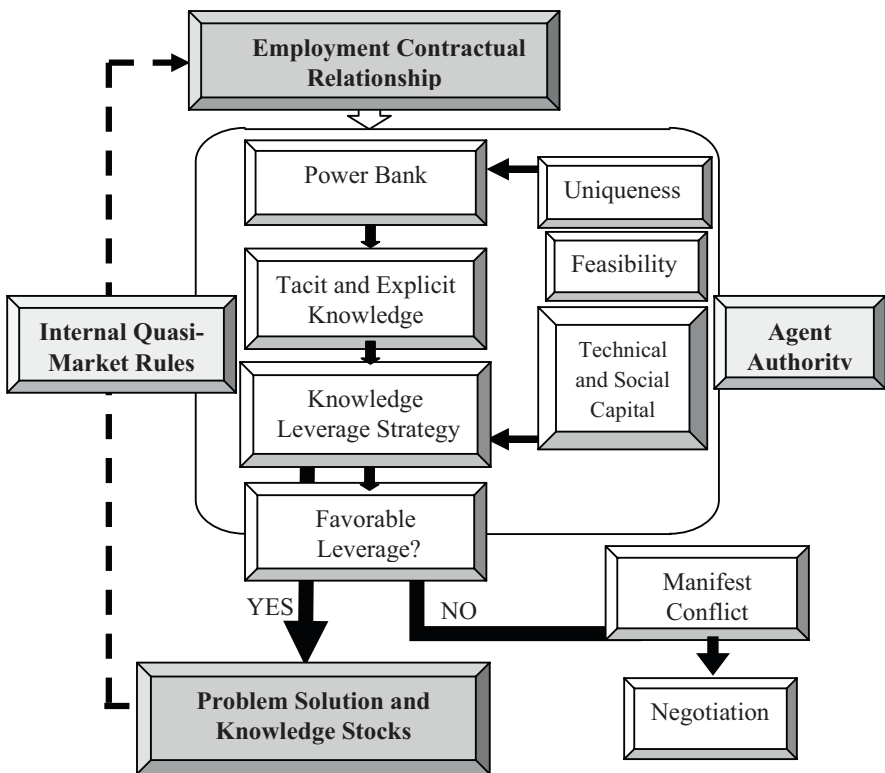
Workers, units, or centers within knowledge services organizations are in possession of incomplete information simply because of their position in the firm. The employment contract suggests that workers would not be members of the organization without the possession of such resources. To the extent that knowledge is not only valued and scarce but also unevenly distributed throughout the internal market, workers will be induced to interact and exchange with one another. This is how knowledge is leveraged within these service firms. What is important to understand here is that the primary reason knowledge service organizations exist is to ensure an ongoing pattern of information distribution among their employees in order to generate solutions to customer priorities and to build knowledge stocks. Essentially, knowledge service organizations are best viewed as quasi-internal markets - a matrix the organization must adopt to position the firm favorably and succeed. The foremost objective is to facilitate leveraging and building of knowledge stocks through exchanges made by a diverse social network of stakeholders.

The knowledge a service firm possesses is not something that floats around within an internal market but instead is solidly anchored in workers' heads and in centers as knowledge stocks. With an internal market matrix, the moral hazard issue is largely reduced. Workers are not encouraged to take mindless risks because they expect to share in the outcome if they succeed. After all, they are using their own resources (tacit knowledge) to generate value-added solutions. In addition, workers can expect to pay a price if they fail by engaging in risky behavior. Successful projects and initiatives lead to increased capital in the internal market. This capital is of value because it can be leveraged or stored in what are essentially "power banks"²¹¹ of people and knowledge centers within the firm. As the term implies, the power bank is an important investment tool consisting primarily of an inventory of knowledge stocks and other resources at the disposal of workers and centers that control them. The size of one's power bank is not necessarily a reflection of job title

or one's position in the organizational hierarchy. It fluctuates over time depending on risks taken and successful achievements.

Power banks may also contain social capital; or the ability to access or contact those in possession of crucial information to facilitate the generation of service solutions. Social capital is extremely important within a knowledge service organization due to the organization's inability to measure the results of internal solutions. Those with the most social capital will be afforded more opportunities to create internal solutions that increase the visibility of the proventurer's work. Consider the staffing decisions made by two operating room supervisors. If they both want the same employees on their shifts, they must bargain and negotiate with each other while making the schedule. When the desired staff members work will be dependent upon which of the two supervisors has a larger power bank. To obtain the desired staff, the more well-connected supervisor must give up some of this power. It is important to note that the person with the most power is not always the most senior or highest ranking individual. During the negotiation, the supervisor who does not end up with their ideal staff should increase their power bank by taking the second choice, thereby improving their chances for securing the employees they prefer in the future.

Fig. 4-3. A Framework of Power in Internal Markets



Knowledge and/or incomplete information in the power banks of workers and centers can be used as incentives for leveraging. One way to view incentives is as an inventory of assets at the disposal of centers and workers such as education, skills, intelligence, contacts, network centrality or any attribute others may deem relevant for value-added solutions. This means that within internal markets, the possession of power by workers or centers is based almost exclusively on their capacity to contribute knowledge or value-added solutions.²¹² These incentives, as Figure 4-3 shows, may take the form of tacit or explicit knowledge repertoire. The type of repertoire determines the kind of leveraging tactics a worker will adopt in the development and generation of service solutions and knowledge stocks. The entire point of leveraging knowledge is to enhance the power bank of workers or centers within the firm's internal markets. As each center increases their power bank and expands its knowledge stocks a competitive advantage is created for the firm. Internal market power is "soft power" which is largely based on persuasion and cooptation and not so much on the coercion prevalent in traditional hierarchies.²¹³

The internal market is essentially a kind of barter: a trade exchange system within the organization. The barter occurs when a given brand of knowledge is exchanged for one kind of one transaction and a different kind of knowledge in the next transaction.²¹⁴ In addition, the knowledge exchanged in one situation may be valued differently than in another situation.²¹⁵ When proventure workers exchange their knowledge they are making both a promise and an investment about the rendering of equivalent knowledge at a future time.²¹⁶ As a result, the trading community within the firm expands as buyers and sellers both come out ahead.

The law of reciprocity is one of the forces inherent in leveraging knowledge for problem solutions and of knowledge stocks in internal market structures. The fundamental rule of reciprocity is that every gift incurs a debt. The process of leveraging knowledge entails a reciprocal interdependence among centers such that solutions of center A become the input of center B and vice-versa. The customer service center in our theoretical hospital, for example, may provide patient profiles to the finance center. From this information, the finance center may develop risk management (insurance) knowledge for patients. This new knowledge, in turn, is provided to the customer service center. Another example of leveraging knowledge reciprocally is the interaction between the HR and documentation centers. The HR center, with knowledge in PeopleSoft Self-Service provides input to the documentation center—a repository of information from other centers. In order to develop problem solutions on self-service issues, HR needs to tap into the explicit knowledge contained in documents. The new HR solutions are then sent back to the

documentation center as explicit knowledge stocks. Each party earns value denominated in binding obligations in their power bank. Failure to live up to the inherent binding obligation of reciprocity is all but condemning the party to exile from the bartering network, as a lack of knowledge sharing invites shunning by others. The leveraging of information and solutions amongst departments is becoming more important as more systems and processes become integrated. Firms are using this technique to share more information internally, increasing the potential for new solutions.

Though a crucial mechanism for leveraging information in knowledge service organizations, reciprocity does not imply equality in exchanges among stakeholders. Reciprocity is produced by the extent to which the leveraging of different kinds of knowledge are complementary, and not so much the equality in value of the various kinds of knowledge that are leveraged. Thus, the approval of an associate lawyer's solution in litigation by a managing partner in a law firm is an equitable exchange, but not an equal one ("approval" and "ordered work behavior" are clearly not equal). What makes the leveraging and exchange of knowledge stocks equitable is the mutual agreement that what the managing partner possesses is a reward "coin" that the lawyer views as having equal value, distributed in the form of an approval. Hence, the leveraging of knowledge among workers and centers is "equitable." What then follows is that differential knowledge centers (i.e., special positions within the division of work) have associated with them different amounts of power.²¹⁷ As in a law firm, reciprocity exists within a hospital's internal network. Nurses frequently treat patients' symptoms and pass along crucial information to doctors. For their efforts, doctors reward these nurses with additional patient care responsibilities and patients with more complex concerns.

Given the existence of differential power in internal markets, there is a general "organic" consensus²¹⁸ among workers regarding the equity of the normal exchanges of knowledge that take place within internal markets. This kind of consensus forms the underlying value system that legitimizes the exchange process of non-identical "coins." Power becomes the currency for the development of problem solutions and knowledge stocks. Based on Figure 4-3, power is the ability to accumulate knowledge stocks by directly and indirectly affecting the behaviors and actions of others, reciprocally. This soft power is the glue that holds the internal market together in knowledge service firms.

Knowledge Stocks as Cost Centers

For knowledge service organizations, power is clearly a salient currency that emerges from the accumulation of knowledge stocks. But in order for such stocks to be developed, a certain amount of investment is required. Such

investment may or may not be consciously exercised. Some employees build up their power but make unsuitable investments, such as taking on the wrong projects or failing to see the overpayment for involvement with questionable projects. What is important in the development of knowledge is the effect of leveraging incomplete information irrespective of the stakeholder's intentions.

While some tacit knowledge development may be unintentional, most of the knowledge stocks within the firm emerge from deliberate effort undertaken by internal centers to generate new stocks. Fundamentally, successful development of knowledge and solutions suggests that the sum of the values is greater after leveraging than before. Each knowledge center provides its internal customers more than they previously possessed in solutions despite the advantageous position of the knowledge center. This occurs even though one center has monopolistic power and is negotiating with asymmetric information. The previously mentioned concept of soft power, along with internal market forces, serves to ensure that both knowledge centers benefit from the arrangement. This indicates that the costs of the solutions have been established before centers enter into transactions with internal customers. Although difficult to define, the price of internal solutions can be seen in the number of employees, capital, and time devoted by one center in an attempt to solve the problems of another center. The predetermined agreement on the costs of solutions suggests an inherent pricing mechanism that serves to coordinate and value internal market transactions.²¹⁹ Such a pricing mechanism is important because it serves to regulate the development of knowledge stocks within the firm—particularly scarce knowledge—and adds stability to internal markets.

Knowledge centers usually have a monopoly position within service firms. This can be problematic for the firm in terms of sole supplier status. In every internal market, returns are greater when a monopoly exists. Clearly, if competition is required, it decreases returns. Within traditional structures, there is a restriction on the alternative suppliers available to internal customers, which creates a form of regulated monopolies around knowledge centers. This in turn can affect the cost and quality of solutions and knowledge development. For example, centers can engage in effort rigidity, or the allocation of a fixed amount of time and the assignment of some specified date when the internal customer can expect the service solution. This is a form of pricing imposed by the center in the restriction placed on the scope of the exchange in effort that will be given to solutions, effectively determining the value of the transaction. In general and with only rare exceptions, returns on exchanges are roughly proportional to the time or effort invested.

One common way for knowledge service organizations to reduce such a supplier monopoly is to seek substitute knowledge sources outside the firm. This tactic assures goal congruency with the outside producer while forcing

specialization on the internal centers. Caution has to be exercised here, however, because this approach can be even more disadvantageous to the firm. The outside knowledge supplier may have less of a vested interest in the firm and may be less disciplined by competition, a combination which therefore creates a greater potential for the development of lower-quality solutions. It may very well be in the best interest of internal customers to build stronger alliances with an inside knowledge monopolist. Further, for the internal knowledge center, there is the realization that a part of its monopoly status is based on activities that are team or unit specific. For example, safety solutions provided by a facilities center to its internal customers in the financial center are unique and specific to the financial center and difficult to transfer to other centers. If this task were to be given to an external source, significant value would be lost through the time it would take to create a feasible solution. The internal facilities center is therefore better off building mutually beneficial alliances with its internal customers.

EXPANDING THE CAPACITY OF KNOWLEDGE CREATION

It seems clear that the paramount reason for relying on internal market structures in knowledge service firms is that they are much more adept at invigorating the organization than traditional hierarchies. The firm's competitive advantage and its sustainability are heavily dependent upon leveraging and rejuvenating its knowledge base in order to differentiate itself from competitors. Building and expanding the scope of knowledge stocks within internal markets requires a focus on the following factors:

Table 4-1. Criteria for Knowledge Stock Expansion

<ul style="list-style-type: none"> • Managing the information processing needs of centers • Creating knowledge through internal customer dependency • Extrinsic output reward systems as motivators
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Managing Information Processing Needs

It seems clear that internal markets emerge as a pillar of coordination and integration within the firm's structure largely because of the uncertainty inherent in leveraging and developing tacit knowledge. Uncertainty can be viewed as the lack of information which makes it difficult to predict workers actions and the outcome of such with any degree of accuracy.²²⁰ There is no exact way to determine an appropriate solution where tacit knowledge is required. Knowledge developed under these conditions is extremely hard to value

and will generally be accompanied by some feelings of doubt by the supplier as to the effectiveness of its use in solutions. Such feelings of doubt can be readily overcome and confidence in the efficacy of solutions will increase when knowledge centers seek to engage in activities of gathering, processing, and leveraging excess information in addressing customer priorities.

This tactic of gathering and processing lots of knowledge for solutions not only serves to increase the confidence of proventure workers, but maximizes their satisfaction with the problem solutions as well.²²¹ Since there is a need for a greater amount of rich face-to-face information exchanges for the generation of tacit knowledge,²²² knowledge centers will expand by engaging in the political activity of “empire” building. This activity affords centers a valuable indulgence in excessive resource accumulation by having relatively more employees involved in the processing and leveraging of an expanded information base. Consequently, the overall internal market itself expands and serves as an invaluable warehouse of knowledge stocks.

In knowledge service firms, empire building by knowledge centers is an important tactic for reducing the cost of carrying what at first glance appears to be unused capacity. This is in recognition of the fact that the process for selecting proventure workers is loaded with uncertainty. Given the firm’s limited ability to predict workers’ skills, potential, and future, the job selection processes commonly available become unreliable. The most effective and expeditious way to gather information on workers’ potential worth is from past performance. This can be directly observed in the sorts of networks and alliances employees build with internal customers through “screening tasks”²²³ performed through probationary, peripheral activities in an attempt to separate the wheat from the chaff. These screening activities would generally not entail the development and delivery of core value-added solutions to customers, but instead focus on peripheral solutions. Within purchasing centers, for example, core activities would entail problem solutions in negotiating terms and condition of contracts with external vendors and performing due diligence to determine if the vendor has the capability to fulfill the contract. Peripheral activities within purchasing centers may involve relatively explicit knowledge such as entering the purchase requisition and calling vendors for prices and availability. The abilities of employees within the purchasing center to build alliances with internal customers and deliver quality problem solutions can be more readily appraised based upon the information generated by peripheral tasks. This enhances the firm’s knowledge of the potential fit between the employee and the internal customer. Feedback is also provided by internal customers regarding the quality of transactions in social networks. Professional certifications are another method of determining the value of the employee. Certification is acknowledged by many governing bodies as competence within a particular field, such as project management, accounting, law, medicine, etc.

One can reasonably expect that the longer the period spent in screening tasks, the more information can be gathered about the skills of the employee. When, however, an internal knowledge center has small numbers of employees relative to increasing demands from internal customers, the unit cannot afford to keep employees in peripheral tasks for long periods of time. Doing so can adversely affect the overall ability of engagement personnel to generate and deliver quality service solutions to external customers as internal customer needs will not be met. Within a hospital, this can be seen by the amount of time doctors must spend in medical school and residency before becoming a full doctor. Before being selected as a resident doctor, the individual must complete a variety of screening tasks. As a resident, the doctor will be trained by the hospital within their specialization (oncology, emergency medicine, pediatrics, etc.). Upon completion, further screening will be performed through a fellowship, in which the individual learns a sub-specialty (pulmonology, cardiology, etc.). Finally, this process ends with licensure as a full doctor and the ability to practice independently. In a hospital setting this process can take several years due to the life-and-death decisions that must be made daily by a doctor. This requires a large number of screening activities. Other knowledge service industries require similar screening, but accelerate the process. In general, the larger the knowledge center, the longer workers can remain in the screening process as an important form of vetting. The goal of expanding internal markets (empire building) is not only an attempt to overcome problems inherent in employee selection decisions, but also to use slack resources to obtain more accurate information about employees' potential before they are assigned to provide value-added service solutions to customers. When there is a failure of fit between the proventure employee and the firm, in an effort to control cost an aggressive attempt will be undertaken to advise the employee to leave the organization. In the business consulting industry, for example, this process of separation is known as "counseling out."²²⁴

Knowledge Creation through Customer Dependency

One of the fundamental features of internal markets in knowledge service organizations is the competition for scarce resources among knowledge centers. By fostering such internal rivalry, organizations often seek to reduce duplication of activities in the interest of efficiency and value. In so doing, opportunities emerge for individuals and centers to behave as "quasi-monopolists" based on the presentation of particular knowledge stocks. In some instances, this can be useful for the firm because it tends to promote "job sheltering" arrangements for workers within the center.²²⁵ Within the medical profession, this occurs frequently when patients seek care from one

specific physician. As a doctor sees patients more frequently, he/she becomes more familiar with their health history and likely remedies. A doctor with more loyal patients can expect to obtain more resources, despite the fact that other physicians may be more knowledgeable or qualified in a certain field. Through this customer dependency, the doctor with the larger patient base is able to create an advantage within the internal market and obtain resources that potentially could be better used elsewhere. Internal arrangements of this sort can have an adverse effect on the quality of service solutions²²⁶ as centers seek to exploit their resources by creating demand and internal customer dependency. This is done by finding new applications for knowledge stocks and by marketing or promoting extensively to internal customers. Annual budget adjustments provide a forum for such activities within these organizations and are directly related to how effectively centers promote and deliver knowledge solutions to customers, as well as how indispensable their service solutions are perceived to be.

In an environment that calls for tacit knowledge solutions, centers can also expand their knowledge stocks by initially offering service solutions to internal customers well below acceptable cost. The strategy is to “lowball” on the initial pricing or agreement (e.g., deliberately devoting excessive time and effort to a project) in order to obtain a commitment or contract and then subsequently raising the “price” (e.g., devoting less of the expected time and effort) when the user has become dependent. If the rendering of solutions to the internal customer is to continue, the center will have to increase the cost to the user by allocating more resources to reflect the true worth of the service solutions. This creates the potential for centers to expand their size or empire by hiring or contracting additional employees to reflect the true cost of the knowledge.

Using Extrinsic Reward System for Knowledge Creation

The kinds of reward systems adopted within knowledge service firms will have a pronounced influence on the quality of knowledge stock created and differentiated within the internal market. The reward system can impact the firm in two important ways. First, the fundamental intent of the reward system is to motivate centers to develop new knowledge²²⁷ and to market the resulting service solutions to internal customers. For example, information systems or human resources training programs are made available to the workforce to increase the skills and efficiency of employees. By tying the reward system to unit performance over time, the internal market forces will move toward an equilibrium of demand and generate service solutions and knowledge stocks to satisfy internal customer needs or priorities.

There is another important way in which the reward system can impact internal market differentiation and knowledge creation. As centers innovate in leveraging and developing knowledge and service solutions, additional resources will be required to support these activities. Securing more resources increases the budget and the size of the center. The importance of a differentiated center can generally be gauged by the size of the budget allocated to it relative to other centers.²²⁸ Thus, the reward system may create an incentive for managers of internal service centers to engage in self-interested differentiation, as it leads to a larger center or is a way to disguise empire building. In turn, the center's power, prestige, compensation and other tangible rewards invariably increases.

For example, each unit within a hospital tracks its own medical supply inventory. Although most of the supplies will be the same, the specialization involved in different areas of the hospital requires each unit to stock items unique to their area. Since each unit performs this task independently, there is potential for differentiation by managers. Those managers who excel at performing this task may be able to obtain additional financial benefits for helping other units implement a more efficient system. Their units may also benefit when staffing decisions or large capital investments are made. As the manager has proven capable of tracking inventory, they may be afforded additional responsibilities managing large equipment or staff.

