

CHAPTER 2

Ask the Right Questions

The purpose of this chapter is to explore how management can most effectively address basic questions about IT and business, and thereby set the stage for effectively controlling the IT spend and maximizing IT's bottom-line impact.

Managers ask tough questions about IT spending, particularly at budget time. Here are typical questions we have heard:

CEO: Can we afford what we're spending on IT? Do we even know how much we're spending on IT? How can I tell if IT is helping with our strategies? Are we getting bottom-line impact from our IT investments, and how will I know that? Are we making as much use of the technology in our business as we should? How can I get all of my managers to agree on our technology strategies and plans?

CFO: Are we controlling our IT expenses? Do our IT managers understand the financial implications of their decisions? How do we justify new IT investments?

How do we balance our resources between requests for new investment and the needs of existing activities? How do I know IT is contributing to our business success? Can we justify spending what we are, on IT?

CIO: I've got \$75 million in IT project proposals and \$30 million in IT budget . . . how do we as a company decide which are the best \$30 million of projects to do? What is the correct balance between infrastructure support and new projects? How do I get business and IT people on the same page

Control Spending and Maximize Impact on the Bottom Line

1	Define the Goals
2	Ask the Right Questions
3	Connect to the Bottom Line
4	Understand Costs and Resources
5	Focus on the Right Things
6	Adopt Effective Process to Produce Action
7	Tackle the Practical Problems
8	Make the Right Decisions
9	Plan for the Right Results
10	Keep Score
11	Implement Right Decisions/Right Results
12	Chart the Path to Implementation
13	Define What's Next
14	Answer the "So What?" Questions

about IT initiatives, priorities, and expectations? How do I get business managers to agree on IT's priorities? How does IT communicate its performance and its impact on the business in terms business understands? How do I get business and IT people on the same page about IT initiatives, priorities, and expectations?

Business Unit Manager: How can I help control my IT costs? How do I figure out how to use IT to improve my business and competitive edge? My direct reports all have good technology ideas . . . how do I choose? How do I get IT working on the things the business needs, as opposed to the things that individuals need? How do I build a business case for the IT investments we need?

IT Managers and Professionals: How do we explain to the business what we are doing and why it costs what it does? How do we cut costs and still provide good services to the business? How can we work most effectively with our peers in the business, to assure that we are addressing the right problems and producing the right solutions? How do we know that the infrastructures and applications we manage are making a difference for the company?

These are the questions managers feel they have to answer to get to Right Decisions/Right Results. The questions address management process (e.g., "How can I get IT working on things the business needs") and outcomes (e.g., "How do I know we're getting value from IT?"). However, we propose a simpler set of questions that address all of these concerns while focusing the company's attention on the most effective IT actions.

THE RIGHT QUESTIONS FOCUS ON AFFORDABILITY AND IMPACT

Businesses feel three pressures when trying to control IT spend while producing bottom-line impact. First, the overhang of existing IT activities (legacy systems, infrastructure, personnel, etc., which we will call the "lights-on" expense) usually requires annual spending increases. Second, business is more effective each year in defining new IT investments ("projects"), increasing the budget requests for future periods. Finally, business managers continue to put downward pressure on IT costs, forcing hard examination of lights-on expenses and new investments.

From a practical perspective, we see these pressures play out in the annual IT budget cycles. First, companies develop future lights-on budgets with pro-forma increases, with little examination of the underlying bottom-line impact of the activities and expenses. Second, new IT investment proposals are developed (often as business wish lists), and combined with the lights-on expenses to complete the overall IT budget proposal. Finally, business management places

spending constraints on the organization, forcing a close examination of all IT expenses.

In many companies, the lights-on budget (up to 85% of IT expense in some companies) takes on the mantle of an entitlement, with little examination of the value of those continuing expenses. Consequently, controlling IT spending means controlling the costs of new investment, squeezing new projects out rather than reducing existing activities. In effect, the amount of new IT investment is the difference between overall budget targets and the budgeted lights-on expenses.

We propose that the role of management in this context is to force the examination of all IT expenses, using the yardstick of bottom-line impact, and creating IT spending patterns and budgets that are affordable for the business, given budget constraints and guidelines, while supporting the new IT activities that the business needs. To do this, management must address two complementary sets of questions:

Affordability Questions

- What can we afford to spend on IT?
- Can we reduce unnecessary IT costs?
- Can we redeploy expenses to support needed projects?

