MANAGING IT AS A BUSINESS

A Survival Guide for CEOs

Mark D. Lutchen

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To my family—
You light up my life!

Foreword

On May 22, 2003, CIOs from many of the world's largest companies convened for the annual MIT CIO Summit. As each CIO spoke, a common theme quickly emerged: CIOs were under unprecedented pressure to deliver measurable productivity benefits. The free-spending days of the late 1990s were over.

There is no question that the current focus on productivity is an essential return to reality. In the past, hundreds of billions of IT dollars have been wasted either because no metrics were used, or, worse, because the wrong metrics were used. Unfortunately, IT productivity has too often been defined by an overly simplistic question: "How can we squeeze the IT budget even further?"

Stephen Norman of Merrill Lynch was one of the CIOs at the Summit. He captured this mind-set evocatively when he told the story of the "Magic Orange":

> On a clear December day, a worried-looking CFO knocked on the door of his harried CIO and said, "Times are tough. We need to squeeze 10% out of the IT budget." With some effort and with more than a little help from Moore's law, the CIO managed to squeeze out 10% of costs without causing any appreciable loss in service quality. The following year his CFO returned to say, "That was terrific. However, this year we need to squeeze out *another* 10%." Dutifully, with some hard-nosed decision making, the CIO managed to find an additional 10%. However, at the end of the year, the CFO once again said, "Now we need an additional 10%. And, what's more, you can guess what I'll be asking for next year." The CIO

took a deep breath. It was getting really difficult to squeeze out more savings. He wondered how often he could wring the same orange and still get drinkable juice. To the CFO, the IT department was a "Magic Orange" that could be squeezed indefinitely.

While achieving cost savings in the IT department is a laudable goal, doing so risks missing the bigger picture. The real productivity benefits from the remarkable increase in computing power per dollar do not come merely from cost savings in the IT budget.

Rather, as Mark Lutchen clearly illustrates in this book, those savings result from thinking of IT more broadly as a business. That means delivering more value to the rest of the organization by increasing the productivity of other business units, of end-users, and of the corporation as a whole.

Indeed, research now clearly shows that on average, firms that are more IT intensive also are more productive over time.[1] More interesting, however, are findings that indicate a tremendous disparity in returns. Some very high IT spenders excel while others perform poorly. As an investment, IT may have a positive expected return, but that return is not guaranteed.

What differentiates successful investors from their competitors? As Lutchen argues in this book, to be effective, IT must link to corporate strategy. The IT organization should be aligned with the underlying profitability drivers of the business. At the same time, business systems must be redesigned to take advantage of new, low cost, and more powerful technologies as they become available. To achieve these objectives, CIOs must build strong and trusting relationships with their peers on the executive management team, with business-unit CEOs, and with the key end-users, that is, customers. Also, they must be ready, willing, and able to transform their businesses and workflows so that these truly leverage the technology. Indeed, a whole new digital organization is needed if businesses are to benefit fully from IT.

In my own research, I've found that for every dollar spent on IT hardware, up to nine dollars go to complementary investments, including organizational and human capital. These investments can create real, if intangible, assets. A CIO who focuses only on IT spending that occurs within the IT budget misses all but the tip of the iceberg. This can have disastrous results. While many of these intangible assets go unmeasured on typical corporate balance sheets, they should not go unmanaged. Taken as a whole, Lutchen's ideas for understanding the "real" level of IT spending provide a welcome and useful framework for addressing this challenge and opportunity.

This book will prove invaluable to CEOs, CIOs, CTOs, CFOs, business-unit leaders, consultants, and researchers who seek a practical, research-grounded guide to running IT as a business. There was a time when IT in many firms could be relegated to a cost center, but, today, every industry is a high-tech industry. As a result, no successful manager can afford to ignore the lessons that Lutchen provides.

The author's advice is grounded in a unique combination of careful research and real-world experience that Mark Lutchen brings to all of his work. As one of the Founding Sponsors of the MIT Center for eBusiness, PricewaterhouseCoopers, as represented by Lutchen and his colleagues, consistently challenged us to push the frontiers of research in directions that would create tangible benefits for businesses. That ethos infuses this book and makes it an "essential read" for anyone hoping to achieve such benefits.