QUASI-PROFIT CENTERS AS INTERNAL CONTROLS

In knowledge service organizations, management can never be totally sure that their internal centers will live up to obligations in generating service solutions that will satisfy the needs of internal customers. But in order to align interests and reduce goal incongruence, knowledge centers in internal markets need to be monitored as to their performance in effectively addressing customer priorities. However, monitoring activities have costs. Time and other resources must be spent implementing governance systems, and these costs must be accounted for in the price of knowledge solutions. Tacit knowledge creation and service solutions do not lend themselves very well to technical or process control techniques, or to direct control mechanisms because pro-venture employees must be afforded discretion and autonomy to do their work. Instead, what is much more effective is the use of outcome or output control mechanisms²²⁹ and a profit center approach for addressing control issues. For example, at a company like IBM, managers could be evaluated based on goals of achieving a defined increase in revenues and/or profit. The manager's reward could be a percentage of the new profits or a defined dollar figure. From top management's perspective, the final outcome of this structure is more important than the process.

The main focus of profit centers in internal markets is on revenues. Revenues are generated by delivering service solutions to internal customers as well as by selling solutions to the external marketplace. Revenues for profit centers may also emerge from gaining valuable experiences²³⁰ in the form of knowledge stock. The organization of centers as relatively self-contained units makes it possible to conduct performance evaluations on the basis of profits or loss compared with other centers. This structure has another important value to these service firms. As profit centers with resources needed to leverage and generate knowledge, a necessary discipline is imposed on the operation of centers to bear the costs of internal service solutions and reduce the problem of information asymmetry. As a seller of service solutions to both internal and external customers, the internal knowledge center is in a “double” supplier situation by serving interests of two parties in different markets. The commercial intent of the center places it in the position of being a quasi–subsidiary of the company.

This is seen in American Airlines 1999 sale of SABRE, its internal reservation unit. SABRE had evolved to provide a web presence for American Airlines to publish and sell airline tickets. Soon after its launch, the commercial applications made the technology a valuable asset to sell on the open market. SABRE was spun off as an independent company initially valued at \$6.3 billion. Another example of a successful service innovation can be seen through Bank of America’s anti-money laundering models. The breadth of Bank of America’s consumer and B2B clients allowed it to become a market leader in developing these types of services. These models were initially developed internally to assist the bank in detecting money laundering schemes, while protecting its assets. Once developed, Bank of America recognized that this was a tool that could benefit the entire industry. Bank of America then began to license out the models to other banks as another means of generating revenue. In the end, the consumer benefits through reduced fraud (and by extension, lower service fees) and Bank of America benefits by using innovation to create new revenue streams and protect its assets.²³¹

It seems clear that the use of profit centers within knowledge service firms creates incentives within the organization for increased efficiencies in the allocation of service solutions and the generation of new ones. Such internal efficiencies usually occur through the center’s “profit budget” which are the expected revenues accruing to the center at the end of some period beyond the anticipated budget or the investment needed to cover the center’s costs. For example, the warranty and repair center may generate revenues not only as a quality control mechanism for their internal customers, the production center, but may also increase revenues for external customers as well. Internal organization efficiencies are also attained through demand from customers both internally and externally. Such customer demands serve as signals to central management as to the value added by these knowledge creation activi-

ties. If the demand for a particular solution remains strong, this signals to central management that the supplier's knowledge center should be expanded. If, on the other hand, knowledge centers are unable to justify the costs of providing their solutions, management may then take action to improve or eliminate these activities.

As a control mechanism on the supplier side of the internal alliances, profit centers will create efficiencies and add value when there is price competition for internal services. Profit centers will be most effective when organizations intentionally seek to reduce the duplication of work activities and restrict the number of supplier knowledge centers to a single one. By awarding internal knowledge centers access to the external marketplace, the knowledge service organization increases the possibility of achieving efficient outcomes in internal markets by converging on price competition for center activities.

Knowledge service inefficiencies will emerge when internal customers feel tied to the knowledge center. Unlike their external counterparts, internal customers may not be able to switch suppliers.²³² What is needed in internal markets is the introduction of a secondary supplier of service solutions. This, however, creates a dilemma for the firm because by having a second supplier overhead costs increase through duplication and such duplication itself produces certain inefficiencies since now more than one center is generating the same knowledge solutions.

Alternatively, knowledge service firms can look to outside sources for the requisite second supplier. Outsourcing or subcontracting becomes a mechanism by which efficient pricing can be effectively achieved. Outsourcing is nothing more than a pricing mechanism since it allows internal customers to compare internal solutions with similar solutions offered in the external market. Giving internal customers the option of purchasing service solutions from either source imposes market conditions and efficiencies on the internal suppliers. Increased efficiency occurs as a result of increased information through market-based pricing mechanisms. Not all internal knowledge creation functions can be successfully outsourced, however. The criteria for determining the outsourcing of service activities follows.

THE ISSUE OF OUTSOURCING AND UNBUNDLING SERVICES

It would seem that a prominent feature of internal market efficiencies in knowledge service firms is the outsourcing of activities. In fact, internal markets are often configured by their outsourcing decisions.²³³ Outsourcing or subcontracting makes it possible to transform knowledge centers from solution deliverers to brokers and facilitators of needed solutions within internal markets.²³⁴ The ability to subcontract with outside suppliers increases the

power of the buyer and prevents internal centers from inflating prices by reducing their effort in rendering solutions to internal customers.

The decision about which knowledge center activities to retain as a core competence not subject to outsourcing, and which to outsource is based largely on the service organization's strategy and the extent to which such activities can be produced more efficiently (i.e., cheaply) elsewhere.²³⁵ After all, at its core, outsourcing is a make-or-buy decision for the firm. Outsourcing merely allows the firm to get a more accurate idea of the value of internal activity particularly because of the knowledge centers' monopoly status within the organization. When firms can ascertain the true value of the outsourced activity and have the infrastructure to compete, outsourcing becomes less attractive. This is what occurred when JPMorgan Chase Co. outsourced its computing to IBM. Having determined the price, JPMorgan dissolved the contract with IBM and took control of its computing by bringing it back in house.²³⁶

Outsourcing will be more extensively employed by knowledge service organizations with problem-focused customer alliances. These are specialist knowledge firms with customers who are quite knowledgeable about their priorities. Problem-focused service organizations have a keen understanding of problem solutions to customer priorities, resulting in the adoption of specialists strategies. This makes it possible for the organization to better monitor knowledge centers and thus optimize investment decisions in knowledge creation through outsourcing activities. Generally, when the cost of maintaining internal customer satisfaction escalates because of the resources required to select, to retain, to reward, and to design the work environment of knowledge centers or becomes more cost efficient externally, then this center becomes a candidate for outsourcing.

The same rationale is not so easily applied in the case of knowledge service organizations in lateral differentiation alliances with customers. Outsourcing of service activities in these organizations is much more problematic because of the breadth and complexity of the problem solutions to customer priorities they generate. The requisite tacit knowledge for solutions generated by centers is less easily understood and monitored and thus more difficult to subcontract or outsource. For services in lateral differentiated alliances, outsourcing is less of a tactic since the lateral differentiation strategy requires total solutions to customer priorities. Thus, there is more of a tendency for "insourcing" of activities.

Distinctive capabilities are of the utmost importance for the effectiveness of these organizations. These capabilities are activities or services rendered by knowledge centers in the generation of knowledge stocks that presumably can be undertaken only within the firm. The firm has to determine the extent to which particular core center activities are non-tradable, non-imitable, and non-substitutable.²³⁷ It is precisely these types of internal activities—

competencies in the generation of knowledge stocks—that knowledge centers would be encouraged to develop. Examples of such non-outsourcable activities would be those that require judgment by proventurers in developing service solutions in particular knowledge centers. These can include engagement or front-line personnel such as nurses or doctors (in a hospital), programmers (in tech. service firm) auditors (in an accounting firm) and lawyers (in a law firm).

It seems clear that costs are the primary reason for outsourcing knowledge center activities.²³⁸ For problem-focused knowledge services, cost, however, has several dimensions which have to be taken into account. Solutions that emerge from proprietary activities, especially new innovative service solutions that are highly differentiated, are not subjected to outsourcing decisions. The primary reason for this is that the tacit knowledge generated from these service activities is human asset investment knowledge with a strategic focus to maximize business opportunities. In problem-based services with a specialist tactic, outsourcing decisions are directed at the relevant cost level where the firm attains the lowest cost per solution. It is important to evaluate whether others can produce the tacit knowledge at lower costs. This is sometimes seen in tax preparing firms who outsource the preparation of returns to other countries where labor is cheaper. For example, RSM McGladrey, a large public accounting firm headquartered in Bloomington, Minnesota, has been sending tax returns to India since 2003. In addition to cost savings, McGladrey benefits by freeing up domestic staff to focus on customer service issues, while the data entry is performed in India²³⁹. It should be noted here that an important exception is made for internal core centers that are considered to be strategic and which are retained within the firm's boundaries.²⁴⁰ Core knowledge centers, as noted earlier, are defined as centers that are not easily imitated by competitors and are non-substitutable.²⁴¹ Most outsourcing decisions are long term, strategic decisions that involve many different factors. The costs of building new alliances and evaluating the contracted work must be built into the pricing mechanism.

But even internal core knowledge centers that provide a competitive advantage for emerging services can be sustained only for so long as their knowledge stocks may, in fact, change. Recognizing the importance of change and uncertainty in customer priorities allows us to examine changes in a firm's internal knowledge production activities that presumably add value to the firm. The worth of a firm is generally described in terms of its underlying activities in generating knowledge stocks or a discrete set of activities relating to its infrastructure, input, throughput, and output activities.²⁴² Change emanates from changing economies that tend to unbundle a firm's value chain. This case is most difficult to make in knowledge service organizations with heterogeneous solutions primarily because of the coproduction with external customers in tacit knowledge generation and delivery, particularly

knowledge service firms with lateral differentiation strategy. The core elements of the value chain cannot be easily segmented when internal customers play an active role in the process because the output cannot be readily separated from the input.²⁴³ The value chain for knowledge service organizations focuses on the impression and satisfaction of the internal customer and the satisfaction and productivity of centers.

Regarding internal market structures, it is imperative for knowledge service firms to understand that there are inefficiencies to outsourcing since information asymmetry may also be inherent in a relationship between the firm and external contractors. However, the alliance between the internal and external market should be reciprocal. In the process of outsourcing, external market pressures are transmitted to knowledge centers in internal markets. Simultaneously, organizations can influence external subcontractors to be cost efficient. One way to do this is to withhold a portion of the service that is outsourced as a sort of carrot and establish short term contracts because service solutions are constantly changing.²⁴⁴ For example, Allstate Corp., the large insurance company, was solely dependent on its internal tech facility in Northern Ireland for tech work. Recently, Allstate adopted a different approach to its tech needs by doling out work on short term contracts to a slew of service providers including IBM, Accenture, Infosys Technology Ltd., Wipro Ltd., and Syntel Inc. Allstate has an internal unit responsible for identifying promising tech services with whom they can work in the future. This short-term multiple outsourcing approach creates creative tension among providers and serves to foster novel solutions within a sort of market system that rewards good work or value-added services.²⁴⁵ In essence, the service is being provided to the internal customer from both internal and external sources.

What this further suggests is that within internal markets, the traditional view of outsourcing only nonessential activities is not effective for knowledge services. An internal market system encourages managers to seek out the best solutions where ever they can be found so that all activities can be subjected to external forces. Health care environments have long been using the strategies of outsourcing and unbundling. Lab work is often sent out to a third party specialist, payroll is done externally, units are staffed through nursing agencies, and the collection of payments from insurance or Medicare are all areas commonly outsourced by many hospitals. Prince William Health System in Manassas, Virginia has taken an aggressive approach to outsourcing with tremendous success. They have outsourced their Health Information Management system, business office, and medical and diagnostic transcription functions.²⁴⁶ As a result, Prince William has been able to create more efficient processes in completing medical records and to strengthen its overall automation efforts. The hospital system now has more time to devote to its core competencies and can serve its patients more effectively.

SUMMARY

Quasi-internal market structures are critical for the sustainability of knowledge service organizations and are fundamental to the generation and delivery of quality problem solutions to both internal and external customers. The emergence of knowledge centers within these services makes for a more efficient way to address customer-client priorities as the variability and heterogeneity of problem solutions expands. Internal market mechanisms serve to address “control loss” which invariably emerges as a result of the inability to monitor center activities.²⁴⁷ Traditional methods of managing organizations will not allow managers of knowledge service organizations to monitor all activities even when additional levels of supervision are added. Knowledge centers, even those that wish to be good stewards, may set goals which would be different from those in place if information flowed perfectly. The need for coherence among knowledge centers beyond traditional organizational approaches necessitates internal market structures. Within knowledge service organizations, imperfections and asymmetries arising from contracting among service centers provides the context as to why internal market structures become appropriate integrative and coordinative components. These configurations are quite different from traditional hierarchical ones and are more effective in the generation of service solutions and knowledge stocks.

The objective of knowledge service firms is to maximize the efforts of internal knowledge centers in order for the internal customers to receive maximum knowledge, improving the quality of service solutions delivered to external customers. Simultaneously, managers of these service organizations want to minimize the cost of generating knowledge stocks and providing service solutions. It is clear that internal service centers have a monopoly status in knowledge service organizations. Internal markets provide the kinds of organizational incentives that will motivate centers to expend the effort necessary to satisfy internal customers’ priorities; yet at the same time allow both the organization and the internal customer to minimize the cost of these incentives.

CHAPTER 5

BUILDING ADVANTAGE: MANAGEMENT BY MISTRUST IN CONTROLLING EMPOWERED PROVENTURE WORKERS

Abstract

How can knowledge services direct and control their employees who must be empowered or given the autonomy to generate value-added solutions to customer priorities? This is a pressing question for managers of knowledge services. In this chapter, the conditions for empowerment are discussed, with the notion that the more discretion employees are given the more controls management has to impose for the organization to be effective. One of the radical ideas presented in this chapter is that employees should be managed and controlled by mistrust rather than a reliance on trust in knowledge services which, among other control mechanisms, entails peer control by other workers.

“They (executives and directors) have to have a certain level of cynicism and skepticism.”

-Jay Lorsch, Professor of Human Relations, Harvard Business School²⁴⁸

“Mistrust may be a better regulatory tool than trust.”

-Eisuke Sakakibara, Former Director-General, Japanese Finance Ministry²⁴⁹

We have emphasized the radical uniqueness of the knowledge service industry through its creation of value through customer alliances where customers interact with front-end engagement personnel or employees. These interactions are indispensable for the organization not only for creating good will, but also for soliciting knowledge about what is valued about the organization by the customer. Thus, the empowerment of these front-end employees is a significant decision. The goal of empowerment is to enable well trained and motivated employees to build distinctive linkages with key customers. There is a negative aspect to empowerment, however, in that poorly-trained, but equally responsible employees can inadvertently threaten the sustainability of the firm. Given the internal market nature of proventure architectures in knowledge services, empowerment, as a whole, is a crucial component of these service firms' strategy to build sustainable advantage.

Many long-held notions on empowerment are breaking down in knowledge services among them is the connection between employee autonomy and managerial surveillance. Like most grand organizational strategies, the problems are often not with the concept but with the implementation.

WHY EMPOWERMENT SUPERCEDES TRADITIONAL STRUCTURE IN KNOWLEDGE SERVICE ORGANIZATIONS

Empowering employees in knowledge service organizations is particularly important because of the complex relationships inherent in customer alliances. The traditional hierarchical model of centralized control is not viable when applied to knowledge services organizations. Why? The traditional hierarchy works well under conditions where there is little uncertainty around the solutions to customers' priorities. In these cases, rules and regulations governing how employees should interact with customers are needed to establish consistent results. Particularly among knowledge services where there is much uncertainty, direct interactions between employees and customers are more frequent and more consequential. For example, Cray Inc., the supercomputer research company, assigns its engineers to work with the customer's technical people, as well as its marketing managers to work with the customer's marketing group, and so on. In this context, providing autonomy to employees engaged in the external delivery function to build customer alliances is indispensable for creating value services and for firm sustainability.

Empowerment is fundamental and unavoidable in service deliveries primarily because management must decentralize the decision making authority and responsibility to lower level employees in a process that Waterman calls "directed authority." It is a process of sharing power with employees in the external delivery so that employees in customer alliances can act more freely to address and develop solutions to customer priorities. Empowerment promotes not only flexibility and creativity in employees, but quickness and decisiveness in response to customer needs as well.²⁵⁰ In other words, empowerment allows employees to act as proventurers within knowledge services.

San Jose Medical Group, a major doctors' group in California serving health maintenance organizations, provides another example of empowerment as a tactic. By empowering its doctors to find ways to lower costs, the San Jose Medical Group has reduced its dependence on insurance companies and large health plans, and it has generated dramatic savings. What also emerged was that doctors in charge of lowering costs found creative ways to provide better quality services to patients. As a result, care to patients remains at a very high level. And yet, the reward system is structured in such a

way that doctors receive bonuses for increasing the number of patients they see, not cutting costs. This balances quality care and cost reduction, and quality care is not compromised²⁵¹.

Empowerment has become one of the most popular topics in contemporary business circles. Many managers of knowledge service organizations, however, have begun taking pause as it is becoming increasingly clear that there is an insidiously dark side to the empowerment of employees in external service deliveries. Managers are beginning to realize that the process of empowerment, when embraced improperly in knowledge service organizations, can produce unintended, adverse consequences. A lack of proper understanding and use of empowerment can have devastating effects on the performance of knowledge services as is obvious by the well-publicized banking debacles for the past two decades. At Kidder Peabody, a large well established brokerage firm in 1994, an empowered employee was accused of concocting \$350 million in government-bond trading profits, while concealing losses of \$85 million over a two-and-a-half year period. This resulted in the decline of Kidder, before ultimately being absorbed by PaineWebber Group Inc. It is interesting to note that the employee allegedly responsible for bringing about the demise of Kidder was compensated in the millions of dollars in bonuses including \$9 million in 1993 and he maintains that he was fully empowered to undertake the activities in which he engaged.²⁵²

The dark side of empowerment raised its head in another dramatic case. At Barings PLC, the 233 year old British bank, an empowered employee wagered heavily and poorly that the Japanese stock market would rise and covered his losses while attempting to bet his way out of them. The losses compiled by this employee were so extensive, some \$1.3 billion, that Barings after so many years in existence was severely crippled and put out of business by being absorbed by the Dutch Financial-Services Group Inc. in 1995. The empowered employee, Mr. Nicholas Leeson, who brought down the bank, was essentially given the authority to make decisions as he saw fit as he generated staggering profitability in trading over an extended period of time. Barings executives had empowered Mr. Leeson to do whatever he wished as long as the incredible profits kept rolling in to the corporate coffers.²⁵³

A similar situation took place most recently at the French bank Societe Generale in 2008 where an empowered employee accumulated \$7 billion in losses related to what appears to be unauthorized trading positions. This resulted in the reorganization of Societe Generale top management with the resignation of senior executives including the chief executive officer and the second in command along with a takeover bid for the bank. The empowered employee involved in this case had racked up losses for quite some time and exposed the bank secretly to risk that was more than the market value of the bank itself.²⁵⁴

While these represent three of the best known failures associated with employee empowerment, there are untold cases where the lack of proper understanding of employee-involvement practices led to significant organizational losses. The empowerment process can be quite explosive in knowledge service organizations. It can generate outstanding performance and quality service solutions by employees in internal markets but in the hands of untutored managers, empowerment can adversely affect the overall performance of the firm.