These questions address management's judgment on where, and how, to spend company resources on its operations, of which IT is but a part.

Impact Questions

- Are we investing IT resources in the right places?
- Do our business strategies drive our IT actions and produce bottom-line impact?
- Are we getting bottom-line impact from our lights-on resources?
- Are we balancing our strategic and tactical investments?

These questions address the alignment of what IT spends with the company's basic strategies and goals. The questions also get at IT's performance with respect to doing the "right" projects and the "right" way to allocate IT resources.

We also want to point out a question we are *not* asking: We are *not* being distracted by the "IT Value" question. Considerable energy has been expended throughout the IT industry to answer the "What is the Value of IT?" question. We do not believe that at this stage of business and IT development, this is the right question, because it does not lead to the appropriate management actions. We are focused on the *actions* needed to control IT spending and improve IT's impact on the bottom line.

To ask and answer these questions effectively, we need to engage senior managers in discussing and resolving the basic Affordability and Impact Questions, in order to take the actions that effectively control the IT spend and improve

IT's bottom-line impact. Senior managers should be responsible for a number of actions:

- ***Establishing spending targets and specific justification criteria for IT spending.*** IT spending is like any other business expense, and managers need to set affordable and realistic IT spending targets.
- ***Understanding investments.*** Senior managers should understand where and why money is being spent for new projects and ongoing IT.
- ***Understanding the business impact.*** Senior managers should know the connection between IT investments and accomplishing what is important to the business (reflected in the company's strategic intentions.)

By considering affordability and impact, the management team can most efficiently focus its own activities and drive the actions of the IT management group.

AFFORDABILITY QUESTIONS: THE STARTING POINT FOR THE RIGHT ACTIONS

Over the last 15 years, we have conducted many management exercises in prioritization and alignment intended to answer the Impact Questions about IT's value: Are we spending our money in the right place, can we support our strategy, and so forth. These exercises generally succeeded in getting management groups to understand what they were doing with IT, and renew or redirect their commitment to their IT strategic and tactical plans.

However, in almost all cases, there was a subtext to the management teams' discussion: that the company had implied limits to what it could spend on IT. In effect, an "affordability"¹ factor enters into management's concerns. Consequently, for many companies, the "strategic" questions are not the first ones to ask. The management actions needed are not only to decide on IT investment to support strategy, but also to decide, in the context of that company and industry, what is the *right level* of IT spending, and how should the company allocate those dollars between ongoing activities and new investment as effectively as possible.

By starting with affordability, we start with reality. We are explicitly stating that the issue is not one of garnering new budget support for every new idea, but allocating a scarce resource between new needs and existing activities, so that the mix produces the best bottom-line impact for the company.

The three Affordability Questions are simple to state but complex to answer. Each question contributes a critical piece of understanding to managers making resource decisions.

1. ***What can we afford to spend on IT?*** From a CEO's perspective, IT is but one of a number of business expenses that must be managed and controlled.

From the business unit or CIO perspective, IT expenses are often entitlements (lights-on budgets) and new spend (project budgets) that need to grow if services and functions are to continue. We propose that each company has an implied target for IT spend, that may or may not be articulated throughout the company. The issue for management is to identify and understand that constraint, and allocate IT resources within that number to the best and highest-impact activities.

What is the right level for IT expenditures for a given company? “Lights-on” should be stable at worst, given the constant decline in unit costs of hardware and the many alternatives available for reducing software costs. Project money should be dependent on the strength of the individual project business cases, offset by the risks involved, and represented in total by the project portfolio. Our starting point is to look for stronger projects with larger bottom-line impact. Overall, the right level for IT expenditures is based on executives’ judgments on what the company can afford, dependent on industry conditions and company capabilities, rather than line management’s beliefs about what they need.