The power of IT has been growing exponentially for more than 40 years. Today's computers literally have 10 million times more processing power than the computers used in the 1960s. This trend is sure to continue for at least another decade. In fact, all signs indicate that it is accelerating. More importantly, the domain of activities affected by IT is vastly larger than it was 40 or even 10 years ago. In short, the impact of IT that we've seen during the past decade is only a fraction of what we can expect to see during the decade to come.

The implication is clear. CEOs and CIOs who don't learn to manage IT as a business will lose their mandate. Those who do will be the business leaders of the next decade. That is why I urge all who aspire to such leadership to read and profit from this book.

ERIK BRYNJOLFSSON

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Acknowledgments

Authoring a book such as this is analogous to conducting a world-class symphony orchestra. Like the conductor, the author moves to center stage at the end of the performance and takes the bow for the result of the collective work of many individuals. That is how I feel about writing this book. Were it not for the behind-the-scenes work of many people who are unable to take the bow with me, I would not be in a position to do so. I am truly humbled by the amount of talent, intellect, creativity, integrity, and professionalism exhibited during the writing of this book by my clients, partners, colleagues, and other professional associates who toiled alongside me both in substance and in spirit. Thanking specific people is always a risky business because someone is always inadvertently left out. I apologize up front if that occurs here; it is surely not my intent.

First, I would like to gratefully acknowledge a few people whose influence and assistance were invaluable. In a professional services firm, clients always come first, so my initial thanks go to all of the clients who have afforded me the opportunity to be of service to them during the past three decades. Helping many of the world's top companies to solve some very complex problems has provided me with a wealth of unparalleled experience, some of which I have tried to share in this book. I would particularly like to thank Donard Gaynor, former CFO, SVP-HR, CIO, and reengineering leader of The Seagram Spirits and Wine Group; Nick Henny, vice chairman and CFO of Universal Music Group; and Paul Turner, executive VP and CTO of AMS for applying their unique business insights to their reviews of this manuscript.

Next, I would like to thank a number of people who were instrumental in researching, writing, editing, and publishing this book. These include Gene Zasadinski, my editor at PricewaterhouseCoopers; Mark Friedlich, PwC's global publisher; and Jon Zonderman, freelance editorial consultant. Gene, Mark, and Jon—your professionalism and steady hands kept this effort on course and on schedule with the highest quality. You are truly all masters at your respective crafts. A special thanks also goes to Denis Picard, a partner of mine who began this literary adventure with me, but who is now breaking new ground in applying the principles discussed here, as well as a few of his own, as a businessman, advisor, and CIO. I would also like to acknowledge the outstanding work of all the people at John Wiley & Sons, especially editor Airie Stuart, publisher Larry Alexander, and associate marketing director Laurie Harting. Thanks for believing in the value of the message contained in this book and for ever so carefully shepherding the manuscript through the publishing process.

While this book was being written, I was also in the process of building and leading an IT Business Risk Management practice for PricewaterhouseCoopers. The core team of people involved in that effort deserves a big thank you for helping me to codify and simplify much of what is discussed in this text into a service that can be provided to our clients on a much broader and consistent basis than ever before. Thank you, Jonathan Lawrence, Sam Tobin, Dries Bredenkamp, Anu Sahi, and Ellen Fang. And thank you, Paul Kennedy, for your constructive insights and input along the way.

During the past several years, I have been a member of the executive board of the MIT/Sloan Center for eBusiness, which is very ably led by its chairman, Dean Emeritus Glen Urban, and its director, Schussel Professor of Management Erik Brynjolfsson. I have developed the highest respect and

admiration for both of these gentlemen as I have watched them build one of MIT/Sloan School's flagships of intellectual pursuit and practical business application.

My thanks must also go to individuals with whom I worked when I had the pleasure of co-leading PricewaterhouseCoopers' Multinational Corporation (MNC) Network. If it were not for my partners, including Pat Kiernan, Dick Rossi, Bill Glimour, Bob Leach, George Barbee, Howard Aycock, and Paul Turner, who is currently executive vice president and CTO of AMS, and for outside expert advisors such as Ken Roman, former chairman and CEO of Ogilvy & Mather Worldwide, the client service and teaming principles created, established, and followed within the Network would not have flourished and become cornerstones of this book.