UNDERSTANDING EMPOWERMENT IN SERVICES

Employee empowerment has long been depicted as a process of "turning the front line employee loose".²⁵⁵ This widely quoted statement captures the intent of empowerment and is instructive largely because of the implied recognition that employees in external service deliveries are in possession of untapped knowledge and pent up motivation to create value in addressing customer priorities. Employees in external service deliveries are capable of affecting the organization's performance simply because they occupy boundary spanning positions in their relationship with customers and the external environment. Thus, engagement personnel have the power to make decisions and create value for the organization. The structure of the organization is changed to provide employee the power and authority for decision making.²⁵⁶ What empowerment then turns out to be is the process of unleashing that power or wealth of useful knowledge that employees possess into the external service delivery in order to generate value-added solutions to customers' priorities.²⁵⁷

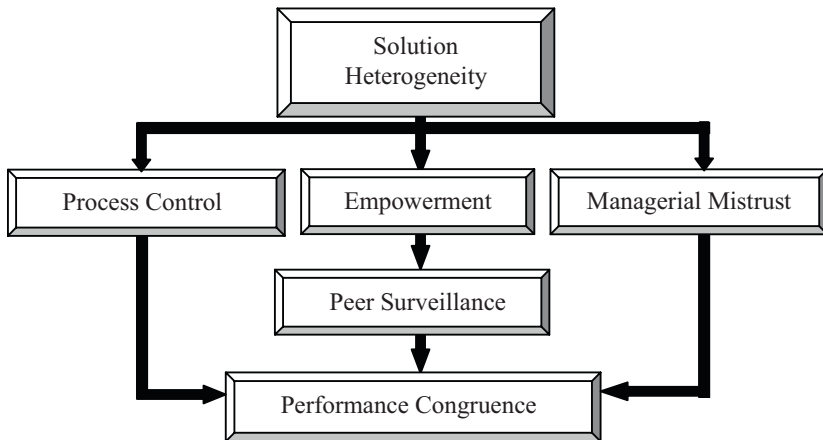
It is important to note here that empowerment is also partially grounded in the notion of stewardship. Within this interpretation, the model stresses the utility of collectivistic behaviors over individualistic, self-serving interests. Given the choice between self-serving behavior and collectivistic interests, the steward will favor the interests of the organization. This behavior benefits outside owners, who are served by the focus on organizational goals, and also subordinates, who are served by being cared for by the steward. Internal markets facilitate this because of the mutual dependence in exchanges as buyers and sellers both benefit in the generation of knowledge stocks and value added solutions. Given this dual nature of attention, empowering people who think of themselves as stewards can be a powerful strategy. It is a failure to communicate this notion to employees and the conditions conducive for its use that give rise to the dark side of empowerment within knowledge services.

WHEN SHOULD EMPOWERMENT BE USED

In spite of its indispensability to value realization in service organizations, empowerment is not universally applicable or appropriate for all service deliveries and can be enormously counterproductive if the process is not used correctly. The question then for managers is: What organizational contextual factors drive its implementation for the realization of gain? One of the most important determinants of empowerment in services is the nature of the task activities that are performed by employees in the external service delivery. There must be a fit between the nature of the task activities required to render services to the customer and the empowerment of employees in external service deliveries. What engagement personnel are actually doing in their interaction with customers is the best indicator as to whether front-line employees should be empowered and this is where managers seeking to exploit the process of empowerment should begin.

When task activities performed by employees in the external service delivery is of a routine and stable nature, value is optimized for the organization through traditional means such as rules and standard operating procedures. Well Fargo & Co., the large retail bank chain, is widely recognized for operating a highly efficient and tightly run service delivery to its customers. Wells Fargo has set rules and procedures that define the boundaries within which decisions for quality customer service can be made. While the company's engagement personnel have some limited social and interpersonal leeway in their encounters with customers, the importance of employee empowerment is essentially diminished largely because decisions on rendering services to customers in Wells Fargo's external service delivery are predetermined. In this example, employee empowerment is not essential because systems can be established due to the little heterogeneity in the value added services as Figure 5-1 shows.

Fig. 5-1. Empowerment Process Model and Control/Coordinating Mechanisms



The need for empowerment of service employees only arises when there is uncertainty and variation around the task activities performed in the generation of value added solutions in customer alliances. This is particularly the case in knowledge services organizations. Take, for example, the activities performed by traders in the external delivery of J P Morgan Chase, the large investment banking company. Traders are often empowered to make decisions since there is inherent uncertainty and risk in the investment process. As one would expect, investment returns by each trader may differ greatly due to the decisions they are empowered to make. There are many contingencies that make it difficult for traders to clearly indicate in advance how one will respond to these possibilities. For J P Morgan Chase, cause-effect relations between its traders' investment decisions and returns are difficult to establish as it is hard to distinguish between intended and unintended effects of their actions. Investment decisions must be made using tacit knowledge, informed judgment and experience rather than rules and computation.

As uncertainty and task variation increase, traders need for discretion simultaneously increases thereby elevating the importance of empowerment for making wise investments for value added services. Traders at J P Morgan Chase have to be allowed to make decisions as they see fit based primarily on their own tacit knowledge and are indeed afforded the authority to do so. Thus, the empowerment of service employees only makes sense when there is an inordinate amount of job ambiguity and uncertainty in rendering value added solutions or services to customers. Value is gained by providing these engagement personnel the market authority to use their judgment and indispensable knowledge to creatively generate solutions to customer wants. The task activities solicit empowerment because what is most poignantly needed and heavily stressed in the process is proventureship and performance, as empowered employees are encouraged to take a visceral interest in the solutions to customer priorities. This, in turn, stimulates internal market operations for value added solutions and the development of knowledge stocks. In essence, empowerment allows employees to take risks when there is excessive uncertainty and ambiguity in the things that they do within internal markets.

WHY EMPOWERMENT SHOULD BE TREATED WITH CAUTION

While empowering engagement personnel is a mighty tool for value realization in knowledge services, it is not to be taken lightly by management. As noted earlier, there is an enormous downside to the process of empowerment because its implementation leaves management precariously vulnerable. Why? Employees in knowledge service organizations invariably present

control and coordination problems for organizations in which there is a lot of uncertainty and heterogeneity inherent in solutions. Employees, as proven-turers, are afforded relatively more autonomy or discretion to make decisions that always entail some degree of risks.²⁵⁸ When managers are faced with uncertainty in developing solutions to customer priorities, there is inevitably a necessary lack of internal organizational control.²⁵⁹ As a consequence, the empowerment of employees, in a very real sense, creates the potential of "control-loss" to the organization.²⁶⁰

Control-loss is the potential downside of managerial coordination and control that evolves from not being able to secure compliance from subordinates. It is the slippage that takes place in managerial control when direct reports may not understand just what they are supposed to do or may not choose to do what is expected of them.²⁶¹ In knowledge services, engagement personnel control the means of production and this creates the potential for control-loss for management of these organizations.

The ruinous situation at Japan's Daiwa Bank Ltd., also illustrates the notion of control-loss. A bond trader employed by Daiwa Bank Ltd., was empowered by his managers, like other traders employed by the company, to undertake trades for customers, largely in derivatives. Derivatives are securities whose returns are derived, often in a magnified way, from price change in another asset such as a stock, bond, or commodity. These are esoteric securities which can generate high rates of returns to companies and consumers. They are also highly risky and in an age of mushrooming global trading, the stakes are significantly higher. While management did not fully understand these esoteric investments, it proceeded to empower Mr. Iguchi with the responsibility for not only trading but expanded his autonomy to include some bookkeeping functions as well. Over an 11-year period, the trader allegedly accumulated \$1.1 billion in losses and concealed the losses by misappropriating custodial accounts and falsifying bank statements.²⁶²

By empowering the trader to engage in securities trades for its customers, the management of Daiwa Bank provided the employee with the authority to act on their and the customers' behalf in some vaguely defined way. So what emerges from any process of empowerment is the exposure of the organization to risk, because, as the Daiwa case exemplifies, there is control-loss for management and control-gain for employees as authority is passed from management to those engagement personnel or employees directly involved in the external service delivery. With such control-gain, the engagement personnel at Daiwa Bank did not appear to be too concerned in exercising this unfettered autonomy in making over 30,000 bond trades which, as it was later discovered, were not only questionable but quite astronomical in volume.²⁶³

It seems clear that managers of knowledge services must be aware of the potential danger of control-loss on the sustainability and even the very exist-

tence of the firm. While proventure workers have to be empowered for internal markets to be effective in generating novel solutions, empowered employees in knowledge service deliveries may not always act in the best interest of the organization or the employee may have preferences for his/her actions which may not be consistent with those of the organization.²⁶⁴ As a result, divergence of preferences between the empowered employee and the organization may indeed take place. The bond trader at Daiwa Bank is alleged to have not only embezzled many thousands of dollars for his own personal use but engaged in money laundering as well, activities that were clearly at odds with the goals or preferences of his bank's management.²⁶⁵

The divergence in preferences that is inherent in knowledge services is largely due to the uncertainty that employees face in generating solutions to customer priorities. This places management in an awkward bind in terms of empowerment and control because standards for determining employee performance in knowledge services cannot be easily established. In the absence of standards, the empowered employee's performance is exceedingly difficult for management to measure and verify.²⁶⁶ Investment of customers' funds, for example, like most complex knowledge service solutions, is essentially a gamble with returns that may vary greatly. Daiwa Bank management's inability to establish meaningful oversight for its errant trader basically provided this employee with a relatively open contract. As a result, management was placed in a vulnerable state of control-loss and therefore subject to the temptation of the empowered employee to engage in self-interested activities that adversely affected the performance of the organization.²⁶⁷

CONTROLLING YOUR EMPOWERED EMPLOYEES

The immediate and burning issue for management is addressing the inherent paradox of empowerment in knowledge service organizations—the more the organization empowers its employees (decentralizes decision making) the more control (centralization) the organization has to exercise over its employees.²⁶⁸ In other words, the more autonomy employees are given, the more they have to be controlled in order to generate value-added services or solutions. Management must establish control systems to ensure that its empowered employees' goals are congruent with the organization's goals without undermining the internal market system. This is a far from simple undertaking requiring a delicate balance of conventional approaches to prevail.

Managerial Monitoring Systems

To fully address the downside of empowerment and reduce potentially adverse effects on value creation, management of knowledge services must actively engage in extensive monitoring of the external service delivery. The performance of engagement personnel in external service differing greatly from what would be expected, even employees performances that are outstandingly good, should raise immediate red flags and set off all sorts of alarms. Take, for instance, the surveillance of external service deliveries at Oxford Health Plans Inc., the Norwalk, CT based managed-care company that had doubled in size each year from 1991 until 1996 at the expense of much larger rivals. Unusual deviations from expected medical practices catch the attention of management. Oxford's elaborate surveillance of its external service delivery is in the form of quarterly reports which are based on concrete claims data detailing the activity of each doctor in the delivery. Information such as patients sent to expensive hospitals or patients whose stay in hospitals is unusually long is closely examined.²⁶⁹

Conversely, the management of Barings P.L.C., the successful investment bank that collapsed after losses of \$1.3 billion is a case in point. Surveillance was non-existent for Mr. Nicholas Leeson's unit that was responsible for the losses. The staggering profitability of Mr. Leeson's unit should have raised questions by management. Such high performance in profitability is striking information in an environment such as this that deals so heavily with risks. One of the fundamental issues that should have been raised is the extent to which exceptional risks had been taken.²⁷⁰ Units that have achieved success by taking great risks should be brought back into line with management's strategy, such as to align the organization's goals and balance the risk.

Surveillance of the activities of those empowered is an important form of monitoring in the knowledge service delivery as information is gathered about the employee's abilities to adhere to what is expected of them. Such information is invaluable not only because management is in a expeditious position to act with due skill, care and diligence to spot activities that may undermine value optimization in the service delivery and take the action necessary to arrest it. Such information can be used to meaningfully align the compensation system with the employee's behaviors.

An important surveillance focus for managers is the "effort" expended by empowered employees. In general and with rare exceptions, when standards cannot be meaningfully set for employee performance, as is the case in knowledge services, effort can be used as a substitute measure for assessing performance. In essence, it is not enough for the empowered employee to complete some task well or to do a good job. It is also very important to be seen or observed by managers to be doing a good job if there is to be overall satisfaction with the performance of the empowered. Thus, surveillance or

monitoring activities are informative to managers of knowledge services because such control mechanisms provide information that may not be reflected in the value added service outcome itself.²⁷¹ There are a number of control and surveillance mechanisms used to manage employees. Many involve secondary approvals on important processes or spending of high dollar amounts. Another example is the student evaluation process of university professors. The customer, or the students, has an opportunity to provide feedback on the professor's performance, which in turn, effects promotions and salary.

Due to the full value realization risk inherent in the empowerment of employees in knowledge services, management must take steps to shift the burden upon the empowered employee. Employees can be encouraged to undertake what are in essence "bonding" activities to provide managers some minimum level of performance. That, in turn, could have a lasting effect on surveillance by increasing managerial confidence. Bonding is a form of insurance; an employee guarantee. Some typical employee bonding activities include those associated with obtaining credentials (e.g., certificates for completing training programs, awards for outstanding performance and so on), and offering guarantees. The reputation of employees is a crucial element here as a significant credibility factor to managers as to the potential value realization of employees and the amount of risk possible from empowering them.²⁷²

Using Mistrust as a Control Tool

Deviating from more traditional control approaches, proventure workers are more effectively managed through the use of mistrust. The advantages knowledge services gain from this unconventional approach are immense. One of the vital attributes of surveillance or control is suspicion because the very notion of surveillance implies watching over someone—mistrust. To a great extent, as a control mechanism, mistrust is advantageous because of its potential to increase the alertness of managers; an important factor under conditions of output heterogeneity where stakeholders are vulnerable or at risk. Perhaps, the biggest reason for the use of mistrust is that there is a heavy dependence on tacit knowledge for the generation of value added services, and such knowledge resides largely in the worker's head. Management can never be quite sure about just how much or the extent to which workers are truly using such knowledge under conditions of output heterogeneity. Management by mistrust encourages critical discourse as questions are constantly expected to be raised around issues requiring a decision. This, in turn, fosters awareness around the process of generating value added ser-

vices for all involved and gets to the very essence of control in internal markets.

In a departure from 20th century approaches to worker control, mistrust revamps the issue of managerial surveillance in internal markets. It is widely recognized that managerial trust in the traditional organizational work setting is the most efficient system for value creation and organization gain.²⁷³ The rationale for this is based on the idea that the presence of trust reduces the need for costly and expensive governance mechanisms to make sure that employees in service deliveries do what is expected of them.²⁷⁴ However, when employees are empowered, and therefore entrusted, to generate solutions to customer priorities, such trust is based almost exclusively on managerial faith that those in the front-line will act in the organization's best interest and create value. This sort of managerial faith may not be very reasonable and may have very little rational basis because trust or faith emerges from the fact that management has incomplete information under conditions where there is a lot of uncertainty in the generation of value added service solutions.

In the Daiwa Bank example, the organization was predominantly based on an honor system for regulating engagement employees in the external service delivery. Trading in derivatives securities is a very complex process loaded with uncertainties and enormous risks in value creation. Trust was a key mechanism for managing employees as the organization provided excessive leeway to its traders in a trust-based regulatory system. Like any complex knowledge service delivery or solution, whether it is in the delivery of healthcare, education, consulting or legal services, management of Daiwa Bank simply does not usually have a full grasp of the specificities about what is going on in the service delivery. Placing trust in employees compensates for managerial lack of information and this is precisely where the trust issue becomes problematic for service organizations.²⁷⁵

A lack of sufficient information about what employees in the external delivery are doing is inherently risky for management as this pertains to being able to predict the behavior of the empowered. As a result, the trust inherent in empowering employees to act with discretion in rendering value added services to customers suggests two things. One is an acceptance of potential risk to the organization and the other a potential threat to value creation and even the existence of the firm. An employee's failure to fulfill a trust in providing value added services to customers can adversely affect the organization.²⁷⁶ The very process of managers placing trust in employees results in positions of vulnerability for the organization. This is a fundamental downside to the use of trust in knowledge services. For while managerial use of trust is intended to reduce risks in knowledge service deliveries, paradoxically, there are risks attached to the use of trust in these organizations. As

Mark Granovetter has observed "the more complete the trust, the greater the potential gain from malfeasance."²⁷⁷

One of the advantages that mistrust has over trust as a regulatory mechanism is that it reduces the potential downside from malfeasance due to the control-loss inherent in the empowerment of employees in the generation of value-added solutions. Mistrust is nothing more than precautionary management and is a natural and expected consequence of empowerment. As was noted earlier, the discretion afforded the empowered employee in external service deliveries along with the potential risks to the organization posed by the activities of these employees, should invite managerial suspicion or skepticism that there is a potential for proventure workers to behave in ways that are contrary to those of the organization. Effective oversight of the empowered in knowledge services must be accompanied by managerial mistrust or precautionary concerns if the firm is to sustain long term gain.

Mistrust is woefully misunderstood as a regulatory mechanism in knowledge service organizations. This may be partially due to the term itself which conjures up a lot of confusion. Some of the misunderstanding stems from the negative connotation attached to the common usage of the word. Mistrust is often thought to undermine employee morale in the workplace as employees may feel threatened by this control process, particularly among employees who value individualism. The widespread belief in the services sector is that trust is good and mistrust is bad.

However, given the precarious risk empowerment poses to the overall performance of the organization, it is reasonable and prudent for management to exercise some concern by engaging in precautionary activities. The use of mistrust to regulate the activities in service deliveries is simply management taking the necessary steps to reduce doubt inherent in knowledge services outputs. But there is another important, often overlooked upside to the issue of mistrust. Contrary to often held parochial misconceptions, governance through the proper use of mistrust creates an environment of critical discourse or at least the raising of questions which fosters more open exchanges, better understanding within knowledge service organizations, and a more supportive environment than generally recognized. As a regulatory tool, mistrust fosters responsible management and employee accountability by extensive managerial surveillance of employees' activities in value service deliveries. Mistrust can bring to the forefront inappropriate metrics employed in assessing value added services and can increase the adaptation of the firm to changing environments. But mistrust is not only restricted to managerial surveillance but also includes peer surveillance endemic in internal knowledge markets. The challenging of one another with critical discourse by having to prove issues is an integral part of mistrust.

For management mistrust to have its intended effects within knowledge services without undermining the internal market, it is of the utmost signi-

ficance that the organization undertakes four important steps. First, managers must educate employees in the service delivery as to the inherent risks in the process of empowerment and that organizations, being fundamentally risk averse, must exercise some sort of governance over their employees. Employees have to be well informed about the natural aspect of distrust in the process of empowerment and understand that precautionary measures are a required part of the process.

Second, managers must compensate for the potential loss in control from empowerment by strongly formalizing some activities. However, in order not to jeopardize the creativity necessary for the generation of value added service outputs, rules and regulations are applied to “non-contingent” aspects of the empowered employee tasks. Participating in staff meetings by software programmers is non-contingent or peripheral to writing codes. In a hospital operating room, empowerment and discretion of the surgeon is high regarding critical technical (i.e., contingent or core) aspects of the surgery, although any given operation is tightly bound by an explicit framework of written procedural specifications and rules (for example, washing of hands, going over procedures with associates before surgery, accounting for all instruments involved in the operation, etc.). This brings management who are often removed from the engagement personnel activities closer to the service operation where potential problems can be spotted.²⁷⁸ At Sumitome Corporation, the commodities firm, traders are rotated every few years to prevent them from acquiring too much influence over a particular segment of the market. Under this company job rotation regulation, employees can stay in their job for up to three to four years. The intent of the rule is to prevent or reduce the temptation of unauthorized trading.²⁷⁹ Such non-contingent guidelines will be invaluable not only to the monitoring mechanisms but make employees more accountable to both management and peers. Controls around the non-contingent employee activities do not adversely affect the overall functioning of the internal knowledge market and the creativity that is necessary to generate value added solutions. More important, such regulations and rules create more open disclosures within the firm as employees become aware of the expected behaviors from the monitoring mechanisms imposed.

Third, it is crucial that management make healthy skepticism and even cynicism pillars of internal regulation within internal markets. Managers have to be aware of engagement personnel activities and seek explanations when red flags appear. Skepticism encourages raising questions which reduces managerial negligence in controlling engagement personnel. Fourth, some sort of reward system that would encourage the close and frequent interaction in the service delivery and monitoring of service employees in empowered situations. See Table 5.1 for a summary of managing mistrust.