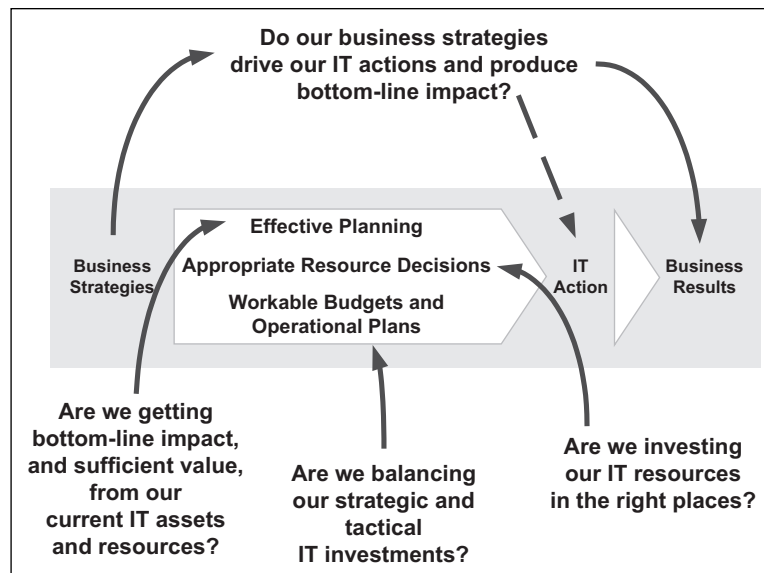
2. ***Can we reduce unnecessary IT costs?*** For the most part, this question deals with lights-on budgets and ongoing IT activities. First, it implies that we know what the costs for IT are. However, we have learned that in many companies neither business nor IT managers truly understand the extent or detail of the costs that make up ongoing activities. While gross bottom-line budgets are known, such important issues as the cost to run a given application (or even what the inventory of applications is), the people dedicated to particular systems, and the overall infrastructure component costs (and what is driving those costs) are completely unknown. Second, it also implies that companies are examining these costs, but we have found there is very little examination of ongoing costs (beyond anecdotal cases for outsourcing, systems replacement with new purchased software, etc.). The issues for management are to identify these costs, understand their bottom-line impact, and eliminate (or redeploy) costs that are not contributing to the bottom line.
3. ***Can we redeploy expenses to support needed projects?*** Given limited resources (first question) and understanding of overall and especially unnecessary costs (second question), this question implies that we can redeploy poor-performing assets and resources to new projects. Assuming flat or slightly increasing budgets, redeployment allows an overall higher impact from all IT dollars, while supporting more “strategic” projects that might otherwise go unfunded.

By starting with and answering the Affordability Questions, we set the groundrules for spending and resource allocation, and provide the basis for using the Impact Questions to drive the right actions from IT.

IMPACT QUESTIONS: THE ROADMAP FOR THE RIGHT ACTIONS

The Strategy-to-Bottom-Line Value Chain is a series of connected management processes that produce projects and budgets for projects and ongoing operations. In the processes, management makes decisions about strategies, projects, and plans; those decisions are then implemented in terms of the projects and operational budgets. The result is a roadmap for getting the right IT actions. See Exhibit 2.1.

EXHIBIT 2.1 The Impact Questions



Senior managers know they need effective and timely information technology support for their key business strategies. What the Impact Questions do is allow them to drive IT actions directly from those business strategies, and focus IT and business line management on using resources to deliver bottom-line impact.

1. ***Are we investing IT resources in the right places?*** Given a company's strategies and operational issues, are the IT resources devoted to the most important things? This can mix resource allocation questions (which investments should we make?), impact questions (are we spending on and supporting old IT activities that are no longer important?), and planning questions (are we generating the best ideas for using IT in the business; are we contributing solutions to our business strategies?) Business and IT management teams must answer this question together, with a clear view of the business strategies

being supported and an equally clear view of the opportunities that IT presents to meet those strategies. (Typically, management disconnects between IT and business get in the way. If business and IT management are not working from a common philosophy, and a common set of cultural values in making these decisions, they simply add to the problem rather than answer the questions.)

- 2. *Do our business strategies drive our IT actions and produce bottom-line impact?*** The question implies that management agrees on a common statement of business strategy, and understands the kind of actions IT is taking to support that strategy. In many companies, merely asking the question forces a rearticulation of the strategies, in terms that are *actionable* by line management. IT is then able to understand more fully what management is intending and what actions it can take to support those intentions.