It is often easy to overlook the outstanding executive and administrative support and assistance that hard-working individuals provide selflessly and without fail day in and day out. Thank you to my executive assistant, Catherine Zadroga, who, for the past 21 years, has, with professionalism and good humor, faithfully kept things on track and in order.

I would also like to thank a few groups of special people who worked long and hard to prove to many skeptics that the principles espoused in this book really do deliver results. To people on the TSSLT: Even though I cannot name everyone, each of you knows who you are and what your contributions were to the team, and for that I cannot thank you enough. Thank you to Larry Phelan, Joe DeTullio, and Rich Poshpeck—you know all too well what it really took to turn the ship with speed and passion. I would also like to thank Kathy Leach and Mary Linda Denton for making communicating so easy; Brian Moxey for always making the logistics work out; Stacey Foster and Roberta Perry for

taking HR to new levels; Bob Brick and Jim Holloway for your strategic and technology insights; Jennifer Eckler, Pat Straughn, Nancy Browning, Cindy Cole, Bud Murphy, Sheryl Mills, Dave Goodman, Daryl Mattson, Marty Porea, Lee Robinson, and a host of others for always rising to the challenge; Robert Kight and Mike Drosdowski for establishing a security organization that is second to none; Bob Buttacavoli, Mark McGovern, Roy Ogura, Mike Williams, Sean D'Souza, Shawn Connors, and the rest of the Genesis team for creating a platform that continues to thrive; and Bill Yant, for your insightful and steady guidance. Thanks also to Gregg Ward of Orlando-Ward & Associates for your unique communications creativity and to all of my international colleagues around the world who clearly demonstrated how diversity and multinational capabilities always make a team better and stronger.

Finally, to the hundreds of outstanding people who comprised Team TSS around the world, you are truly the ones who made it all happen on the ground. You learned to embrace change; you successfully addressed some of the most complex, global IT management and technical problems; and you created an unparalleled world-class, high-performance, and top-quality team. To each of you—and you know who you are—I respectfully tip my hat and want you all to know, once again, how inspirational and rewarding it was to work with you.

MARK D. LUTCHEN

Introduction

To: The Executive Leadership Team
The Board of Directors

From: The New CIO

For years now, our company's information technology (IT) organization has mirrored the way the company itself has evolved—decentralized, fragmented, and underleveraged. While significant sums of money have been spent, lack of focus and vision has lessened the potential impact of those expenditures. Specifically:

- IT has never had a global vision or strategy.
- IT expenditures have not been effectively leveraged across the company.
- IT has been managed as a cost center rather than as a strategic competitive enabler and revenue enhancer.
- IT has not been an integral part of our business planning and execution; at best, IT has been a less than effectively managed afterthought.
- IT leadership has been fragmented and diffused within the company, severely limiting the IT organization's ability to drive and leverage standards to benefit the business.
- IT has not had a single focal point responsible and accountable for leading, managing, and leveraging our investment.
- Our IT "spend" across the company is second only to that for human resources and is one of the largest investments and expenditures in our budget. This sizable strategic investment has not been effectively managed.

While we have made considerable strides during the past few years in addressing some of these issues, we still have significant work to complete if we are to accomplish our overall mission.

With our business becoming increasingly complex, it is essential that we evolve and enhance the current technology planning process to reflect the changes that have occurred in our businesses. In that regard, we must develop a new, fully linked technology planning process that is more product-line focused than our current approach.

We need to work together to develop a framework that will enable us to accomplish these objectives. It is only when I work closely with the entire executive leadership team and the board and have a legitimate "seat at the table" that we can meet these goals.

Thank you for your kind attention to this urgent matter.

This memo, which was actually written by a newly appointed chief information officer (CIO), could have been composed by hundreds of other former or current CIOs. The notion that executive leaders are not as involved or familiar with IT as they should be is not new. In his 1991 book, *Managing IT at the Board Level: The Hidden Agenda Exposed,* Kit Grindley wrote the following paragraphs.