Table 5.1. Managing Mistrust

How to Manage Mistrust:
<ul style="list-style-type: none"> • Educate employees of risks of empowerment
<ul style="list-style-type: none"> • Compensate for loss of control
<ul style="list-style-type: none"> • Use skepticism and cynicism when regulating internal market
<ul style="list-style-type: none"> • Align reward system with monitoring of empowered employees

Oxford Health Plans Inc., the rapidly expanding managed-care company, has a responsible management by mistrust approach to control empowered employees in the external delivery of the organization. As a healthcare organization, many of its empowered employees are physicians. In order to create peer awareness and surveillance of physicians' activities and behaviors, self-selecting groups of 40 to 100 physicians are arranged into "partnerships."²⁸⁰ Each partnership is allotted an overall budget from which physicians are paid a percentage of patient premiums. Budgets have fixed amounts for medical activities such as physician care, hospitalization, and prescription drugs. By providing detailed quarterly reports on the activities of each doctor to the group, Oxford is essentially practicing prudent managerial mistrust which closely monitors physicians for signs of excessive use of tests and costly treatment. Since there is a fixed budget for each partnership, each physician's activity has an effect on the outcome of others in the group. Consequently, Oxford's management by mistrust encourages open disclosure of employee activities, peer surveillance of colleagues, and promotes the overall self-interest of the group in order to regulate and protect the organization from employees who might be tempted to engage in questionable, ineffective activities that may have detrimental effects on sustained organizational gain.²⁸¹

PEER SURVEILLANCE

Because of the organizational values, peer surveillance can be effectively used as a pervasive control mechanism for empowered employees in knowledge service organizations. But, in order for the organization to realize full gain from this control mechanism, incentives programs must be established and closely tied to the process of peer surveillance. The process of peer surveillance is quite simple in these organizations since employees monitor their fellow workers as a part of exchanges or resources for the generation of

solutions and in doing so, make sure that there is adherence to the rules of the organizational game.

One of the advantages of internal markets within knowledge services is the potential for peer control. It was noted earlier that an internal knowledge market is a system of control based on clusters of relatively autonomous individuals and units within the organization where there are open exchanges of resources for the accomplishment of task related activities, the building or knowledge stocks, and or value added service solutions.²⁸² Because buyers and sellers are mutually dependent on each other in order for both parties to come out ahead, within internal markets, peer surveillance is a potent yet unobtrusive control mechanism that is capable of reducing the risk or downside of employee empowerment. Put simply, peer surveillance is based on the unwritten work rules for acceptable or unacceptable behavior and exchanges.²⁸³ Organizational values of the firm are a shared standard of preferences whose main function is to help employees discriminate among possible courses of action. This is crucial in knowledge services where proventure workers are confronted with many different tasks and complex alternatives. This is where values come in. Values can guide knowledge workers who are required to use informed judgment in generating novel services or solutions to customer priorities. Take, for instance, the effects of the organizational values of Bankers Trust New York Corp. on performance. Bankers Trust was once regarded as one of the most profitable and aggressive banks in the world. In 1995, the bank experienced serious setbacks as it racked up huge losses for many of its major customers including Proctor & Gamble Co., Gibson Greetings Inc., Federal Paper Board Co., and Air Products & Chemicals Inc. Documents secured by Proctor and Gamble in its suit against Bankers Trust for fraud would seem to suggest an organizational value system within the bank that fostered questionable activities.²⁸⁴ Bankers Trust's brokers were faced with several possibilities for investing Proctor and Gamble's funds. These investments varied from highly speculative with big gains and bonuses if the broker succeeded as opposed to safer investments with a set return. The organizational value system within Bankers Trust tended towards risk-taking that induced customers to purchase complex derivative deals, which tended to produce high profits for the bank and often large losses for the client. Given an organizational value system that centered on risk taking, it is therefore not surprising that this organizational value system would be reflected in the actual investments made by traders who would be prone to make oversize bets. Proctor & Gamble alleges that the Bankers Trust's brokers misrepresented to customers the pricing and risks of the product it sold. Additionally, brokers enticed customers who had suffered losses to participate in even more complex transactions that were supposed to recoup losses but that only served to create even more losses for the customer. After settling most of its suits that were filed by customers, Bankers

Trust took radical steps to clean up the mess. A dominant cause of its problems rested squarely in the value structure within the organization and the bank moved quickly to correct this. Top management was replaced and the firm reorganized its priorities to shift away from high-risk derivatives to the more conservative transactions with much lower risk. The bank also took steps to alter the aggressiveness and speculative tendency of brokers that permeated the firm and move more towards transactions that are based on long-term customer relationships instead of on one-time transactions aimed at quick profits. What Bankers Trust essentially did was change the organizational structure or architecture and as a consequence of this, the value system in order to realize long-term gain. The approach by top management is classic in the implementation for establishing effective organizational values and gets to the very nature of value structures in services. Organizational values emanate from the top and trickle down through the external service delivery and the engagement personnel.

In knowledge services, organizational values are perceptual screens or processes of interpretation in heterogeneous conditions for generating value added services to customers. These are shared realities or understanding among proventure workers in internal knowledge markets on how a particular activity or solution should be undertaken and even extended to what are desired outcomes or goals. In judgmental situations, decisions made by proventure employees can be evaluated as "right" or "wrong" because the organizational value is an inherent basis for comparing possible courses of action and in so doing, gives consistency to behaviors in the generation of value added services.²⁸⁵

Peer surveillance for the empowered carries added control weight for another important reason. The reputation of knowledge services organizations is a most desired strategic commodity in attracting and retaining customers. Reputational effects increase as substitutes for outcome when there is an increase in "credence" factor—the inability for customers to determine the quality of the service solution even after it has been consumed. A good example would be a strong performance in court by a lawyer, but still failing to win the case in litigation. Customers, therefore, rely quite heavily on the reputation of service organizations. Members within internal knowledge markets accept the liability for each other as this pertains to their reputation. Mutual monitoring among colleagues is in each employee's best interest in developing and maintaining the reputation of the service delivery. Healthcare providers, for example, are well aware that questionable behaviors by one employee can have an adverse effect on the reputation of others in the external service delivery. Thus, because of the vested interests in each other, any suspicious activity is grounds for scrutiny by other employees. Behaviors that differ greatly from what would be expected are seen as red flags in

peer surveillance and such behaviors are not likely to be covered up as it is not in the knowledge service firm's best interest to do so.

SUMMARY

Empowerment of proventure workers is clearly important in knowledge services. Of critical concern to managers of knowledge services is how best to align the interest of employees with the goals of the organization in the presence of organization control loss. For managers, empowerment should not be used without considerable thought because of the potential conflict and divergence of interests inherent in the empowerment process exposes the organization to risks. There is a downside to empowerment which can adversely affect the performance of many knowledge services. The framework for managers in dealing with empowerment is that the more employees are empowered, the more regulations are needed to control employees and such regulations should focus on non-contingent or peripheral factors of the workers tasks and not the core activities.

The notion of surveillance in knowledge services suggests suspicion because the very word itself denotes "to watch over". The implication for management is that proventure workers are more effectively controlled through the use of mistrust. In internal markets, mistrust increases the alertness of managers and workers which is crucial under conditions of output heterogeneity where stakeholders are vulnerable. Since there is heavy dependence on tacit knowledge for the generation of value added services, management can never be quite sure about the extent of workers contribution. Tacit knowledge is difficult to separate from those who possess it. Management based on mistrust is therefore a necessity and quite appropriate in internal markets as it heightens awareness of both workers and management.

CHAPTER 6

BUILDING ADVANTAGE: DESIGNING THE RIGHT STRUCTURE FOR KNOWLEDGE SERVICES

Abstract

It is well recognized that value-added solutions to customer priorities is dependent on knowledge that is scattered throughout the reaches of the organization. However, the issue of how people find out who has exchangeable knowledge worth pursuing, particularly those in possession of tacit knowledge is a major challenge for managers in knowledge services. Traditional 20th century hierarchies are incapable of addressing this issue. In this chapter, a novel organization architecture, which is termed the “proventure structure”, is presented which is designed to support the location and exchange of knowledge for more effectively generation value-added solutions to customer priorities. The proventure architecture is a new form of organizing and is presented as an investment and exchange forum for the generation of solution and the building of knowledge stocks within the services organization.

“Barriers include the natural class structures that arise in organizations: There always seems to be one function that considers itself and is perceived by others to be the one the organization values the most. Then there’s the different languages spoken by different disciplines and even the physical distance between offices. In a creative business like ours, these barriers are impediments to producing great work, and therefore we must do everything we can to tear them down.”²⁸⁶

-Ed Catmull, Cofounder of Pixar and president of Pixar and Disney Animation Studios

Among the many reasons why Pixar has become a successful organization is the fact that its founders recognize the importance of an appropriate structure for a knowledge services organization. From its beginnings, Pixar has incorporated the use of teams, peer-based collaboration, and a commitment to new, innovative ideas. At a movie making studio such as Pixar, the environment is creative, fast paced, and highly pressurized. The structure must match these constraints.

This chapter provides a rebuttal to the assumption that *organizing templates for knowledge service organizations are similar to those of 20th century manufacturing firms*. In this chapter, we show that differences between traditional manufacturing and knowledge services require new ways of thinking

about how knowledge services should be structured. Popular models of organizational design, based on manufacturing management, are premised on *co-alignment*, matching environment with structure, and *dependence*, developing structures based on the interdependence of tasks.²⁸⁷

While both premises relate to knowledge service organizations, their application to organizational design tends to be fundamentally different. In today's uncertain markets, value creation starts with design considerations. Tom Peters has noted that firms must get their organizational structure right first because without supporting structures, even well-conceived strategies may fail.²⁸⁸ Structuring service activities has become the key competitive issue, particularly in the labor intensive knowledge services.²⁸⁹ More than anything else, competitive advantage in knowledge service production often results from superior tacit knowledge rather than any other attribute of the product or service solution. The inability to separate this knowledge from the employees who produce and control it is of even more importance for managers. Unlike traditional manufacturing where management controls the means of production, workers in knowledge services control the means of production. This distinction in production control marks a radical change and suggests that tasks and relationships should be structured in new ways that enhance value in the production of service solutions to customer priorities.

THE LOGIC BEHIND ORGANIZATIONAL DESIGN

Service alliances between the front-line engagement personnel and customers are central elements of organization design decisions. They are the medium through which customers' priorities are determined, brought into the organization, and disseminated as solutions directly back to the customers. Since customers range from very knowledgeable to very uninformed about just what they want, they are dependent, to varying degrees, on the service-provider. Due to such dependence and expectations embedded in these alliances, uncertainty is created for organizations. Reducing uncertainty or some attempts at controlling it becomes the driving force in designing knowledge service organizational structures.

Based on the kinds of alliances established between front-line engagement personnel and customers, two fundamental types of service strategies emerge: Problem Focused and Lateral Differentiation. These categories of knowledge services, as discussed in Chapter 2, are important because they make it possible to match strategies and organizational structure with the requirements of each service production.

COUPLING STRATEGIES AND INTERNAL MARKET STRUCTURES

Not unlike manufacturing firms, the inability to develop support structures would render a well-conceived strategy useless. After all, any well conceived strategy needs to be supported by the proper structure. Hewlett Packard’s success in the printer line is due to the excellence of its products, as well as its ability to build a structure to accommodate its service requirements. Anticipating an era of services, IBM has excised traditional product line structures in favor of service-oriented lines. In light of the increasingly complex work landscape of knowledge services, the task of developing an appropriate organization structure or architecture to position knowledge firms favorably is far from simple, as IBM has experienced in recent years. Formulating strategies to accommodate the requirements imposed by interdependence is the first necessary step. Matching structures and processes to strategy—the underlying logic of any organizational design—is the second.

Two fundamental components of knowledge service are necessary to reduce uncertainty and to manage interdependence in the generation of solutions to customer priorities: an internal service delivery and an external service delivery. Both internal and the external service deliveries are very closely tied and must be integrated for value added solutions and overall effectiveness.²⁹⁰ Specifically, the structure should combine the standardization of core activities in the internal service delivery, with some amount of decentralization of the external or front-line delivery for differentiation on peripheral services.²⁹¹

In light of the above conditions, the architecture for effectiveness and competitive advantages must address four crucial strategic issues listed in the table below:

Table 6.1. Strategic Issues in Service Firm Architecture

Designing an Appropriate Architecture:
<ul style="list-style-type: none"> • Develop and maintain customer alliances as a core part of service operations.
<ul style="list-style-type: none"> • Foster proventure work landscape for creative service solution generation.
<ul style="list-style-type: none"> • Expand human assets and proprietary knowledge stocks.
<ul style="list-style-type: none"> • Develop and maintain the firm’s reputation.

These factors point to an architecture built for flexibility by decentralizing power to the outer boundaries of the organization where direct alliances with the customer take place; a structure that best accommodates the requirements

of knowledge service contingencies and is capable of withstanding the demands of any knowledge strategy or tactic.

As mentioned in the introduction to this chapter, Pixar has created an architecture that fits the criteria listed above. Throughout its history, alliances are built with a number of key stakeholders – Disney (through acquisition), technological innovators, distribution companies, and advertising agencies. Employees are encouraged to critique other's work at a review process termed the "dailies." This allows for creative solutions by allowing employees to show their unfinished work to co-workers who provide not only critique, but also inspiration. This eliminates the concern that work must be in its finished state before review from peers. By accepting criticism of a work-in-progress, Pixar is able to make incremental changes to a movie, thus increasing the overall quality and avoiding the problem of having to re-write large portions of the script.

As Pixar co-founder Ed Catmull states, "The view that good ideas are rarer and more valuable than good people is rooted in a misconception of creativity."²⁹² This underscores Pixar's emphasis on human capital and the proprietary knowledge that accompanies it. Pixar correctly understands the role of proventure of management to include encouraging people to take risks while setting up an environment that has the capability to recover. The result of taking risks is the additional proprietary knowledge that is housed within the firm.

Finally, the firm's reputation must always be maintained. Pixar does this by employing rigorous internal standards of quality during the design of their films. Extensive and creative film promotions are also a staple of Pixar's development of its reputation. For example, the trailer for Pixar's 2009 film "Up" was first released during the Super Bowl²⁹³ and followed with a spot during the Oscars.²⁹⁴ This film will also be Pixar's first to be released in 2-D and 3-D formats, further building the firm's reputation of innovation and creativity.²⁹⁵

Although Pixar's current structure has yielded great success, it still struggles with the same challenges of many other service firms. The underlying issue is trying to convince employees to divulge the tacit knowledge that is in their head. This can be seen as the agency theory at work. There is asymmetric information between what the employee and firm knows. Each must act in their own self-interest, thereby continuing the problem. Service firms have yet to find a way to circumvent this issue and access the tacit knowledge within each employee.

THE PROVENTURE ARCHITECTURE

An architecture with the potential of awakening employee thoughts and unleashing tacit knowledge through the fundamentals of internal markets is what we call the proventure design. This architecture derives its name from the attributes of employees that are necessary to perform in problem focused and lateral differentiation customer alliances. The proventure architecture, unlike its predecessors, is designed for the inclusion of customers as active members of the knowledge service organization production process. As co-producers of value added solutions, customers have the potential to provide intimate and invaluable knowledge of business processes, strategic goals, and industry and market conditions with which they are familiar.²⁹⁶ The expansion of the organization boundaries to include the active participant of customers is a feature that distinguishes the proventure structure from traditional organizational structures in a radical and significant way. Customers are an integral part of the external service delivery which is linked to supporting infrastructures of the internal service delivery.

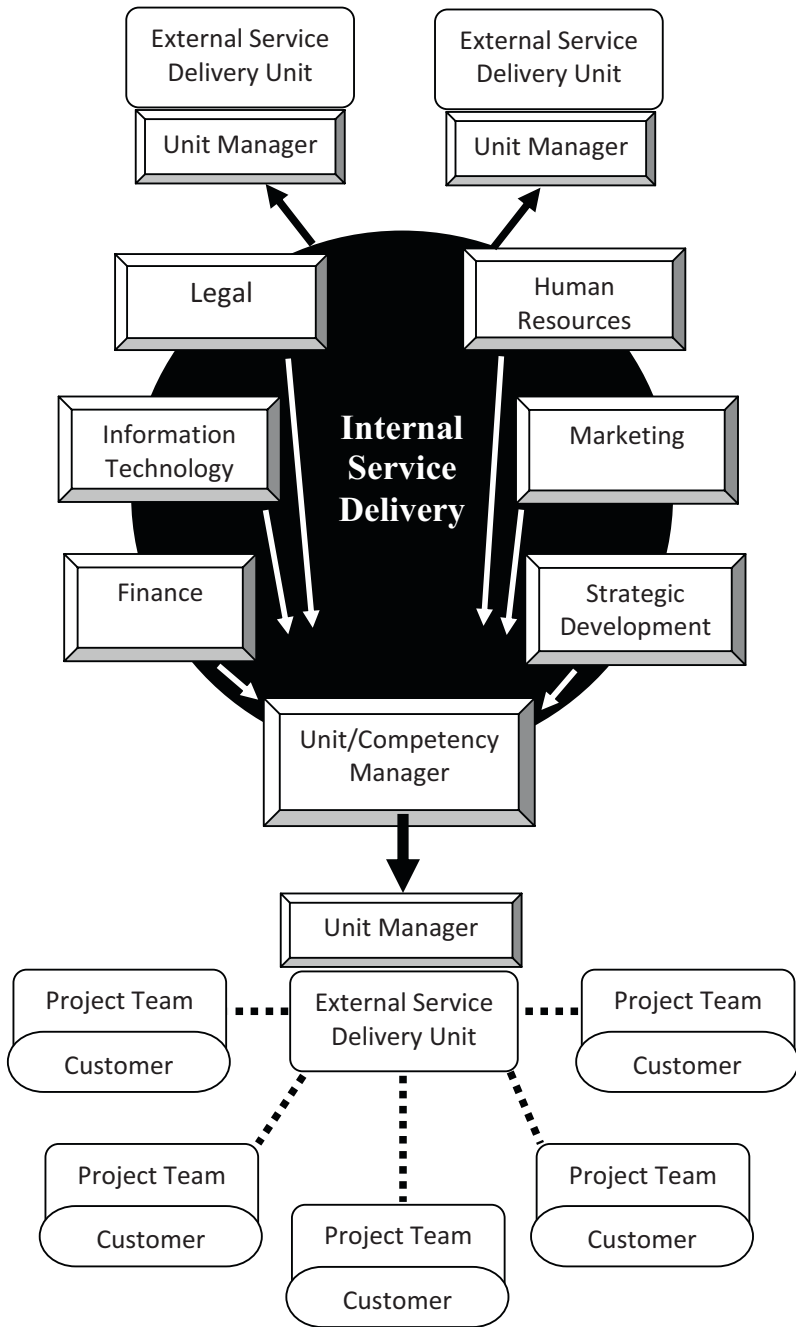
Consistent with the demands of knowledge work, employees within this organizational structure are proventure workers who have to be flexible and creative in order to make frequent and sometimes drastic changes to meet customer's priorities.²⁹⁷ Employees must have freedom to act as they see fit, establishing unconventional employment relationships between front-line engagement employees and the organization. Within this decentralized structure, each employee or team is a part of the delivery and contributes to the common service organization mission but does so independently (i.e. pooled interdependence).²⁹⁸ The link between employees or teams of employees is that they share physical and financial resources from a common pool and the successful delivery of value added services to customers by each employee contributes to the success of the organization. As mentioned earlier, Value Behavioral Health Inc., which specializes in mental health care, is an example in that each health care employee need not interact with another employee while they do, indeed, share common resources.

Essentially, the proventure structure consists of a set of concentric power circles. The outmost circle entails relatively autonomous operational units based on knowledge stocks groupings. Each unit is a cluster of complementary and or similar knowledge stocks to address a particular type of customer priority. These are knowledge services whose very nature dictates a need for flexibility. In order to accomplish this, operational units are loosely coupled in these structures²⁹⁹ to allow the firm to adapt to uncertain environments, generated primarily by customer demands. In a meaningful and profound way, the loose coupling of operational units serves to localize disturbances in the firm's environment and thus reduces the impact on the total organization. Further, such coupling makes it possible to extract valuable knowledge from

various segments of dynamic and changing external environments which can then be disseminated throughout the organization. Thus, in an internal market environment with heterogeneous task requirement, proventure architecture provides an opportunity for employees to be flexibly focused³⁰⁰ in the generation of value added services. This knowledge service architecture “cognitizes” the work landscape because it is designed for workplace creativity and operational inventiveness in the process of generating solutions to customer priorities. By cognitizing the workplace through proventure activities (autonomy, freedom to take risks, act with foresight, use intuition), workers are strongly motivated to display such behaviors in an internal market context. As a consequence of individuals and/or operational units displaying such behaviors, there is an overall expansion of knowledge stocks and the customer base, leading to higher growth within the firm.