We often see companies that do a good job of connecting their IT planning to business strategy but then fail to implement the best projects. The culture forces projects with high short-term ROI to the top of the priority list, or emphasizes short-term operational goals in setting budgets and choosing projects. This illustrates the importance of having a common basis for answering the question: “*Do our business strategies drive our IT actions?*” The answer is important, but the culture and practice to do something about the answer are important as well.

- 3. *Are we getting bottom-line impact from our lights-on resources?*** This question implies that we know in detail what our current IT *resources* are, and how they are being used. Additionally, the answer depends on the intended outcomes from the investments in IT assets and resources. For example, if they are competitive in nature, then the question is about the impact that the investments have on competitiveness, market share, customer retention, and so forth. If the outcomes relate to cost or productivity, then the question is about the impact that the investments will have on costs and on operational performance.

Disagreements about IT value can occur when business and IT management have different views on the actual business outcomes needed. For example, business management may look for substantial ROI or, alternatively, substantial competitive edge, as the basis for IT’s value. If IT looks for competitive edge, and business is marching to the ROI drum, a serious disconnect exists. Disconnects can also occur in culture, which may resist changing existing business practices or focus on immediate bottom-line performance. Disconnects can also exist in management processes, where nothing in the annual planning or budgeting activities requires connecting the business strategies to the IT planning practices.

- 4. *Are we balancing our strategic and tactical investments?*** People typically think of lights-on budgets as tactical, and “new” projects as strategic. However, in most IT activities there is a mix of tactical and strategic spending in both lights-on and new project budgets. The question for management is balancing the amount spent on each so that the strategic needs of the company

are met, as well as the tactical needs (usually meaning productivity and cost reduction). The answer to this question also demands a clear and common view of overall company objectives and strategies. IT managers need a common view with the senior manager team, and typically this is difficult to achieve.

For example, in a large consumer products company, the IT management team works closely with individual vice-presidents who are responsible for the major functional areas of the business. These functional managers do not have a clear consensus among themselves or with senior management on what the enterprise strategies are or, more importantly, the implications of those strategies for each functional area and their use of IT. Without a clear and common view of the company's strategic directions, IT does the tactical things demanded by the individual vice presidents preventing the productivity and competitive advances the company needs. (We will pay close attention to the ideas of balancing investments in our portfolio management discussions in subsequent chapters. The notion of "balance" covers not only strategic/tactical but also back-office versus front office, infrastructure versus applications, and risk management.)

These questions have been around in one form or another since IT entered mainstream business discussions. In the past, senior management teams looked to IT management for answers to the IT Impact Questions, but the questions are not simply about IT; they are connected to business as well. This is the core problem for the senior leadership team. While it may be convenient to look at IT as the silver bullet to produce results for the company, it is clear that IT is merely an enabler. For significant bottom-line results to occur, business management has to be intimately engaged. IT produces value by enabling business to make transformational changes—in internal processes, in products, and in outreach to the customers. In every case, the underlying business process has to change in order to produce value. Business and IT management have to work together on a common vision and in tandem to produce the technical solutions and business process changes. This is how value is produced.

EXAMPLES: THE IMPACT OF ANSWERING THE QUESTIONS

Consider the example of a company that defines its strategic intentions² as: (1) growing sales and revenue through market share increase, (2) reducing product manufacturing cost, and (3) strategic acquisitions in its industry. In analyzing the company's IT "lights on" budget, the result was shown to management with Exhibit 2.2.

The chart shows that only 42 percent of the ongoing lights-on budget strongly supports the company's three strategic intentions, while 39 percent of the budget has from no support to weak support of the strategic intentions. (This is in response to the question: "Are we getting sufficient value from our current IT resources?")

This also means that only 42 percent of the *actions* IT takes, in dollar terms, strongly support the company's three strategic intentions, while 39 percent weakly support those intentions.

What we see here is a company not taking the right actions and, therefore, not getting the right results from its IT investments. The management team now has decisions to make and actions to take. These decisions can take the form of reviewing where those poorly performing IT activities are and how they could be improved or abandoned or, alternatively, how the business units could improve their utilization of the IT *resources* being provided. The key is that questions are asked, answers are provided, and action can result. Of course, if no action actually occurs, than the exercise is not helpful.³

Consider another company that asked the question: "Are we investing our new IT resources in the right places?" In this case, the question focused on the new development budgets for projects. Exhibit 2.3 shows six strategic intentions for the company, and shows their relative importance to one another (expressed as a "weight"). The exhibit then shows the project investment dollars that strongly support those strategic intentions.