"Once it was all about trade, the days of the great merchants. Then it was about production, and the engineer was king. When the critical path became raising and deploying capital, the accountant held sway. Recently, consumerism has brought the marketer to power. In the future, it's clear that power and success will accompany the management of information resources." [2]

He continues, "[But] those who run the businesses have enormous difficulty accepting that IT is a part of the business strategy. For centuries, business has been about making things, marketing things, and managing money. Businessmen have done their job and earned their living by being expert in one or more of these areas."[3]

THE EVOLUTION OF IT

Information technology (IT) is one of the top three-to-five expenditures in most large corporations. In the late 1990s, it was not unusual for each of the 500 largest global companies to spend $200 million, $500 million, even $1 billion annually on IT addressing Y2K computer issues and the conversion of European national currencies to the euro, ramping up an e-business presence, implementing enormous global enterprise resource planning (ERP) systems, or just keeping day-to-day IT operations running.

Beginning in 2000, much of that IT spending fell off, once again putting many of these same companies behind the information technology curve. As capital spending by companies contracted, a disproportionate amount of that contraction affected spending on new IT.

Historically, IT has also been one of the least understood expenditures and one of the most mismanaged areas of many businesses. Inability to meld IT organizations, systems, and technology and to directly link these to the company's strategic business drivers to produce results is one of the major reasons why large, complex mergers or acquisitions often fail to deliver on their promised synergies.

If technology is to fulfill its promise and provide maximum benefit to a corporation, two major changes must occur:

1. The IT organization must be managed and led in a professional manner, like any large business unit, with careful attention to priorities, people, and performance.
2. The relationship between IT users throughout the corporation and the IT organization must change. IT users must understand that a company's ability to provide IT is not unlimited. Like anything else, IT is bound by rules of supply, demand, and cost. Only when users of IT throughout the corporation are forced to "pay" for IT, either explicitly through some sort of transfer pricing or more often implicitly through tradeoffs in other corporate budget line items, will they learn how to use IT carefully and purposefully.

Neither change, however, is easily accomplished. Individuals who lead IT organizations have generally come up from the technology side of the equation and have not traditionally possessed the well-developed, finely honed business management, leadership, organizational, political, and communication skills necessary to lead complex organizations effectively. Many technology leaders also lack the ability to provide direct, substantive, and easy-to-understand help to top corporate executives who must leverage IT if they are to drive the enterprise to new heights.

At most companies, IT leaders (CIOs) lack the support they need to acquire the necessary skills to participate at the top level of corporate management. In fact, at many companies, the CIO reports through the chief financial officer (CFO) or chief operating officer (COO). This often sends a message to the corporate leadership team, business-unit leaders, and the IT organization itself: Information technology (and information systems) is a *support function* and a *cost center* akin to accounting or facilities management rather than the important driver of business success that IT can and should be.

Such a message breeds constant tension between CIOs desiring more “toys” and CFOs looking on IT organizations as being expensive and, therefore, ripe for cutting and subjects the IT organization to endless, frustrating cycles of stop-and-start investment. It also inserts a layer between the CEO and a key person who has, or should have, a deep understanding of how the business really works and of the obstacles keeping the business from improving.

Because of this dichotomy between the *techies* and the *ties,* corporate IT spending is often haphazard, IT strategy is often not linked closely with business strategy, and IT projects often become captive to the business cycle when, in order to capture the advantages of new technologies, they should be continuous.