Not unexpectedly, within proventure architecture, power is concentrated primarily in revolving groupings of tacit knowledge holders. For this reason, unlike traditional organizational structures, power is conferred upward. More specifically, much of this power is concentrated in teams of proventurers with tacit knowledge at the outer boundaries of the organization where direct engagement of customers is extensive. Each team is responsible for value-added solutions in which the customer is an integral part. The inclusion of the customer within the boundaries of the organization is both radical and transformational and further accentuates the differences between traditional structures and proventure organizations. Traditional manufacturing operations are like a slow changing “closed” organization while proventure is a swift changing “open” one. There is little doubt that the outer circle of the service delivery is clearly the most important segment of the proventure design as the customer's involvement is greatly intensified (see Figure 6-1). The empowerment of the employee in the external service delivery, nourished by the internal market, unleashes employee creativity in finding novel solutions for customer priorities. In this way value is added to the organization. Multinational advertising firms like Chicago-based Leo Burnett and Omnicom's DDB Needham are exemplary sources of creativity.

Fig. 6-1: The Proventure Organization Structure



While individual employees may have established alliances with customers, proventure architecture is essentially a team-based organizational structure. It is important to note that teams in the proventure architecture have radically different responsibilities from teams found in more traditional organizations. In proventure architecture, teams operate as small revenue producing units or profit centers realizing potential value by seeking out niches or service lines in response to customer priorities. The value to the organization from this setup is the overall expansion of the customer base and thus the growth of the firm. The composition of what workers do within the teams or in cases when they perform individually may indeed change from situation to situation depending on customer demands and potential value creation in satisfying customer priorities. As mini-firms within the internal market, teams are purely entrepreneurial and goal directed in that some mutually agreed upon profit or revenue target is set based on the availability of core competencies in the unit. Budgets are also important control devices which serve as governance guidelines for the teams overall performance.

While the proventure organizational structure with its anchor in internal market imposes pressures on teams, there are also incentives to create value through inter-team integration. Getting otherwise self-interested units or teams to interact and talk with each other is an important organizational benefit. The internal market nature of the structure is a key driver for knowledge workers to exchange ideas and generally find out what is going on in other segments of the organization. Teams may actually purchase services from each other when there is a need to do so in creating value added solutions for customers. If, for example, unit A requires the services of an expert electrical engineer who happens to be in unit B, unit A will negotiate with unit B to purchase the engineer's services. Exchanges may be financial but are frequently made using other terms, such as the exchange of various employees or other available resources.

Given the focus of the proventure design on localized accountability, revenue producing individuals, departments or units within the internal market are not restricted to other employees or teams within the organization, but extended to outside consultants or contractors. It is not unusual for legal firms, for example, to hire private investigators or less prominent attorneys for undertaking work that is needed. Generally, within proventure structures, such outside resources are restricted to situations in which the unit is unable to secure the resources internally at a reasonable price. This is particularly the case for problem focused knowledge services. For example, Microsoft has been successful outsourcing some of its lower-level coding writing to India. Here, they find skilled labor at a reduced cost. This also serves to benefit the firm by allowing employees from its corporate headquarters in Redmond, WA to develop new solutions to software problems and focus on the strategic elements of the service delivery³⁰¹. In order to reduce costs, much of the code

writing for the software is contracted out to lower paid immigrant engineers.³⁰²

The improvement and expansion of knowledge stocks is crucial if the firm is to sustain itself. Proventure structures invigorate the organization because it is built to enhance knowledge technology. Knowledge technology can be defined as the use of intellectual capital (a body of ideas) by employees to diagnose or address customers' priorities and justify a recommended course of action or solution. Such technology entails informing or providing some rationale to customers for what is being done and the actual solution generated to address their priorities.³⁰³ Knowledge technology can gain proprietary information that gives the organization competitive advantages. Technology is another area where Pixar has been able to create a competitive advantage over its competitors. By securing numerous patents related to computer animation techniques, Pixar is able to generate a distinctive look and feel to their films. Many members of Pixar's leadership team have a background in technology and engineering, starting with its CEO Steve Jobs, co-founder of Apple. Proprietary technologies are highly beneficial, even in service industries, underscoring the importance of service research and development. For this reason, Pixar continues to maintain a close tie to the academic community. Its successful merger with the Walt Disney Company can be attributed to an alignment of these core values. Disney has long been an innovative service company, beginning as the first animator to include sound and color, as well as integrating animation with live action.³⁰⁴ As Figure 6-1 depicts, the proventure structure is a relatively flat organizational design with few levels of management. Since coordination is based on internal market principles, the fundamental fissure between management and worker in traditional hierarchies is resolved as control is mainly decentralized to the functional teams in the external service delivery. For example, the traditional ethic of promotion to higher levels is of much less importance in proventure design. The structure simply does not encourage it. The flatness of the proventure architecture tends to reduce the expectation of upward mobility and the desire and significance of hierarchical managerial positions. The career path of the knowledge worker is not vertical as one would find in traditional structures, but rather horizontal and vertical as employees cross the boundaries in the value chain, thereby, increasing their potential mobility to explore opportunities in other firms. The knowledge worker's job is idiosyncratic and in these situations, the promotional ladders are quite thin.³⁰⁵ This is an enterprising structure which serves to enhance employee flexibility and change. What proventure architectures provide for workers are opportunities for internal horizontal mobility through job rotation within teams which offers a change in status for the knowledge worker and a chance to build their tacit knowledge stocks and, in turn, their power banks.

PROVENTURE ARCHITECTURES AND MARKET ADAPTATION

More than anything else, proventure structures are able to weather turbulent risks more easily than traditional hierarchies. The heavy reliance placed on internal markets will generally create a constantly evolving work landscape in the generation of value added services. A salient driving force is the counter intuitive notion that when solutions begin to add value it is time to change them. Proventure structures offer the most potential for creating value because of their sensitive relationship with the environment. The core service solutions and knowledge stocks within an organization are determined by the most pressing environmental contingency. In addition, environmental sensitivity stimulates organic growth—internal expansion without acquisition. The inability of management in knowledge services to predict environmental changes with any degree of accuracy suggests a context in which tactics and strategies change frequently. This is partially due to the heterogeneity of solutions and task activities which require workers to make frequent and sometimes drastic changes from one situation to another in response to customer priorities. As a result, the requisite need for continuous change inherent in generating novel value added services is a crucial adaptive attribute that allows adjustments to heterogeneous customer priorities. Traditional hierarchies are of little value in this environment because it is highly questionable whether flexibility could be achieved through a tight coupling between strategy and structure as these 20th century structures reflect. The key to the proventure structure is flexibility. The teams or units, along with the internal market, help the organization achieve efficiencies in the generation of value added solutions, as well as meeting the challenges of various corporate strategies. Within the proventure structure, the core in itself is extremely adaptable and flexible—the composition changes with what the organization defines as the primary environmental contingency. This malleability in structure is advantageous for value creation because it allows varying degrees of adjustment to subtle changes in customer priorities in the service delivery and adaptation to the external environment.

Unlike traditional capital-intensive manufacturing industries, knowledge service industries are quite vulnerable to slight changes in customer specifications, therefore, the need for constant vigilance and feedback loops to monitor these changes. Flexibility for knowledge services is neither grounded in strategy, nor even in the co-alignment between strategy and structure. Instead, it is necessitated by very basic, less enduring, and more intractable principles that provide the buffer against the unsettling influences of strategic changes, and diminish any inertia that is linked with sunk costs and investments (i.e. structure). Unlike traditional structure that represents formal and enduring patterns

of relationships; proventure structures permit the firm to creatively adapt to the requirements of many strategies.

It is important to note the distinction between proventure architecture and more recent structures dealing with uncertainty in another important way. Unlike earlier organization structure (i.e., adhocracy), or variants of it such as Handy's "shamrock" organization, where three levels of staff (core, contractual, and temporary) are distinguished, the proventure architecture is much more flexible, more unstructured, and more malleable.³⁰⁶ This is because in the proventure architecture the core evolves in reaction to, or in anticipation of the most pressing need (i.e. contingency), and can include temporary and peripheral staff as part of the shifting core. As the contingency is resolved, the group may disband, and another is created in response to the next environmental contingency. The coordination of activities by internal market principles entices engagement employees in the external service delivery to expand each customer's unique potential and create value for the organization by uniquely satisfying customer priorities (see Figure 6-4). As a consequence, the proventure structure is the most empowering of its employees in the service delivery as control shifts away from the administration to the independence of the worker.

This shift to worker control is crucial for strategic planning and firm sustainability because the power and autonomy rendered to employees at the lower levels in proventure structures expands the organization's potential for environmental scanning. Proventure knowledge workers in the external service delivery occupy crucial positions to detect changes in the market or external environment particularly as these changes occur in customer priorities. The quasi-autonomous relationship between knowledge service workers and the organization makes it possible for proventure structures to penetrate more broadly into the external environment than is possible for more traditional organizational structures. As a result, proventure structures create open boundaries for knowledge services particularly through the customer alliance integrating mechanism.

MOBILE WORKERS

The extent of such market penetration through customer alliances is highly reflected in the proventure structures' "mobile" employees, those operating out of remote offices. Of IBM's 330,000 employees worldwide, over 43% are considered mobile.³⁰⁷ In some divisions at IBM only a few employees, typically top executives and their assistants, actually have fixed desks and offices.³⁰⁸ As engagement personnel move from customer-site to customer-site, employees operate mostly from their homes. It is then possible to fulfill the primary goal of the proventure structure which is to get the engagement per-

sonnel as close to the market by extending the boundaries of the organization to form customer alliances and address customer priorities with as little hierarchical constraints as possible. Integrated Systems Solutions Corp., an IBM subsidiary that sells information systems to the business and public sectors is a case in point. The wide discretion and autonomy afforded workers to interact and explore the external environment extends the boundaries of the organization such that employees do not have a permanent physical location in the company. Instead, these mobile workers operate from their homes with only occasional visits to the company work site for special meetings and to secure supplies. Traditional office work activities are performed at the employee's home.³⁰⁹

This level of worker flexibility makes it possible for front-line engagement personnel to monitor specialized tasks and to operate as what Earl Sasser calls 'mini-factories'.³¹⁰ This is particularly noteworthy for global companies. Historically, IBM has also pursued a strategy of creating 'mini-IBMs' in various countries, adapting its offices and policies to each individual country. The mobility of the workforce has allowed IBM to take advantage of arbitrage opportunities in developing countries where salaries are lower.³¹¹ This is due largely to the employees being afforded the independence to produce and deliver the service individually and the inherent inseparability of production and consumption of the service.

Further, as proventurers and quasi-independent contractors, employees are in a most advantageous position to easily identify potential customer needs so that the strategy of the organization can shift to future service niches. Traditional employee controls are of little value in this work landscape in which the boundaries of organizations have been so radically expanded so that it is difficult for managers to set meaningfully measurable objectives around heterogeneous work. Some rudimentary controls can be imposed on empowered mobile workers, such as "spyware" in which electronic monitors can be built directly into the mobile workers transactions with the client to allow managers to log in at anytime to determine if workers are actually working or even showed up at the customer's worksite.³¹² These electronic monitoring systems can allow managers to exercise some control over the activities on mobile workers. However, closely monitoring workers every move with the use of cameras on computers, counting keystrokes or mouse clicks can be quite use but limited. This is because such external control systems focus on contingent or peripheral activities that are pertinent to the generation of value added solutions. Front-line engagement employees in proventure structures like IBM's require, instead, self-regulation or self-management for coordination and organization effectiveness.

COORDINATION BY SELF-MANAGED TEAMS AND INDIVIDUALS

It is becoming increasingly clear that the era of direct supervision seems to be ending. This is very pronounced in knowledge services. The generation of value added services requires autonomy and independence of workers. Managerial use of traditional process control mechanisms for proventure workers would simply undermine the quality of solutions to customer priorities because it restricts decision making at the lower levels in the interest of production efficiencies making it difficult for employees to initiate novel solutions. Proventure architectures overcome this issue by de-emphasizing process controls, and focus instead on internal market controls. This means less emphasis on the traditional value chain analyses that call for the separation of activities and responsibilities, and more emphasis on uniting activities in the knowledge worker's job. The fundamental heterogeneity and uncertainty inherent in the creation of value added knowledge services requires the integration of the "thinking and doing" aspects of the job; aspects that are generally separated in the traditional manufacturing work context for efficiencies.³¹³

The primary objective of the proventure structure is to operate as a market organizer on behalf of the customer. Work activities in these knowledge services firms are therefore focused around knowledge centers. The critical integration of the thinking and doing aspects necessary for generating value added solutions fosters worker control over the means of production and their independence. The act of building knowledge stocks is therefore actualized through self regulation or self-management, (individual or teams) as power and discretion are extended to workers who are in control to the means of production. Self-managed teams are the building blocks of the new emerging proventure architecture. In effect, proventure architecture is more accurately viewed as a set of teams whose members behave from self interest, but at the same time are aware that their destinies are heavily dependent on the survival of the team in its competition with other teams to expand their power banks within the internal market.³¹⁴

What Are Self Managed Teams In Knowledge Services?

In general, self-managed teams in knowledge services consist of task groups that are self-controlled or self-regulated and use collective cognition to solve problems.³¹⁵ It is a process of unshackling frontline engagement personnel in customer alliances from traditional management restraints that leads to the development of value added solutions to customer priorities. Many of the activities traditionally performed by managers are instead done by the

workers themselves. Managerial task activities, such as developing and presenting proposals to prospective customers, designing work methods in response to customer priorities, scheduling, deciding when and how to interact with customers, the nature of alliances established with customers, and the sorts of guarantees made to the customer, are performed by proventure workers in teams. Depending on the knowledge required to address specific problems, an employee may be a member of a team on one project and a competency manager on another project. In this way, self-regulation reduces the need for a lot of traditional coordination and control. While teams still tend to have some form of a competency manager, the focus shifts to managing the project versus managing the employee. What little coordination exists in proventure structure is largely undertaken by the operating unit managers.

As an integral part of knowledge solution team, operating unit managers assist in team self-set goals, team self-set criticism, team self-set planning and job assignment.³¹⁶ In IBM Global Services, for example, that sells information systems, coordination amongst its knowledge workers is done by what the firm calls “opportunity” managers or “practice” leaders whose task it is to assign employees to jobs based largely on availability or people and skill level. Regional practice managers establish the teams by matching skills to the demands of the project. Since the focus is on customer solutions, an employee in the Northeast of the U.S., for instance, with special skills may be assigned to a team on the West coast if this is in the best interest of fulfilling customer priorities. Teams tend to be heterogeneous in their composition with a range of knowledge workers across functions, disciplines or specialties within internal markets. Thus, the team has access to knowledge resources in order to provide a more complete service solution to customers and create value and profitability. It is predominantly for this reason that the proventure architecture makes it possible for autonomous teams to operate as quasi-independent units within the internal market, a feature that gives knowledge services, such as IBM Global Services, its unique distinction as a set of self-managed service centers. Further, the self-managed team, as a critical pillar to the generation of quality knowledge solutions in internal markets, attracts the brightest people and gets the best out of them in terms of effort, creativity and flexibility.

However, this structure is not without its risks. When employees from one unit are transferred to another, the firm must ensure that an appropriate transfer price is being paid. The ultimate goal is to increase revenue for the firm, not the business unit. If incentives are only aligned with business unit objectives, this could present a conflict of interests for employees being asked to move between units. The recognition of sales to other business units must also be considered when incentives are created and employees are transferred. Failure to do this could result in employees not helping other departments, refusing to join another unit, or misallocating resources.

The Self Managed In Generating Value-Added Services and Stocks

It is becoming increasingly clear that the sustainability of service organizations is largely dependent on the firm's knowledge stocks, particularly tacit knowledge, because tacit knowledge is more difficult for competitors to imitate. Since it is often difficult to generate knowledge and value added service solutions without ideas from others,³¹⁷ proventure architecture is advantageous in fostering interactions by its emphasis on self-management. Proventure structure with its internal market provides self-managed individuals or teams the means to leverage exchanges with others. Access to new ideas and resources bolsters the potential for quality and better solutions for customers, as well as the building of knowledge stocks. Such access also serves to diffuse knowledge throughout the organization and increases returns, that is, unlike a tangible product that decreases in value the more it is used, the value of knowledge services often goes up as more people use it.

The knowledge, tacit or otherwise, in the employee's possession is of greater benefit when it is incorporated with new knowledge to generate novel insights or even more value added knowledge stocks.³¹⁸ Additionally, in an internal markets landscape, self-managed workers are required to be enterprising as they focus on innovation and novel solutions for building future knowledge stocks. It is primarily for this reason that self-managed units or individuals are induced to exchange with others in creative ways. Such innovative behaviors may often require that self-managed teams carve out their own niche within the internal market by providing value added services to internal customers (other employees) or directly to external customers of the firm. As a consequence of asserting their autonomy, the team can take more risks on new perspectives in order to be innovative in creating value added services. Here we expect deviations from prescribed service activities in a manner that creates value to customers and benefits the team or employee.

It is important to note that while deviations are encouraged and even expected in knowledge services, this is a far cry from how the concept is viewed in traditional hierarchies. In traditional hierarchical organizations, deviations by self-managed teams can be problematic because the main goal is to create cost efficiencies by perfecting the process leading to outcomes. The traditional hierarchy only allowed compliance to prescribed scripts and rules in a command and control work landscape, making it difficult for teams to initiate value added solutions. One of the major drawbacks to gaining full value for self-managed workers in traditional structures is the tendency of service managers to view the teams' exploratory solutions with suspicion or even as rebellious acts which are likely to be discouraged.³¹⁹ The net result is to inhibit the creativity of self-managed workers for the generation of value-added services to customers. Proventure architecture reduces such barriers because it not only gives workers the right to sell resources and access the proceeds of

exchange, but also empowers workers to innovate to meet needs. As owners of knowledge, teams are allotted the authority within internal markets to sell their knowledge through exchanges with others. Workers also share in the proceeds from such exchanges by the build-up of knowledge stocks within the unit's power bank, which may affect their compensation and employment mobility. Further, existing solutions, particularly successful solutions, have been known to impede enterprising behavior in traditional hierarchies.³²⁰ This is not the case in internal knowledge markets of proventure architecture. Within internal markets, enterprising self-managed workers realizing the need for continuous change must adhere to the fundamental mantra that if a solution is working successfully, then it is precisely the time to change it in order to sustain value. Put simply, if it isn't broken, fix it. It is within this frame that IBM has begun to encourage its engineers to anticipate customers' needs and generate novel solutions to address future customer priorities not just current ones. Using advanced analytics software, IBM engagement personnel can generate crucial knowledge about potential markets for their external customers and future demands of such markets.³²¹

While the internal knowledge markets of proventure architecture offers workers the potential to create new knowledge and receive recognition, it provides invaluable sources of both extrinsic and intrinsic motivation that are self-sustaining. More importantly, proventure architecture prevents the crowding out of intrinsic work motivation. The issue of crowding out occurs when an individual feels forced to behave in a specific way; the motivation for the person's behavior shifts from inside the person (intrinsic) to factors outside the person (extrinsic). As a result of this shift, there is a decrease in the individual's intrinsic motivation, which can have adverse effects.³²² It is widely believed that people are truly motivated by intrinsic factors such as the work they do, achievement, personal growth, and recognition. In proventure architecture, the crowding out of intrinsic work motivation need not occur. This is because workers own their tacit knowledge and have the right to sell or not to sell their knowledge, strengthening their feelings of internal control or self-regulation. The independent nature of proventure workers along with the autonomy granted to them in selecting projects, choosing with whom to exchange resources, and determining the level of their time to invest all suggest that crowding-in rather than crowding-out will occur. The implication here is that crowding-in is associated with an increase in intrinsic motivation and occurs when there are stronger feelings of internal control over what workers actually do.

THE ADMINISTRATIVE FUNCTION

As the pronounced transformation of the work landscape progresses, the administration in proventure architecture is radically different from the traditional command and control approach. Proventure management is no less crucial in the effectiveness of knowledge organizations, but has evolved in response to what is dictated by internal markets. While internal market principles are crucial in the generation of value added solutions in the proventure architecture, these structures do not operate as pure free markets. The activities necessary to generate solutions in knowledge services do indeed resemble market relations. This includes demand uncertainty as well as the desire of workers to capture some of the benefits associated with their valuable knowledge. However, the employment contract constrains the employee's interactions to authority relations.³²³ It is for this reason that internal markets are not pure markets and management has a major and pivotal role to play in the performance of these structures.