EXHIBIT 2.2 Application Portfolio Support for Strategic Intentions

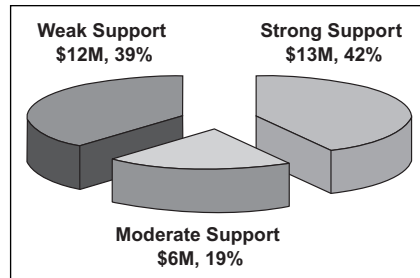
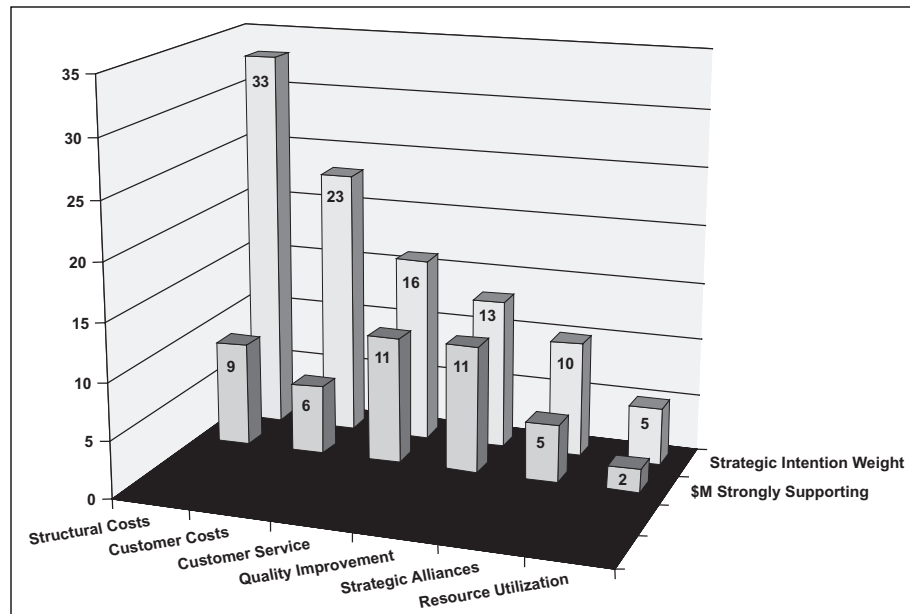


EXHIBIT 2.3 Investment Dollars in Strong Support of Strategic Intentions



The interpretation is that the most project dollars, in terms of strong support of business strategic intentions, occurs for the middle two strategic intentions, and that the most important ones are not getting as much support. The good news is that the projects are supporting the company's strategic intentions. The bad news is that the proportion may not be as appropriate as company management might wish.⁴

One consequence is that the set of IT actions represented by the projects and their impact on strategic intentions is not optimally established. Management may wish to take action on the mix of projects to be undertaken. Another consequence is that management does not understand what the IT actions will accomplish, in terms of bottom-line impact.

THE CONTEXTS FOR MANAGEMENT QUESTIONS ARE PLANNING AND BUDGETING PROCESSES

Management teams generally focus on IT when it comes time to plan and budget for IT spending. This comes to a head during the annual planning and budgeting cycles. As we ask the Affordability and Impact Questions, we must provide answers by working within the context of planning and budgeting, and link the process of answering the questions to those processes.

Planning Processes

As management establishes strategic and annual operating plans, IT affordability and impact is an important factor. From each business unit's perspective, it is a question of what IT will do for that unit with new projects and ongoing operations. From the enterprise perspective, it is a question of whether the overall costs are appropriate and affordable and how well IT supports the business.

Workable Budgets and Plans

A basic premise of this book is that plans and resources mean little until IT management takes the right actions, either by implementing new capabilities or supporting the directions the business takes. The rubber meets the road when budgets are available and actions are taken. For development projects, this means effective prioritization and project selection. For ongoing IT activities, it means appropriate support levels, infrastructure maintenance, and maintenance and support of the existing applications.

WHY ASK AFFORDABILITY AND IMPACT QUESTIONS?