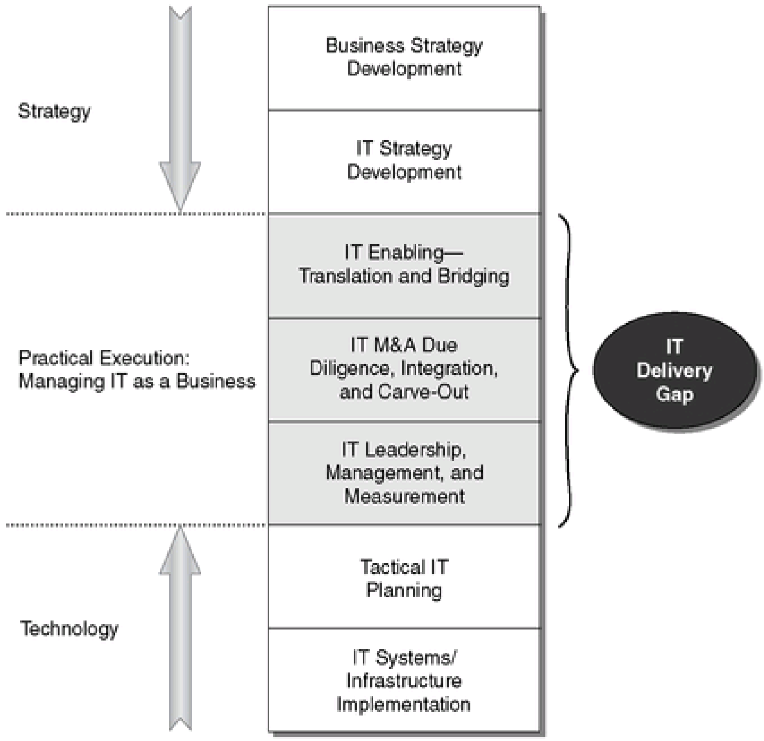
Another obstacle to maximizing the benefits of IT is the belief that IT is virtually impossible to measure and that only hard-core technical operations and discreet projects lend themselves to any sort of quantitative performance measurement. This belief has prevented broad-based, business-focused performance measurement concepts, processes, tools, and techniques from entering the IT organization. In reality, while embedding business-oriented performance measurements into all of the components of an IT organization (i.e., technical, functional, operational, and human) may not be easy, doing so is a necessity, a business imperative whose time has come. More and more executives tell me that this must be done if the IT organization is to survive in the twenty-first century.

The real conundrum here is that if this narrow view of IT is not sufficiently broadened, if the management of IT is not professionalized, and if users do not learn how to “price” IT against other corporate needs appropriately, companies will lose the opportunity to take advantage of proven and emerging technologies that can enhance their business’s portfolios and revenues. The risk is that some existing players and new market entrants *will* take and apply a broader view of IT, placing those companies that do not at a competitive disadvantage.

VIEWING IT AS A BUSINESS UNIT

Historically, companies have attempted to address these issues by focusing either on the top or on the bottom of what might be termed the *IT Delivery Spectrum* (Figure I.1), that is, focusing either on strategy or on implementation of systems and infrastructure.

Figure I.1 IT Delivery Spectrum.



The main reason IT organizations and CIOs fail to deliver value to the business is their inability to focus sufficient attention and resources on the area in the middle—the *IT Delivery Gap.* While a significant portion of an organization's IT budget is spent on the complex fusion of technology processes and human assets that comprise IT infrastructure and IT management, [4] not enough management attention or management skill is focused there. For the most part, IT managers have traditionally not been schooled in weighing IT business risks against costs. Failure to address these areas affects the key IT business value levers, resulting in increased costs, higher business risks, and a reduced ability to manage and leverage the investment portfolio, thus limiting the overall business value of IT. Many of the problems on which I have been asked to advise have their roots in the company's failure to manage the key IT business value levers.

A New Solution

Many have attempted to address this IT management dilemma with varying degrees of success. This book, however, proposes a new solution—one that is at once simple and radical. The solution involves six critical steps:

1. Bring IT into the mainstream of the enterprise.
2. Consider the IT organization as a stand-alone business unit (though not necessarily a profit center) that advances the agenda of both the corporate center and the various business units.
3. Link IT strategy to corporate strategy, but with a focus on practical execution rather than theory and idealized processes.
4. Require business units to define their IT needs and require IT to provide services through a methodology of rigorous relationship management.
5. Institutionalize a culture of customer service, on-time delivery, high quality, and results-oriented performance.
6. Reward IT executives and managers on their outcomes that drive business value at all levels.

IT, like any other business unit, should not be about projects and processes, but about relationships, execution to plan, measurable outcomes, and people/skills development.