Managers' Role: Internal Market Stability

In spite of the empowerment of self-managed teams and units, management still has to regulate internal markets. The administrative unit acts as an oversight to keep the internal market from getting out of control and has the difficult task of stabilizing the internal market to foster cooperative behaviors and reduce disruptions. To this end, management is mainly concerned about the overall costs of the generation of knowledge as well as the investments necessary for changing patterns of demand in these organizations. Although many factors can cause internal market disruptions, the most significant factor is the insolvency of the "power bank." In exchanges for the generation of knowledge, employees (buyer and sellers) make estimates about the general state of the internal market in terms of those in possession of potential value added knowledge. As a bartering system, employees adjust their actions as they see fit in accordance with their estimates of the internal market, resulting in binding obligations in exchanges. Binding obligations to others become a sort of currency stored in the power bank. When there is rapid and widespread insistence on binding obligations by employees, calling in their chips, both users and sellers, this taxes the capability of the power bank to fulfill all its legitimate obligations.³²⁴

Management has to deal with the occurrence of such potential internal market disruptions because of the inherent heterogeneity of service solutions. There is no exact way to determine the precise value of solutions. Employees who need the knowledge are consumers of it and cannot readily observe or

determine the exact appropriate activity being supplied. The supplier is well aware of the buyer's disadvantage. The supplier thus has an incentive to ration such knowledge or effort, particularly when constraints are placed on exchanges. This principle of "low balling", as discussed in Chapter 2, shifts risk away from the seller of the knowledge and allows the cost of binding obligations to be covered by the buyer. Increasing dependency or excessive binding obligations will signal to management the changing demands within the organization as employees supplying the knowledge can price themselves higher than comparable suppliers outside the organization. Management will have an incentive to further hire more workers or retain its current ones.

Management is actively involved in maintaining stability of the internal market by reducing bargaining unfavorable to others. This disruption in the bartering system can create vicious cycle patterns as others may be stimulated to make similar demands and thereby impairing the power bank.³²⁵ Vicious cycle patterns place inflationary pressures on the power bank as the overall value of fulfilling normal legitimate binding obligations increases. Rising inflation refers to the many employees, as internal buyers, who put interactions (purchases) with others on the back burner. This has the adverse effect of deleveraging or shrinking the quality of service solutions and the amount of knowledge stock within the firm. Management has to invoke sanctions to discourage such leveraging behaviors because of the potential for dissatisfaction among employees and the disruption of the power bank. In this way, management is central in exercising direct supervision of units. Individuals maintain close watch of key parts of the internal market system to access information as necessary for internal stability. Regulatory action by management is of great symbolic importance to prevent manipulative exchanges.

Managers' Role: A Focus on Enhancing Customer Alliances

One of the advantages of the proventure architecture is that it expands the boundaries of the organization to actively include the customer in the external service delivery. As a part of the team, the external customer becomes not only captive but is generally much more receptive to new solutions. As a team member, the customer is partly responsible for the eventual valued added solution and their own satisfaction with the service. Such responsibility is essentially an investment which increases the exit barrier for customer. However, customers can exit the firm through another important way—employee turnover.

Employees in knowledge services control the development of their own tacit knowledge and thus their mobility. Since workers own the means of production, the social contract of company loyalty in knowledge services is disintegrating and fast becoming a thing of the past. Lurking in the framework

of the proventure architecture is the potential for knowledge workers or teams to exit the organization, taking with them not only the firm's means of production but valuable customers as well often to start new firms or join other organizations. Customers cannot be forced to return to the original company and will remain loyal to the individual service provider or engagement personnel. For example, the traditional notion of lawyers bonding with law firms is clearly a thing of the past.³²⁶ This can be a problem for the organization. One adverse effect is that the organization is not only losing valuable resources but if the newly independent unit succeeds; it is likely to become attractive to the current employees of the parent company and cause more defections within the ranks.

The other important effect concerns the loss of customers. Mr. Maurice Saatchi's departure from Cordiant' PLC' s Saatchi & Saatchi Advertising Worldwide to form his new company, M&C Saatchi, was a loss to Cordiant PLC. The new start-up took British Airways, which had an 11-year relationship with Saatchi & Saatchi Advertising Worldwide. Further, the new M&C Saatchi was run by former executives of Saatchi & Saatchi Advertising Worldwide.³²⁷ When departing employees also take customers with them, this may be a signal to other customers that something is amiss within the organization. Engagement of employee turnover in knowledge service is critically important because these employees represent not only the tacit knowledge capital/social capital but also the face of the firm and can directly affect the customer alliance in the service delivery as customers begin to have second thoughts about the value of solutions being provided. Managers have to constantly bear in mind that the more intangible the service solution, the more reliance customers place on the credibility of the organization. Credibility can be a major problem because credibility is a precious commodity which can be depleted or increased and is particularly subject to rumors, as Bear Stearns, the investment firm discovered. The loss of customers becomes an additional bit of information which other customers will invariably take into account in their relationship with the organization.

The potential ease with which valuable employees can depart is an inherent paradox of the proventure architecture. The value creation of this design is possible only if extensive autonomy is disseminated to employees and teams in the service delivery so that full value can be realized. However, in so doing, customers also become the domain of the employee or team, thereby establishing a process of easy exit. To reduce customer exit, managing directors along with their managerial teams must expend effort developing relationships with customers independent of the alliance which lower level engagement employees already have established with these customers. This is important because it sets up a dual link to the customer and creates an additional barrier to customer exit. Both Shelly Lazarus and Charlotte Beers, former president and chairman respectively, of Ogilvy & Mather worldwide, the

large advertising agency, were widely recognized as being exceptional at managing both employees and customer relationships. By providing secondary services through customer relationships, the company not only attracted new accounts such as I.B.M. with \$600 million in billings, but has been able to maintain large customers such as American Express and AT&T.³²⁸

Another common barrier to exit is the transfer of ownership to key employees in the form of early stock options, profit sharing and bonuses. Ownership of this sort is fundamental to the internal market of proventure structures due to its reduction of turnover and allotting workers an appropriate portion of the rents created by their knowledge. However, while these kinds of appropriations are quite useful, nothing reduces flight of employees and customers more effectively than the organization's credibility. More than anything else, credibility of the firm enhances the perceived value of tacit knowledge possessed by workers themselves in the organization. The importance of maintaining a reputation can be illustrated through the percentage of revenues spent on advertising. In 2007, IBM spent 1.26% of its revenues on advertising compared to only 0.27% spent by Accenture. Even though these two firms have not traditionally spent a large percentage of their revenues on advertising, it is important to communicate value, particularly since the service is intangible. See Table 6-2 for a breakdown of advertising expenses.

Table 6.2. Advertising Expenses as Percentage of Revenue for Service Firms³²⁹

	Nike	Microsoft	IBM	Bearing Point
2007	11.7%	2.60%	1.26%	0.72%
2006	11.6%	2.78%	1.31%	0.62%
2005	11.6%	2.50%	1.41%	0.61%

The above table also illustrates the difference in advertising expenses for a manufacturing firm such as Nike compared to the three service firms. Additionally, the table highlights the differences between Microsoft, a problem focused firm, and IBM and Bearing Point, both lateral differentiators. Microsoft and Nike's advertising costs are significantly higher since they are targeting the mass consumer. On the other hand IBM and Bearing Point sell their services in a B2B context, where the final decision maker is targeted through more direct channels. It is important to note that it is equally important for all

four firms to maintain their reputation through advertising, regardless of the channels used.

On the far extreme end of advertising expenses lie many hospitals and healthcare firms. These companies have long declined to advertise in the name of professionalism and industry standards. As a percentage of revenues, healthcare companies advertise very little, but rely on other means to maintain their reputation. Individual doctors often do this through referrals from current patients and other do. Hospitals maintain their reputation not only through their doctors, but frequently through other local community organizations.

Managers of proventure structure must devote enormous efforts building and maintaining the reputation of the organization. The more intangible the service output, the more important this becomes to realize value. With a strong reputation, customers may be enticed to stay with the firm when engagement personnel depart.

In essence, the administrative unit is concerned with two functions: secondary alliances with major customers within the external service delivery and fostering a closer relationship between management and providers in the external service delivery.

MANAGERIAL ROLE: A FOCUS ON BUSINESS PROCESSES

Processes are established by the administrative unit to exercise quasi-control and coordination of the organization and the primary mechanism for doing this is the information technology. Proventure workers tend to be willing to take risks, which is encouraged by the internal markets. Since proventure structure empowers its employees, management has to demonstrate that the firm's technical process can be as effective at monitoring units, centers, or individuals to the same extent that they empower them. In a sense, the information system assists with internal service delivery, provides unrestricted access to stored knowledge stocks, and acts as an added monitor on unit performance. Information is provided to the units, for instance, about budget goals so that there is some semblance of centralized control at the administrative level in a structure that is essentially decentralized. What the administrative team seeks to do is prevent the units from moving into directions at odds with the firm's overall mission. Departments or units do not therefore operate as pure profit centers but instead as proventure teams, mainly because of their dependence on the administrative unit.

Thus, although discretion needs to be afforded the units in proventure architecture, it is important for the organization to compensate for this potential loss on decision control by strongly formalizing non-contingent activities which are important but peripheral to the core tasks performed by the worker

or unit. Participation in staff meetings by software engineers is peripheral to writing line code. In a hospital operating room, discretion of the surgeon is high regarding critical technical (i.e., contingent or core) aspects of the surgery, although any given operation is tightly bound by an explicit framework of written procedural specifications and rules (for example washing of hands, going over procedures with associates before surgery, etc.). It is imperative in proventure architecture that internal markets must be accompanied by increased standard procedures and documentation designed to maintain control and consistency of performance.³³⁰ Hence the paradox – the more discretion afforded workers in knowledge services the more controls are needed. It is within this context, for example, that processes such as “spyware” – the electronic monitoring system attached to workers’ computers – are established by management to control mobile workers. Such objective control procedures provide an upward flow of information in internal markets which serves to indicate some degree of willingness to comply with organizational requirements.

Managers’ Role: A Focus on Informed Construction in External Service Delivery

Clearly, the key to the proventure architecture is the external service delivery. This is a structure that focuses on employee performance in the delivery system, while extending the traditional boundaries of organizations in their relationship with customers. By pushing control down and out to engagement personnel, including mobile workers, the effectiveness and survival of the organization directly rests on the performance of the front-line employees. Workers control the means of production and are largely responsible for the development of their tacit knowledge stock. It is the worker’s business and not so much the business of the firm they represent. The power and the quasi-independence of the front-line engagement personnel can be seen in the way engagement personnel in these structures take ownership of customers and their priorities. It is not unusual for employees to refer to customers as ‘my’ customer, client, patient, or student. The importance of this cannot be overstated because external customers do business with the engagement personnel in the alliance. This is critically important in proventure structures because it further symbolizes not only the employee’s independence in the organization but the recognition of their responsibility in building the reputation or brand of the organization. It is for these reasons that managers in proventure architectures must pay so much attention to employee quality, primarily at the input of the service delivery, including the hiring and retention of quality engagement personnel particularly those who are capable of working independently and collaboratively.

One of the managerial mechanisms that has long been thought to be effective in controlling the self-managed and to reduce control-loss is the notion of trust.³³¹ Trust is taken as the faith or belief in the fulfillment of some future dependant and expected transaction. For the organization, trust suggests an acceptance of potential risk in employee self-management when knowledge workers cannot be readily monitored or when the employee needs high amounts of discretion to deal heterogeneous customer solutions. The self-managed knowledge worker's discretion and the service organization's uncertainty of success around the worker's activities invite suspicion of behaviors that may be contrary to those of the organization. In a sense, the very notion of trust emerges out of distrust. This leads to the conclusion that employees should not be trusted in knowledge services.

Fundamentally, trust can be segmented into two types: routine and basic.³³² Routine trust is "limited trust" which is pervasive where there is information uncertainty about what might occur but there is little uncertainty regarding how the service task, once decided upon, should take place. For example, a programmer may not be able to predict specifically just what customers will request (problem input) but when such requests are made, they can be readily handled. Routine trust develops in these everyday relationships and is built up naturally over time from repeated transactions as participants are able to make predictions about one another. What emerges is a set of role expectations carrying obligations or responsibilities. Control-loss for managers is minimized because the employee has demonstrated bonding activities and appropriate performance, allowing monitoring to be reduced. Additionally, the upward flow of information (e.g., from customers) would make a lack of compliance quite apparent to superiors.

Basic trust consists of obligations which surround internal market relationships where there is heterogeneity around problem solutions. Basic trust can be established by management where knowledge workers are entrusted with relatively large amounts of discretion or responsibility due to the use of self-control. Under these conditions, trust has the potential to enhance the effectiveness with which self-managed knowledge workers go about generating value-added solutions. The very existence of basic trust results in position of vulnerability for the organization and "the more complete the trust, the greater the potential gain from malfeasance" particularly in the short run.³³³ Thus, given the potential malfeasance on the downside, managers of proventure architecture don't generally encourage nor do they have specific and reliable mechanisms for developing basic trust.

While procedures exist within internal markets to facilitate effective control such as the screening procedures or prospective employees for ideological similarity, basic trust is given selectively with high initial investments required both the organization and the knowledge worker.³³⁴ Basic trust is employed as a control mechanism only for knowledge workers who have

demonstrated good performance and who have established close relationships with managers. The development of such close relationship is not costless because close surveillance by the supervisor of the worker's activities is required along with bonding activities by the worker. Under conditions of solution heterogeneity where the quality of solutions are difficult to ascertain, there is a focus on "effort" by the worker as a bonding mechanism. Knowledge worker's efforts not only become a bonding mechanism, but more importantly serve as a substitute for performance. Consequently, while it may be difficult for the manager to directly observe actual job performance in internal markets, activities such as the availability of the knowledge worker, willingness to serve, and demonstrated ability on peripheral activities will become important for developing bonds. Essentially then, basic trust demands costly investment in monitoring activities by managers and bonding activities by knowledge workers.

In order to enhance high quality solutions the proventure structure allows for the building of routine trust in the relationship between the organization and employees but also between engagement personnel and customers. This sort of routine trust can be particularly important in cases where customer priorities require laterality or holistic solutions. Much of the knowledge necessary for the development of lateral solutions is often of a confidential or sensitive nature. Customers will generally feel much better in divulging this sort of information when routine trust is established in the relationship. RHR International, a coaching firm based in Chicago, provides coaching services to executives and managers of major companies who may have blind spots and can benefit from a detached observer. Personal training is a growing knowledge service industry that promises the rehabilitation of talented managers with whom, because of gaps in their personality, no one wants to work. RHR International employees or coaches have the independence of establishing alliances that can last two years and involve fact-finding interviews by the coach with dozens of the executive colleagues, customers, even families in order to offer laterality by incorporating various aspects of the customer as a total or holistic product to generate solutions to the improvement of interpersonal skills.³³⁵ The establishment of a routine trusting relationship is time consuming. Given this investment of resources, substitutability of employees in knowledge services would be largely counter-productive and not cost-effective for the organization. Proventure structures do not foster substitutability of employees in alliances with customers which allows routine trusts in customer alliances to evolve and enhance the development of value added solutions.

The customer alliance is the fundamental unit that adds value to knowledge services and sustains these organizations. To be effective, it is imperative that any architecture for knowledge services must begin and end with the customer alliance. As a relationship that is dependent upon continuous nego-

tiations between parties for producing value added services, the customer alliance is best conceived as one of reciprocal interdependence. Both parties need the other in order to define and meet their mutual interests—value added services. Managing interdependencies in proventure architectures signals that solutions are not mere descriptions of the way things are, or what works, but instead represent meaningful constructions that parties form to make sense of the situations they are in. Such are shaped not only by expectations, but also by the values of the parties which are inextricably linked to the costs, psychological effect, and social contexts of the customer alliance.

SUMMARY

It is becoming increasingly clear that 20th century ways of organizing knowledge services are largely ineffective. The work landscape of expanding knowledge services cries out for new ways of structuring proventure workers. The “proventure structure” is an alternative architecture to the traditional 20th century hierarchical model for controlling knowledge workers. Coordination and integration of activities within the proventure architecture is accomplished through internal knowledge markets as workers cooperate in the generation of customer priorities through exchanges. Proventure architecture is based on the notion that employees are the primary means of production in knowledge services and enable these workers to build valuable assets by leveraging knowledge through the interaction with other employees and customers. Within the proventure framework, systemic generation of tacit knowledge-stocks is realized therefore through integrative and coordinative skills to foster revolving and evolving teams of workers throughout the organization. The high degree of horizontal decentralization in the proventure architecture is represented by employees from different specializations that are formed based on customer priorities. As a result, there is a dissemination of requisite dialogues and exchanges among the various interests throughout the organization the generation and leveraging of tacit knowledge invariably entails. Further, such exchanges within proventure structures foster worker creativity in the building of knowledge stocks within the organization. Proventure architecture makes it advantageous for workers to seek out those whose contribution may increase value-added solutions to customer priorities.

Proventure structure extends the boundaries of knowledge services by actively incorporating the customers and their alliances with workers as indispensable factors of production. With an internal market focus, proventure architecture overcomes the inherent contradiction of corporate entrepreneurship which has plagued traditional hierarchies and, as such, proventure structures increase the potential for the firm to optimize the investment of stakeholders in the generation of value added solutions. While there is heavy reliance on

employee self-management in proventure architectures, the role of management involvement in the structure is not insignificant. Proventure structure allows managers in knowledge services to more accurately focus on how knowledge is actually created particularly knowledge of the tacit kind. This means, for example, less emphasis on the traditional value chain that calls for a separation of activities and responsibilities (Fred Taylor 20th century production notions) and more emphasis on uniting activities in the knowledge worker's job. This allows for the integration of the "thinking and doing" aspects of the job that is more realistic within knowledge service context. Proventure architecture also allows for emphasis on the building of teams that can be both rewarding and necessary in uncertain environments where knowledge is generated

Management is crucial in maintaining the internal stability of the organization rules and process control mechanisms to reduce inherent tensions that emerges in the bartering and exchanges of intangible assets. Perhaps the most important value of the proventure architecture is that it aids managers in achieving their overarching role of developing a fit between the environment and the organization as well as among elements within the organization. Proventure architecture provides managers with a better understanding of the impact of customer alliances have on building firm competences and how those competencies can be leveraged to create effective competitive strategies.

CHAPTER 7

THE INTERNAL PROMOTION OF IDEAS

Abstract

This chapter specifically addresses internal marketing of tacit knowledge. Internal marketing is the promotional activities within knowledge services wherein employees work to “sell” knowledge which is “bought” by others. The implementation of internal marketing campaigns for developing value-added solutions within knowledge services is explored. The promotion of component private knowledge within the organization to increase the internal awareness of trading partners and the expansion of human capital assets for the building of knowledge stocks for organization competitive sustainability are presented.

“I used the Olympics as a front. What I was doing, without telling anyone, was getting computing resources. I also thought the fastest way to get IBM to change was to work from the outside in. If IBM saw itself written about in the papers, then it would change faster than if we got mired in an internal process.”³³⁶

- David Grossman, IBM

“If you think of yourself as being in a box with boundaries, you’re not going to have any breakthroughs. If (people on my team) come to me and say ‘we failed because we didn’t have the authority to do something’, I’ll say that’s crazy.”³³⁷

- John Patrick, IBM

Note: Patrick and Grossman are two employees who helped bring the power of the Internet to IBM

Patrick and Grossman summarize the challenges faced with promoting radical ideas within an organization. Building support, using appropriate channels, and communicating the need for your ideas are very risky ventures. As discussed in chapter 4, the internal market plays an important role in creating alliances, making tradeoffs and reciprocating favors. In 1994, as Patrick and Grossman began to push the idea of the Internet as a competitive and communicative tool through the hierarchy of IBM, they found themselves up against many obstacles and barriers to success. Through the use of many tactics that are discussed in this chapter, they successfully transformed IBM into a market leader in e-business.

IBM ADOPTS THE INTERNET

Ironically, the genesis of IBM's involvement with the Internet began with its inability to capitalize on its sponsorship of the 1994 Winter Olympics. UNIX had already begun using the Internet to communicate to external consumers, including posting Olympic results on its web sites. David Grossman, then a mid level IBM employee, discovered this the hard way, by finding his company being ambushed online by UNIX.³³⁸

Spurred by this discovery, Grossman began trying to sell his idea to IBM's marketing department. Ultimately, this led to a partnership with John Patrick, who at the time was head of the ThinkPad marketing division. Patrick immediately recognized the potential influence of the Internet and would serve as an internal champion for the idea. He would be able to use his influence to arrange meetings with VPs and other top executives.³³⁹

The process began slowly, as Grossman and Patrick began to build a community of supporters throughout the organization. It is important to note that they built support for their idea from the ground up. Rather than immediately taking the idea to top management, they knew it would have a better chance of adoption if it had the momentum of numerous divisions, departments, and employees. Top management could ignore two midlevel revolutionaries, but not an avalanche of internal support. By the time management would make a final decision, the idea would have been proven numerous times and have demonstrated successes. As with any transformational idea, there is a risk of failure. Starting small allowed Grossman and Patrick to perfect their pitch and gain a better understanding of the potential of the Internet. Mistakes could be ironed out and corrected before top management implemented the idea. The idea was truly risky, yet powerful. At this time, Microsoft and others had yet to discover the power of the web for consumer commerce. The Internet had not been proven as a selling tool and few people had ever been to a web page.³⁴⁰

Early successes were achieved and support was built through presentations to IBM officer's meetings and at technology conventions. Involvement in these programs provided an impetus for the Internet team to acquire resources and devote efforts towards a common goal. It served to energize those working for implementation by betting big on the idea. Through these conventions and executive meetings, Grossman and Patrick vigorously promoted their idea, refusing to miss an opportunity to sell it to anyone who would listen. They were not afraid of exceeding formal authority and breaking rules to gain support.³⁴¹

As Internet projects began to take shape, Grossman and Patrick wanted their idea to become integrated within the culture of the organization. Tying into their idea of building momentum first, they realized that the integration could not work if the project was housed in its own separate department. As

an idea that would transform the entire organization, it is essential that buy in is received from all members of the organization.³⁴²

IBM's full adoption of the internet came full circle as they prepared their computing resources for the 1996 Summer Olympic Games in Atlanta. Two years after the idea was hatched by Grossman, the IBM team had planned dynamic web pages with scoring updates and information as part of their Olympic technology sponsorship. Gathering over 100 employees and three supercomputers, Grossman and Patrick's idea now had significant influence over marketing and corporate strategies. They also had results. During the Olympics, IBM's websites were receiving 17 million hits a day, with minimal disruptions and were receiving \$5 million of ticket sale orders. IBM had gone from an organization, clueless about e-commerce, to a market leader, primarily because of the successful internal marketing of a powerful idea.³⁴³

The resources that a knowledge service organization has at its disposal are most important in any consideration of how to best manage for success. This is a way of managing from the inside out; an approach which provides the firm with not only the ability to spot unexploited and cutting-edge knowledge stocks, but to set the firm apart from competitors.³⁴⁴

Generally, organizations maintain competitive advantages when the resources in the firm's possession are unique, and difficult to imitate by competitors.³⁴⁵ This framework is fundamental for managers in developing strategies and profitability, projecting returns on innovation,³⁴⁶ determining core competencies,³⁴⁷ and sustaining competitive advantage.³⁴⁸ However, in knowledge service organizations, competitive advantage results from the use of knowledge competencies which have a lot of uncertainty inherent in their structure³⁴⁹ and the firm's resources are protected by knowledge barriers.³⁵⁰ Specifically, these organizations must focus on the impact of tacit knowledge, which is more difficult to imitate and, in turn, will lead to enhanced firm performance as research has suggested.³⁵¹ Thus, in order to achieve competitive success, managers in knowledge services should focus on exploiting their tacit knowledge stocks.

It is important to note here that all knowledge firms tend to possess a large degree of explicit knowledge, as continued educational training is a vital part of these firms. In 2007, IBM spent over \$600 million on worker education and training. This included task-specific training as well as monies paid to employees to go back to school to further their education.³⁵² However, the possession of explicit knowledge stock alone is not enough to yield a significant advantage, since explicit knowledge can be codified and therefore more easily duplicated by competitors. We know that the exchange and leveraging of ideas to generate novel solutions to customer priorities is an important aspect of knowledge production. It is also well known that the creation of solutions requires a high degree of co-production, in which customers are actively involved in creating the products that they will be sold.³⁵³ But co-production

itself creates new challenges for managing knowledge services. The interaction between the firm and the customer places knowledge development outside of traditional boundaries of the firm and, as employees interact with customers, adds new experiences to the employees' base of understanding or tacit knowledge. As a result of this, we find tacit knowledge dispersed among the employees and scattered throughout all reaches of the firm,³⁵⁴ even extending to knowledge held by customers. The challenge faced by knowledge service firms then becomes how to help employees locate the tacit knowledge they need, facilitate the exchange of this knowledge between employees and customers, and capture the overall value of this knowledge at an organizational level.

Compounding the problem is the very nature of tacit knowledge itself. Because it is private knowledge, tacit knowledge is difficult to separate from those in possession of it, making it less accessible to others.³⁵⁵ It is also quite "sticky," because it is valuable and does not flow easily from one person to another.³⁵⁶ People in the world of work simply do not part easily with assets they perceive to be valuable; making it difficult to locate tacit knowledge within the firm.³⁵⁷ These factors serve to increase the switching costs of tacit knowledge³⁵⁸ in traditional hierarchical organizational forms and to undermine the inter-employee exchanges that are so critical to the generation of novel solutions and the development of knowledge stocks within the organization. The challenge for people in knowledge service organizations is to find those in possession of valuable and exchangeable tacit knowledge. Fortunately, proventure architecture provides a radical approach for addressing this issue.

INTERNAL MARKETS FOR KNOWLEDGE SHARING

In the proventure architectures of knowledge services, component tacit knowledge represents assets and therefore can be taken as investment capital or exchangeable incentives. This is based on the notion that the effective generation of novel solutions or knowledge stocks within the firm requires the recombination of know-how and information³⁵⁹ as current knowledge stock is integrated with newly acquired input.³⁶⁰ For as Leonard-Barton has noted, few, if any, knowledge service employees are capable of generating novel solutions without incorporating knowledge from others.³⁶¹ The decision to access or utilize this knowledge is guided by the consequences or outcomes of such exchanges.³⁶² Therefore, workers need to leverage and reconfigure their component tacit knowledge through exchange networks in order to generate novel solutions to customer priorities and grow the knowledge already in their possession.

The idea of internal market exchanges is clear throughout Grossman and Patrick's campaign for IBM's adoption of the Internet. As assets were needed to build the infrastructure of people and computing resources, Patrick would frequently ask general managers for their most talented employees and best computing equipment. In exchange for these most valuable resources, managers knew they would get a unique solution that would provide their department with internal and external recognition. Frequently, these solutions would lead to a competitive advantage in the external marketplace.

To the extent that workers control the means of production in knowledge services, given that the tacit or private knowledge possessed by employees is valued, scarce, and asymmetrically distributed in these service organizations, employees will be induced to enter into exchange with other employees in the generation of solutions. It was noted in earlier chapters that the use of traditional 20th century hierarchies to coordinate or facilitate such exchanges is inappropriate and of little value because managers have relatively less knowledge than their subordinates and such tacit knowledge is difficult to transfer upward.³⁶³ In knowledge services, there is information asymmetry in favor of workers, who control the means of production in these organizations. Traditional structures are appropriate in relatively predictable situations wherein management can specify behaviors and tell workers what to do. Switching costs are thus likely to be high because users (who are also often the buyers) of component tacit knowledge cannot easily change suppliers when they are leveraging that knowledge for novel solutions. However, switching costs are likely to be lower in quasi-internal markets because of inherent forces in these architectures. This has led to the use of proventure architecture and quasi-internal markets as a more effective way to coordinate the exchange of tacit resources in knowledge service organizations.³⁶⁴

In a departure from 20th century hierarchies, coordination through internal markets demands accountability of employees along with proventureship, which are necessary requirements for autonomous knowledge employees or units to operate effectively. This concept is in line with Halal's³⁶⁵ notion that autonomy (decentralized accountability) and entrepreneurship (innovation) are integral features of market structures. The quasi-internal market of proventure architecture is a coordinating mechanism that facilitates acceptable processes in the exchange of knowledge within the organization and ensures an ongoing pattern of distribution of both tacit and explicit knowledge among employees. In essence, the coordination of employees is not left solely to hierarchical mechanisms, but to the coordination among internal market forces as well,³⁶⁶ resulting in a work landscape where the transfer of tacit knowledge is less costly, the knowledge itself is less "sticky," and the transfer process is less uncertain in its application to productive activities than in traditional hierarchical structures.

However, some challenges remain. Since component tacit knowledge can

be found throughout all reaches of knowledge service organizations, and is asymmetrically distributed, those in possession of private or tacit knowledge need to identify potentially advantageous leveraging networks and tailor their investments to these segments of the organization.³⁶⁷ This idea of creating an internal monopoly is illustrated by Grossman and Patrick's Internet team at IBM. As the sole source of this knowledge, they were able to leverage this position within the internal market to receive the best engineers and equipment. The inherent reciprocity allowed the Internet team to acquire influential people, while providing significant value to departments throughout the organization. Even with the monopolistic power, the positioning of the team enabled the acquisition of influence for the idea. Although department managers were losing resources, Patrick states, "We have never been a threat to any other part of the company. From the beginning, our goal was to help IBM become the Internet Business Machines company."³⁶⁸

Invariably, those in possession of tacit knowledge have to market their assets to potential users because few if any knowledge service workers are capable of generating novel solutions without incorporating knowledge from others. This notion of the internal marketing of knowledge may entail elaborate promotion and selling schemes by supplier employees. This phenomenon can be seen in the trend of incorporating teams into the knowledge service workplace. Firms frequently assemble groups of employees, wherein each member has a different level of experience and knowledge. This tactic allows information to be shared amongst the team and serves as a method of employee evaluation and promotion. Essentially, internal promotion is a method used by proventurers which adopts marketing techniques to secure buy-ins from other employees (internal buyers) involved in the generation of value added solutions.³⁶⁹ In the following section, we examine the process of identifying leveraging partners who may be helpful in the promotion of component tacit knowledge and the generation of novel value-added solutions to customer priorities.

INTERNAL PROMOTION OF TACIT KNOWLEDGE

In internal knowledge markets, the tacit knowledge possessed by workers and customers is of little potential value unless others within the organization are aware of its existence. This fact is one of the driving forces in proventure architecture when determining the extent to which knowledge will be shared throughout the firm. Novel solutions are more likely to emerge and knowledge stocks generated when existing component knowledge is used, exchanged, or invested. In order for this to occur, however, potential stakeholders must be aware of those people within the organization who possess relevant tacit knowledge. In proventure architectures, this can be facilitated

by workers with knowledge internally promoting their assets within the organization (i.e. internal organizational promotion). This is clearly exemplified by IBM's Web 2.0 program which encourages user-generated content to be communicated widely throughout the company. At IBM, employees are not only capable of posting their ideas but can attach their resumes to indicate particular skills for legitimacy.³⁷⁰ Such a practice reduces the proprietary nature of component tacit knowledge and lowers switching costs as buyers (users) in the exchange networks become aware of and have access to a wider array of tacit knowledge. This, in turn, gives rise to the notion of "increasing returns" previously mentioned: the value of knowledge is likely to go up as more people use it.

Internal promotion or marketing is an enabling mechanism for building competences³⁷¹ and consists of individuals or units communicating their ideas or knowledge to others within the organization. For the most part, the internal promotion of tacit knowledge is the process by which the needs of internal customers are met in the generation of value-added solutions to external customer priorities. This essentially establishes a crucial relationship between internal and external value-added solutions in that quality service solutions rendered to internal customers (engagement personnel) will result in better-quality solutions to external customers.³⁷² The singular point here is that effective internal promotion of value-added tacit knowledge is a prerequisite for successful exchanges with customers in the external market.³⁷³ By actively encouraging the internal promotion of ideas, proventure structures create an awareness of knowledge suppliers and, just as importantly, fill in gaps of ignorance in the organization where there is little direct interaction among participants.³⁷⁴ Since the relationship between internal customers and their internal suppliers that is the primary focus of internal promotion effort, concern and technical know-how are at least as important for this internal marketing as they are for external marketing.³⁷⁵ The same skills are required for and used in both selling situations.

The internal marketing campaign for Grossman and Patrick began in the marketing department, but eventually found its way to IBM's top executives. Technical know-how was demonstrated through a series of presentations, culminating with a mock up of an IBM web page. This allowed for a clear illustration of how the technology could be used, while proving that the internal resources are already in existence. Concern was frequently used as resources were gathered and traded on the internal market.

In the launching of an internal promotion campaign, it is crucial that the internal customers be first identified by the supplier or purveyor of tacit knowledge. This is a far from simple undertaking in knowledge services. One of the issues facing knowledge service organizations is that tacit knowledge may be pertinent to solutions and may also be asymmetrically distributed among workers. Because the "supplier's" tacit knowledge is a private and intangible

commodity, quality-sensitive internal “buyers” often struggle to realize the true worth of the supplier’s knowledge. Proventurers do not know with any degree of certainty just what kind of knowledge they may be getting from others because such assets are intangible and difficult to evaluate. This uncertainty creates an adverse selection issue,³⁷⁶ as knowledge service workers with high-quality tacit knowledge (e.g., reliable, useful, accurate, and likely to result in customer satisfaction) have the opportunity to benefit to a greater degree than they might otherwise by making it known that they possess high-quality skills and resources. Through the internal knowledge market, knowledge suppliers are able to engage in internal organizational promotion wherein they can signal the quality of their knowledge to other stakeholders in the exchange network.

Signaling is generally performed through the activities that suppliers undertake to reveal the true level of quality associated with their tacit knowledge when the quality of this intangible resource is unknown before it is purchased.³⁷⁷ Proventurers may signal the quality of their tacit knowledge to others within the organization in several ways, such as through the reputation of the worker, the cooperation of customers, and the price (expressed in terms of time or effort expenditure) of the knowledge. Nevertheless, the supplier of the knowledge faces a challenge in that they still need to determine how to induce the internal “consumer” to try out the knowledge. To eliminate the adverse selection problem and increase the users’ confidence, it is in the knowledge supplier’s best interest to reveal the true quality of their knowledge. Once the “user” discovers the quality of the supplier’s knowledge, adverse selection is no longer an issue.³⁷⁸ However, it is not in the best interest of those in possession of what is perceived to be low-quality tacit knowledge to engage in similar signaling behaviors, as they would not be able to live up to the implicit expectations developed by potential users during the signaling process. This is one of the advantages of internal markets: the quality of value-added solutions to customer priorities will be enhanced because promotional activities are likely to be undertaken by those who perceive their tacit knowledge to be of high quality.

Internal promotion through signaling is not free. Such internal activities incur costs, and employees or customers with high-quality knowledge can be expected to charge a higher “price” as a result of the effort and attention they exert in their exchanges with others. Generally, when the quality of solutions in exchanges is difficult to determine, we can use the supplier’s level of effort and attention to serve as a reasonable substitute for performance.³⁷⁹ What this suggests is that suppliers of solutions are likely to exert greater effort and attention in their exchanges in order to extract a higher price for their knowledge.

Within IBM’s internal market, Grossman and Patrick were able to signal their expertise through the involvement of many high profile projects. For

example, the early successes at technology conventions earned praise both externally and internally. By generating external curiosity, departments within IBM began to take notice and seek collaboration with the Internet team. Working on internal projects, such as the chess match between Gary Kasparov and IBM's Deep Blue, also signaled an expertise that those within the internal market could access.

However, this may not necessarily be the case for high-quality service providers. Those suppliers perceived to possess higher-quality knowledge will be in greater demand as other workers desire and seek their input. As a result, those in possession of high-quality knowledge can be expected to exert less effort on the value-added services or solutions they render to others than those workers perceived to possess lower-quality knowledge. Since the user cannot observe or determine an appropriate level of effort, the supplier has an incentive to restrict their level of effort when their knowledge is in greater demand. By reducing their effort, the value of the tacit knowledge being exchanged is in fact being adjusted upward and the supplier with high-quality knowledge shifts some of their risk to the user in order for the supplier to cover their costs. By exerting less effort, the high-quality proventurer is in fact charging a higher price to the user which, in and of itself, becomes a signal of the supplier's high-quality component tacit knowledge and a tool for the promotion of that knowledge.

Having found the supplier's value-added solution or knowledge to be of high quality, quality-sensitive users are more likely to engage in future exchanges with the supplier in spite of the supplier exerting less effort. Proventurers develop a high-quality reputation as a result of their past contributions to solutions. Such a reputation is an important credibility factor which serves as a certification mechanism³⁸⁰ for the quality of the supplier's other knowledge. This form of signaling—less effort as a proxy for high price—gives other stakeholders within the exchange network some evidence about suppliers' competence when evaluating the potential tacit knowledge held by other employees. We can expect, therefore, that proventurers with high-quality knowledge will exert less effort in providing solutions to others than those with lower-quality knowledge.

Proventure signaling in internal markets often takes the form of certification or bonding activities. That is, activities are engaged in by workers (suppliers of knowledge) in an effort to assure stakeholders (buyers) that they have component tacit knowledge of some minimum level of quality. Typical certification activities include those associated with obtaining credentials (certification for completing training programs, awards for outstanding performance, advanced degrees and so on) or the offering of guarantees. An important and widespread certification trend in knowledge services is the lateral hiring of workers from other organizations. As part of the screening process,

these workers are likely to divulge the extent of their private knowledge in order to improve their employment potential.

Just how receptive others are to the signals of proventurers within internal service markets is heavily affected by how connected employees are within the social network of the company. Promotional activities may be more effective when those in possession of the tacit knowledge are perceived to have influential friends within the internal market architecture³⁸¹. These strong ties to other influential workers are essential because as embedded relationships, they themselves signal the quality of the knowledge holder. This in turn increases others' receptivity to the knowledge holder.³⁸² Grossman and Patrick were successful, primarily because of their ability to connect within the social network of IBM. Alliances were built early and often, by starting small and building a wave of support. Patrick's involvement in the ThinkPad project provided strong ties to other proventure employees with a history of success. He was also well positioned on a strategy task force that allowed access to top management and other influencers within the IBM network.

In these situations, suppliers of component tacit knowledge may inform a small set of network exchange partners and subsequently gain exposure to a wider pool of exchange partners without having to directly inform them all. Other influential employees within internal markets serve as opinion leaders or "brokers" who signal the quality of the knowledge, especially where there is little interaction between those in possession of the knowledge and those who are uncertain about its value.³⁸³ To the extent that these "brokers" have goals in common with other stakeholders, they are able to exert greater influence within the organization.

The receptivity of others to the knowledge supplier's signals may be affected by the structural equivalence or social status of workers within proventure organizations. Structural equivalence represents similar social and psychological positions in the organization.³⁸⁴ Proventurers may routinely signal their membership and status within internal markets to elicit cooperation from those who are structurally equivalent.³⁸⁵ Workers with lower external status (due, perhaps, to inferior background, lack of seniority, ethnicity, gender etc.) are less likely to have many strong ties or embedded relationships within the organization and the component knowledge possessed by these employees is less likely to be sought out by others. These lower-status individuals or units are also likely to experience greater difficulty when promoting their ideas. One common method of overcoming this situation and increasing the probability of acceptance (as part of the promotion process) is seen when workers with lower external status go through a burden-of-proof process when they attempt to invest or trade their knowledge assets.³⁸⁶

As a promotional activity, the burden-of-proof process can be accomplished in two fundamental ways. First, the individual can demonstrate that they possess exceptional component knowledge or skills which, upon accep-

tance by others, results in the individual's recognition for his/her demonstrated contributions. Alternatively, the individual or unit can present themselves as "team oriented," i.e., sacrificing their own self-interest in the interest of the team, or by otherwise displaying good citizenship behaviors.³⁸⁷ In both burden-of-proof approaches, workers volunteer their private knowledge as an initial investment with the hope of influencing network partners to accept their knowledge and, in the process, gain a position of structural equivalence. The intent here is to create favorable positions with opinion leaders within the network by making private knowledge available to potential users on very attractive terms.