To evolve the IT organization to such a model, CEOs and CIOs must jointly enlist the support of other corporate executives, board members, and—where appropriate—financial buyers (venture capitalists and private equity investors) to drive the process.

CIOs must be brought to the executive management table, and once there, be expected to think and function as other executives do. If the current CIO’s management skills are deficient, he or she must be helped to upgrade those skills or a new CIO needs to be found (not that it is easy currently to find one with stellar management, relationship development, people, and communication skills).

The corporate executive team must work with the CIO to assemble a top-notch management team. An IT leadership team in a large organization must have the equivalent of a business-unit COO and CFO, as well as dedicated human resources staff to help recruit, train, and retain the best quality employees and to remove, when necessary, those who do not measure up to current standards.

CIOs need to be supported by marketing and communications professionals who can help them communicate more effectively with technology users throughout the organization and make the black box of technology more transparent to IT constituencies, from the shop floor to the executive suite.

CEOs and CIOs must work with CFOs and COOs to craft relevant and executable IT strategy; create strategically focused yet tactically deliverable (*stractical*) plans; negotiate goals, objectives, resources, and budgets; and develop meaningful, laser-focused IT metrics by which to measure the success of the IT business. CEOs, CFOs, and COOs must talk about IT throughout the enterprise and must become knowledgeable users of IT services themselves if they are truly to understand the relationship between IT providers and users. In short, IT must operate like a business.

If IT people are ever to master the ability to cope effectively with a constant and continuous stream of rapid business and technology change, CIOs must lead by example. To accomplish all of this, they must instill a new culture throughout the IT organization—a culture based on customer focus, high quality, peak performance, and agility and flexibility. During three decades of advising companies concerning IT management, I have met only a few individuals who have really set out to master this model.

Future generations of CIOs must be rotated through operating units and other corporate functions to become more well-rounded business leaders. Their career paths must include hands-on education in management, finance, organizational skills, marketing, and communications, as well as in technology training.

Companies would not dare appoint a business-unit CEO who did not successfully apprentice throughout multiple organizations within the company, both functionally and geographically, to ensure that the candidate was well rounded. Succession planning is critical for top positions. Why then, do companies not have the same expectations for CIOs?

To manage IT as a business, a CEO and his or her executive leadership team must have a conceptual understanding of how technology can support business growth. Unless technology is implemented with the understanding that it may change how a company works, it will not reap the expected benefits. This book provides executive leaders, board members, and economic buyers with that conceptual understanding, as well as with an understanding of what their roles are in interacting with the CIO, the IT team, and the technology that is implemented.

A TECHNOLOGY VALUE OPTIMIZATION LENS

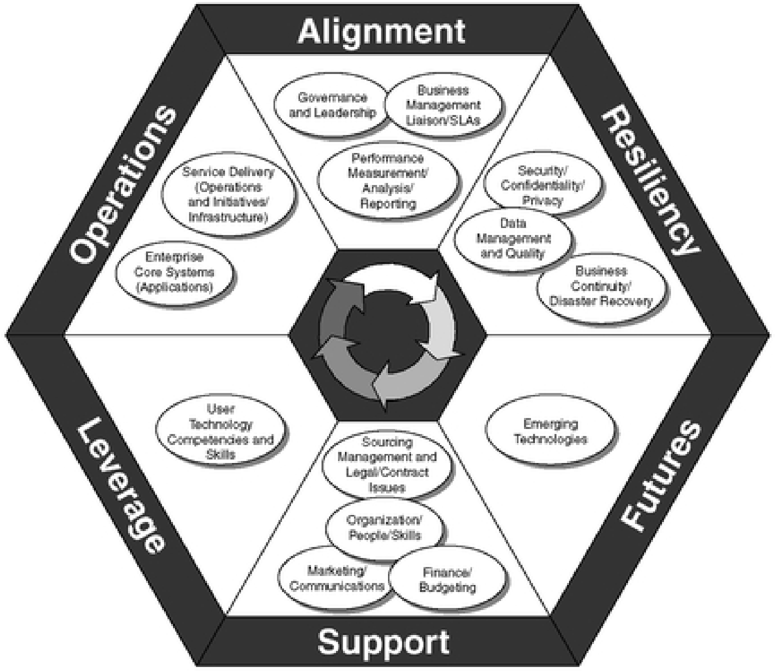
Finally, for the CIO and other business leaders to “speak the same language,” a business-focused nomenclature, or uniform “lens,” needs to be created for IT.

The IT management lens is just such a tool. As illustrated in Figure I.2, the framework consists of six critical drivers of IT success. Within each driver are from one to four component levers (a total of 14) that must be managed.

Alignment

This performance driver includes three component levers that deal with the ability to identify, highlight, plan for, measure, and improve on the critical areas that drive a quality IT organization and directly links these to the business’s strategies and objectives. These component levers are important in ensuring that the focus of IT is always the same as the focus of the business.

Figure I.2 IT Management Lens.



IT Governance and Leadership involves (1) the ability to focus, lead, and govern the activities and efforts of centralized and locally dispersed IT staff to enable them to deliver cost-effective, world-class IT services in a high-performance manner; (2) the ability to build a culture of continuous improvement of IT management processes, controls, and support based on internal and external best practices; and (3) the ability to establish a vision and strategy directly linked to key business objectives.

The *Business Management Liaison* has the ability to work effectively with multiple stakeholders and to apply customer relationship management practices, including the identification of appropriate, mutually agreed objectives, levels of service, and costs/service fees, which in turn are defined in service level agreements (SLAs).

Performance Measurement/Analysis Reporting is accomplished through the ability to effectively measure and analyze various aspects of performance of the IT organization and its service delivery capability and to present clear, understandable, and transparent performance reports internally (within the IT organization) and externally (to key corporate and business-unit stakeholders).

Support

The support driver includes four component levers that deal with those functions that are necessary and critical to the ongoing care and feeding (support) of a fully operational business entity and that focus primarily on financial and human resource management issues, as well as key relationships. These are important in ensuring that IT is provided with all of the requisite assistance it needs to operate as a full business entity.

The *Organization/People/Skills* lever focuses on IT management's ability to harness the diverse centralized and locally deployed IT skills that most effectively support complex global and local business needs.

Finance/Budgeting is a critical need for any business unit. The IT organization must have the ability to develop and implement financial and budgeting processes and controls to manage effectively the economic aspects of the IT organization and its component operations.

The *Sourcing Management and Legal/Contract Issues* lever is the ability to ensure that all IT-related third-party legal and contractual issues are handled in an appropriate manner.

Marketing/Communications is the ability to establish and maintain a variety of effective and efficient channels of open communication, dialogue, and discussion across all business units and geographies, as well as within the IT organization.

Operations

The operations driver is made up of two levers that deal with the fundamental inner workings of an IT organization—24/7 infrastructure service delivery and the development and maintenance of core application systems. These are important because they constitute the primary "manufacturing plant" of an IT organization.

Service Delivery (Operations and Initiatives/Infrastructure) is the ability to provide in a cost-effective manner user-oriented continuous services that are driven by business-oriented performance metrics.

The *Enterprise Core Systems* (Applications) lever enables the cost-effective implementation, maintenance, and rationalization of common and business-unit specific applications based on business-issue priorities.

Resiliency

The resiliency driver is made up of two levers that deal with the overall protection of enterprisewide IT assets—hardware, software, networks, services, and people—to prevent situations from occurring that could potentially cause major damage and disruption not only to the IT infrastructure, but also to the entire company. These are important in ensuring that the IT organization has the ability and agility to proactively adapt to constant change and negative conditions.

Security/Confidentiality/Privacy is the ability to work closely and effectively with the corporate risk management/security organization to ensure that the company's technology assets and networks are used and operated in the most secure and confidential manner possible, and in accordance with desired privacy constraints.

Data Management and Quality is the ability to ensure the completeness, accuracy, and integrity of critical data and the adequacy of the internal control environment to sustain the quality of the data over time. Also included are the collection, normalization, and analysis of large volumes of critical data in a controlled environment.

Business Continuity/Disaster Recovery is the ability to keep the IT organization and operations functioning in the event of various forms of business interruptions.

Leverage