Promoting Risky Ideas

Internal markets are established to foster proventure behavior in the generation of novel value-added solutions. Within knowledge service organizations, it may also be the case that some workers hold radical tacit knowledge or employ significantly different solutions. This is an important factor that can impinge upon internal promotional activities. Those workers in possession of knowledge of a more exploratory nature—where the returns or outcomes from such knowledge are uncertain and often negative³⁸⁸—are less likely to be socially connected members of a network because their ideas are outside the norms of acceptability in the internal market and therefore deviate from market expectations. As there is generally less buy-in from others, these employees will have weak ties or working relationships with other members within the organization.³⁸⁹

In the case of these less-connected knowledge workers, greater effort in promoting the unique efficacy of their tacit knowledge stocks will be required.³⁹⁰ Those in possession of far-out ideas must first identify the expectations of their internal customers with the intent of communicating to the internal customer the supplier's capabilities and discussing obstacles in satisfying customer requirements or expectations.³⁹¹

As sellers of exploratory or risky knowledge, these proventurers will find it more effective to engage in self-promotion through coalition building and rational persuasion. Spreading positive news or spinning ideas will provoke excitement and receptivity in a few select stakeholders. This is a form of internal stealth marketing. This is the exact strategy pursued by Grossman and Patrick. Their idea could have been ignored due to the high level of risk involved, and the revolutionary impact it would have on IBM's business. To get the attention, and ultimately, the approval, of top management, a coalition of Internet enthusiasts was assembled and small but successful projects were completed. Being on the ground floor of this innovation provided insiders

with the feeling that they had found the “next big thing.” The excitement generated spilled over, expanding the group’s support and membership.

The intent here is to enlist the aid or endorsement of a few informed exchange partners who, having been persuaded to use the knowledge, will serve as evidence of the knowledge’s usefulness and “brokers” of its quality.³⁹² Such promotional activities are also targeted towards highly knowledgeable workers because of their ability to use heuristics to comprehend and evaluate complex knowledge contours³⁹³ generally associated with more exploratory knowledge. Heuristics represent simplifying strategies used in complex and uncertain situations, such as is the case when developing exploratory or radical solutions.

While self-promotional tactics are employed by proventurers to attract potential exchange partners in internal markets, the effectiveness of such tactics is heavily dependent upon the quality of component knowledge perceived by those in possession of it. In the selling of exploratory knowledge to others, there is generally a greater amount of information asymmetry in favor of the internal supplier. This is because tacit component knowledge, as opposed to explicit knowledge, is intangible and unobservable,³⁹⁴ making the quality and value of such knowledge difficult to determine with any degree of accuracy. Exploratory knowledge is risky tacit knowledge and therefore difficult to disseminate in internal markets. As a result, knowledge suppliers who perceive their component knowledge to be highly exploratory must work to create an internal awareness of the efficacy of such ideas. One way to do this is to promote their ideas through issue bundling,³⁹⁵ wherein the supplier or seller directs attention towards their peripheral accomplishments and thus engages in self-aggrandizement around such peripheral accomplishments. The intent of the supplier is to focus attention on unrelated deeds and accomplishments, rather than the specific exploratory knowledge in question. Issue bundling of this nature serves to increase the seller’s credibility or to achieve a favorable position through some sort of halo effect, thus increasing the buyers’ receptivity to the exploratory knowledge.

While internal promotion increases the awareness of others in exchange networks and helps knowledge suppliers and users to choose potential trading partners, the overall intent of internal markets is to develop and expand the firm’s knowledge stocks for competitive advantage and sustainability. Knowledge stocks are essentially “solutions looking for issues to which they might be the answer and decision makers looking for work”.³⁹⁶ As such, knowledge stocks—solutions looking for problems—are developed and expanded predominantly through the firm’s human capital assets.

KNOWLEDGE STOCKS AND HUMAN CAPITAL ASSET GROWTH

Most organizations expand their knowledge stocks by investing in the development of their human assets. They do this largely through training, mentoring, and through the use of promotions as a form of deferred compensation.³⁹⁷ More recently, firms have also expanded their knowledge stocks by acquiring employees from other organizations. While these approaches have been beneficial in more traditional organizational structures, the use of these methods to build knowledge stocks in proventure organizations may not be very effective. Proventure workers in knowledge service organizations are relatively more independent than traditional employees, and have a lot of mobility.³⁹⁸ Managers of knowledge service organizations are better off decreasing their investment in mentoring and training due to the risk that the firm will be unable to recover their investment.³⁹⁹ Instead, the proventure architecture of knowledge services leaves the investment in human capital to the individual knowledge workers themselves. As relatively mobile, self-managed employees with quasi-independent contractual relations to the firm, knowledge workers are largely responsible for their own development within the organization. The internal market of knowledge services encourages proventurers to invest in their own development by providing opportunities for them to utilize new skills and competencies.

While the internal market architecture fosters trade and the leveraging of assets for the generation of solutions, workers' tacit knowledge provides a critical source of personal value to the firm. As a result, there is an inherent paradox in that to the extent that these workers share their knowledge, it depreciates in personal value.⁴⁰⁰ In order to gain new knowledge, they must give up their existing tacit knowledge.⁴⁰¹ This shifts risk to the worker and directly affects the worker's marketing strategy for exchanging with others. "Marketing strategy" here implies the manner in which workers choose to promote their assets, skills, and expertise in exchanges or trades and, in the process, the expansion of their component tacit knowledge stocks.

A primary issue for the organization is establishing which signals are to be used as matrices for the existence of individual tacit knowledge stocks. As Mooney observes, organizations signal their need for new knowledge to their employees through informal problem-solving processes that are scattered widely throughout the organization. Such signals may take the form of an encouragement by management to practice widespread interaction with others both within and across units. Employees with access to a variety of approaches or potentially relevant ideas are better equipped to make linkages that could lead to new knowledge and asset development.⁴⁰²

Such interactions may be encouraged through the shifting nature of team composition in the operating units of internal markets, which tend to foster

exchanges among workers. As mentioned in Chapter 4, processes like IBM's so-called DogEar can be established to accommodate these interactions. DogEar is a web based program for "social bookmarking" in which workers can contact and exchange resources.⁴⁰³ The more people interact, the more they will engage in joint activities, leading to the development of sentiments or affections for each other.⁴⁰⁴ Further, the expansion of the boundaries of the organization to include the customer, as noted earlier, as a "partial" employee⁴⁰⁵ provides access to and interaction with an additional source of knowledge crucial for the building of tacit knowledge stocks. Customers maintain their own set of networks of interaction with others, such as through associations or relationships with other organizations. These other interactions provide customers with access to information and resources they can then promote across relationships, providing workers with the motivation to interact and exchange with their customers because of the expectations that the transfer of knowledge will provide mutual gain⁴⁰⁶ for both workers and customers.

Customers' awareness of the firm's knowledge stocks expands along with the organization's understanding of the customer's priorities and related issues. From the vantage point of customer interaction and inclusion, the organization can anticipate future needs of the customer and generate new and novel solutions for these contingencies. Such customer interaction is anchored in laterality,⁴⁰⁷ which is the knowledge generated from lateral interests in customers, incorporating various aspects of the customer as a total or holistic product that is taken into account in the generation of knowledge and value-added solutions. This makes it possible for the organization to adapt quickly to subtle changes in its external environment in response to customer needs.

Increasing the laterality in customer relationships provides the opportunity for a greater variety of alternative solutions to customer priorities along with a buildup of knowledge stocks and an extension of "product" lines that can be offered by the firm. Laterality allows workers the possibility to generate integrated solutions based on a familiarity with a wide array of activities in the customer's interests and enables the worker to stretch the boundaries of possibilities when it is necessary to do so. As a result, customers benefit through the delivery of higher-quality services, and workers benefit as the knowledge they have acquired or created expands their career options. Additionally, such interactions have the potential for increasing returns because, unlike a physical product, the more the knowledge generated from such interactions is used, exchanged, or consumed, the more valuable it becomes.⁴⁰⁸

Finally, Grossman and Patrick were highly successful at expanding the human capital assets of IBM through their involvement in a number of different departments. They refused to be boxed into their own division believing that the idea belonged to the company as a whole, rather than one group. Patrick's boss, Jim Canavino, VP for strategy and development, stated, "You

know, we could set up some sort of department and give you a title, but I think that would be a bad idea. Try to keep this grassroots thing going as long as possible.”⁴⁰⁹ Patrick also says, “I do believe there is a benefit in being separate. Otherwise, we’d have to start going to meetings. Pretty soon we’d be part of someone else’s organization, and a budget cut would come along, and we’d be gone.”⁴¹⁰ This speaks to the importance of being able to laterally build relationships within the organization. Patrick and Canavino understood that they could have the most success by building these alliances throughout IBM. Knowledge of the Internet would spread, and as the human capital assets grew, IBM would leverage this tacit knowledge in becoming a dominant force in this new service. It is clear that this knowledge spread like wildfire as only 6 years after its success in the 1996 Olympics, IBM would shift its strategy with the acquisition of PriceWaterhouseCoopers’ consulting service to focus on becoming a technology consultant. Without Grossman and Patrick’s promotion throughout the internal market, IBM would not have gained the knowledge stocks necessary to make this move.

SUMMARY

In this chapter, we adopt the view that in knowledge services, tacit knowledge is the core resource that creates competitive advantages for the firm. Such knowledge is not only scattered throughout the organization, but is also difficult to separate from those who possess it. The inherent need for workers to promote or market their knowledge in exchanges with others serves as a catalyst to bring such knowledge to the fore. The interactions between internal supplier and customer must first be identified as able to communicate ideas and improve the quality of value-added solutions. Internal marketing is the relationship between internal customers and their internal suppliers. The interactions between knowledge service firms and their external customers are critically important in developing value-added solutions. Similarly, the interactions between the internal supplier and internal customer are important in the development of solutions. This is based on the fundamental notion that better service to internal customers will increase the value-added solutions to external customers. Proventure workers in possession of valued tacit knowledge will use internal marketing techniques to promote and gain acceptance of their ideas. In so doing, proventure workers with valued knowledge can be identified by undertaking internal marketing campaigns which serve to increase the exchange of resources within the firm and the quality of solutions generated.

CHAPTER 8

CONCLUSION

This book is an attempt to focus attention on the architectural designs of knowledge service firms. It is clear that traditional industrial economies are being transformed into knowledge based economies as we move into the 21st century. The traditional approaches to management that have been so beneficial and appropriate for the 20th century industrial landscape are of less value in the expanding knowledge context.

Knowledge services are intangible outputs produced by technologies based on intellectual capital – a body of ideas. In the process of creating value, such technologies are used to diagnose or determine customer priorities and recommend a course of action. The output of knowledge services, unlike manufacturing products, is intangible, difficult to measure and heterogeneous. Knowledge solutions are abstract things which are difficult to store or inventory as one would in a manufacturing context. Value-added solutions to customer priorities emerge mostly from tacit knowledge and such knowledge is stored in workers' heads. This provides a tremendous amount of power for knowledge workers who, for all practical purposes, are in control of the means of production; a clear demarcation from workers in traditional manufacturing firms in which the means of control resides with management. In light of this, traditional managerial approaches are becoming relics, the result of a broader knowledge transformation of the work landscape.

The movement to knowledge services has created a phenomenon that cries out for new design paradigms for this era. Pressure is mounting on knowledge service executives to determine how to best manage these firms. This requires radical thinking. Managers of knowledge services, for the most part, are hampered because of the lack of information that is specifically pertinent to these organizations. Researchers and theorists have transferred concepts and techniques from 20th century manufacturing organizations across to knowledge services often with disastrous results.

Gains from the design or architecture for integrating the organization can be huge. Organization design is necessary to accomplish strategies and goals. It imposes itself on the use of resources to solve problems and achieve goals by establishing guidelines for the coordination of such resources. Resources in organizations do not come together naturally for sustained competitive advantages. Resources have to be designed or arranged to focus and direct member's attention in order to optimize their use for specific organizational ends.

One of the primary ideas presented in this book is that knowledge service organizations gain sustainable competitive advantages by focusing attention

on the tacit knowledge controlled by their employees. Employees in this work landscape are essentially independent production entities unto themselves since they must simultaneously produce and deliver intangible knowledge solutions directly to the customer. In order to accommodate these workers effectively, the authority process has to be disseminated to the engagement personnel to allow for the autonomy and discretion needed for the generation of value-added services. This is difficult to accomplish with traditional architectures. The constraints inherent in traditional hierarchies are indeed alien to and incongruent with what these new organizations are attempting to accomplish. Traditional hierarchies limit the flow of tacit knowledge which is vital for the generation of value-added service solutions. The more discretion withheld from the knowledge service worker, the less productive these workers become.

There are several important takeaways from this book for managers of knowledge service organizations:

- ***Customer alliance as a knowledge development tool.*** Any design imperatives in knowledge services must begin with the customer alliance. The knowledge service firm is in business because it is convinced that it is in possession of some specific set of knowledge stocks that can address customer priorities. The intangibility inherent in knowledge solutions requires the dissemination of such solutions in a personal way. Value-added service solutions must include active participation in the knowledge production process. The person-to-person interaction between the customer and worker creates open systems, directly influencing the generation of service solutions and being influenced simultaneously. Customers are essential to the quality of knowledge services and have to be included as an important environmental element in the service process. Customers are in control of tacit knowledge, which the organization needs for generating value-added solutions and building knowledge stocks. The customer alliance serves as a mechanism to negotiate expectations for mutual gain.
- ***Tacit knowledge is critical, yet creates an asymmetrical relationship favoring workers.*** Tacit knowledge is the commodity traded in knowledge services and such knowledge is largely in the possession of the employees. This kind of knowledge, which directly affects the generation of value-added services, is most often difficult to locate, measure, and separate from those who possess it and thereby creates asymmetric relationships in the workplace in favor of workers.

- ***Lack of universal standards gives workers significant autonomy.*** The heterogeneity inherent in knowledge service production and the intangibility of the output make it enormously difficult to establish sound standards for participants. It is primarily for this reason that the establishment of standards in knowledge services solutions is currently at a relatively primitive stage when compared with the vast progress made in this area by manufacturing firms. It has to be recognized by knowledge services that this is an important challenge that complicates the production of knowledge service solutions. These factors, the vagueness of the task and the lack of adequate standards, have dictated the necessity for knowledge service workers to operate autonomously with immense discretionary power. In contrast, in a traditional manufacturing firm, systems and standards are more concretely established. Workers perform their activities within highly pre-established constraints.
- ***Hierarchical architectures are counterproductive given the heterogeneous output of knowledge service firms.*** Traditional hierarchical organizational designs are of marginal benefit in managing knowledge workers and the use of such structures may even be counterproductive when applied to contemporary knowledge services. Hierarchies work well in predictable work landscapes where systems can be readily established for production efficiencies and where there is segmentation of the value chain. This makes a lot of intuitive sense in work landscapes where homogeneous outputs are desired and attainable by technological determination as inputs are manipulated into predictable outputs. It makes less sense, however, to adopt the same technological assumptions about knowledge services firms in light of the heterogeneity inherent in value-added solutions to customer priorities. One of the most important characteristics of knowledge services is that solutions are generally intangible and cannot be reasonably stored; they have to be immediately consumed. This is one of the factors that have necessitated customer alliances which supersede any other factor as structurally more influential. This is because the service solution producer is dependent upon and heavily influenced by the consumer. Hierarchies are less effective in knowledge services where there is a lot of uncertainty surrounding the heterogeneous solutions to customer priorities. The work landscape for knowledge services is radically different from other work contexts and thus requires radical design approaches.
- ***Employees gain power through their control of production.*** Workers, not management, typically control the means of production in knowledge services. The operational generation of knowledge service solutions gives the worker access to the control of information, persons and instrumental-

ities.⁴¹¹ Since workers in knowledge services generally control the means of production, there is a disproportionate amount of power residing in these employees.

- ***Proventure architectures facilitate customer involvement and creativity***
Knowledge workers have to be given the autonomy to generate novel solutions. Since traditional hierarchies do not allow such autonomy, more radical architectures are required for knowledge services. Proventure architecture offers such a structure. Proventure architecture extends the boundaries of the organization to bring the customer into the alliance with the organization and creates an internal market structure for fostering worker autonomy and creativity.
- ***Internal markets allow for reciprocal exchanges.*** The fundamental feature of proventure architecture is its radical departure from manufacturing models in how resources and activities are coordinated in the generation of value-added solutions and the building of knowledge stocks within these services. The coordination of such interactions is brought about by internal markets as workers exchange resources in the generation of service solutions. Within the proventure architecture, there is a greater tendency and opportunity for more interaction among workers and thus a greater potential for the exchange of tacit knowledge as employees seek to exchange and influence each other.
- ***Internal markets help regulate control within the firm.*** By establishing internal knowledge markets, worker autonomy, so necessary for value-added service solutions, is assured. What takes place, to a large extent, is a controlled competitive environment within the boundaries of the overall company goals. In proventure architecture, autonomy is optimized at the individual and unit levels where responsibility for knowledge service solutions resides. In this way, the proventure architecture is most valuable because its internal market disseminates power away from the top of the firm to lower level knowledge workers where the direct alliances with customers are developed and maintained. Worker self-management in knowledge services essentially reallocates traditional supervisory activities. The architecture transforms the traditional supervisory role within internal markets. It is therefore to be expected that some tension may emerge between proventure workers and management as employees expand their horizons in the face of management reluctance to disseminate power.
- ***Management must gain control through alternative means.*** Given the autonomy afforded proventurer workers, it is extremely difficult for management to determine those who are pulling their weight from those who

are actually shirking responsibility, particularly in a mobile work landscape. Management must establish procedures to regain some of the lost control when they empower employees to be autonomous. Internal markets dictate which employees receive the perks of better job assignments and responsibilities. If a worker's solutions are not approved by the internal market, it will be difficult for them to make a positive impression with both management and the customer.

While the internal market gives management one layer of control, customers serve as an additional control. Customers, as the primary source of sustainability for a firm, provide direct and indirect feedback to management about the quality of the proventurer's solutions. Thus, a proventurer has autonomy to create unique solutions but must always satisfy their co-workers and customers.

- ***Knowledge services as an artistic enterprise.*** The nature of proventure architecture with its unique internal market characteristic makes these structures highly capable of transforming the labor force into creative risk takers. Here workers, as proventurers, are not merely confined to the traditional notion of entrepreneurs with its connotation of proprietorship, but in the more expanded notions of an Adventurer. For knowledge workers in this context, the generation of novel value-added solutions is a piece of art having both a perceived necessity and meaning.
- ***Technology enables rather than restricts workers.*** In proventure architecture, technology adapts to the needs of workers rather than workers adapting to technology. Fredrick Taylor (1911) has often been criticized as being the instigator of the 20th century efficient, yet insensitive production system. Taylor's intent was to adapt workers to technology. However, with the emergence of knowledge services, there is a radical and pronounced movement away from Taylor's to the view of technology as subordinate to workers. This is particularly so with the expansion of information system to facilitate knowledge exchanges in internal markets. Proventure architecture is an iconoclastic structure that is quite well equipped to adapt technology to the human element in the design of jobs in knowledge services. Unlike traditional hierarchies, proventure architecture more fully incorporates the human unit within the production function by elevating the organization participant to a more significant role and by making the traditional view of technology secondary to the individual's needs.
- ***Customers have dictated the transition to a new architecture.*** The indispensability of customer alliances should not be viewed as costless. Firms must abandon traditional hierarchies to accommodate consumers as an

integral part of the generation of knowledge solutions. But their very presence in the firm's operation tends to generate uncertainty. This is especially true in terms of process time, service quality and the difficult task of accurately determining and fully accommodating customer needs. The inability to accurately predict the behavior of the customer is disruptive to the effectiveness of traditional hierarchies. This is not the case for proventure architectures. The intent of these structures is not merely to apprehend customer uncertainty but to transform it into a valuable resource in the generation of novel service solutions. Such transformation of uncertainty is accomplished through the customer alliance and internal market mechanisms within the firm.

The framework for sustained competitive advantages in knowledge services focuses on customer alliances and an internal market architecture. These are the two most important factors for managers to consider in generating value-added solutions to customer priorities in knowledge services. Proventure architecture can also be of immense economic benefit to knowledge service managers by lowering costs. Proventure structures require lower administrative costs because the internal market manages workers, reducing the need for direct supervision. Overall this new architecture provides the service firm with a relevant way to manage in this growing knowledge service economy.

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