The questions we posed above look at the company's strategies, ask about whether the strategies are being supported, and result, generally, in redressing gaps in spending. The questions' thrust is strategy first, then decisions and then action.

IT is approaching 50%, of many companies' capital budgets.⁵ The proportion of corporate resources devoted to IT is rapidly rising, to 15% or more of revenues in some industries⁶. In many industries, IT-enabled services and processes have the capability to change the competitive landscape: consider the experiences of Wal-Mart, FedEx, and Charles Schwab. IT can remain a dominating issue for the senior management team for years, as evidenced by the experiences of many companies struggling with ERP, consuming enormous money and staff energy, and yet promising an impact across the board on business practices. Even in difficult economic times, IT is on the agenda, if for no other reason, that when the economy is down, there is increased interest in controlling the costs of IT, which gives rise to assuring the most efficient use of IT resources, cost reduction, and validation of IT's value. In today's competitive and rapid paced economy, companies simply must get the maximum value from their IT investments.

There are also other views in the industry that we should consider as well. Nicholas Carr introduced a new point into the relationship between IT and the business, in an article in the *Harvard Business Review* titled "IT Doesn't Matter."⁷ Carr suggests that IT is a commodity in most businesses, rather than a unique component of the company's strategic position in the industry. IT remains important, to be sure, as most businesses completely rely on IT for the conduct of their core business activities. But every business has access to IT, and the competitive, "strategic" advantage to be obtained from IT may no longer be a realistic objective for most management teams. In other words, there is no substantial reason for major investment in IT except to further enable the basic conduct of the business. Carr essentially recommends that management treat IT as a commodity and manage it accordingly. Among other things, this means "spending less" rather than spending more as a starting point for the management of IT. It also means focusing on cost and resulting efficiency of business processes, as well as addressing the risks.

This really is not a completely new idea. For example, Paul Strassmann wrote persuasively about his research that found little correlation between the level of expenditures competitors make in IT and their relative profitability. His "shotgun" charts documented, by industry, where each company stood in plotting bottom-line performance against IT investment levels. The charts were completely random.⁸

Jack Keen and Bonnie Digrius wrote an excellent book⁹ that focused on finding ROI in every IT investment. As Keen and Digrius put it, for an individual project, everything is in the ROI. As a practical matter, this means finding the specific way the IT commodity (in project terms) reduces cost, finds some direct impact on revenue, or finds a connection to management goals.

We do not believe that "IT doesn't matter." IT is vital to most companies. The things IT enables—effectiveness and efficiency, new products, new means to markets—are certainly critical to the competitive health of companies. What does matter is that a company's investments in new IT projects and ongoing IT operations are consistent with management's strategies and effective in carrying them out.

We propose that, to be effective in managing IT, *companies need good answers to the questions about IT's affordability and impact, especially when IT is such an important part of senior management's agenda.*

But what if the answers to the IT Impact Questions are “no” or “we don't know”?

This often happens in even the most successful companies, when their management processes do not focus sufficiently on the questions and their answers, or fail to deal with their implications. This book is about five management practices that address the IT Impact Questions. These five NIE practice areas cover planning, innovation, prioritization, alignment, and performance measurement, and apply concepts of value, portfolio, and culture management.

TAKING ACTION

We have developed a simple business/IT stage model that describes where a company is in its management and use of IT. Our view is that the “right questions” depend on whether the company management can do anything with the answers, and this depends on the stage at which the company finds itself. Briefly, companies move through five stages with respect to IT. Stage 1, where the performance of ongoing IT activities such as the infrastructure and running existing applications, is at an acceptable service and quality level. If current infrastructure or applications are unreliable or of low quality in terms of accuracy, then asking questions about strategic support or affordability are irrelevant. This is because management will not be capable of responding effectively to the answers to the questions. The Stage 1 performance issues must be addressed first. See Chapter 4 for the ideas on how assessment of Operational Processes and Tasks can be done.

Stage 2 has to do with the performance of systems development. If current development efforts are substantially behind schedule or over budget, or if the results of development are ineffective in meeting business requirements, then asking questions about strategy are largely irrelevant, and questions of affordability are limited to operational tasks. See Chapter 6 for ideas on how to assess Development Processes and Tasks.

Stage 3 deals with the capability of the IT organization to respond to current tactical requirements, making the changes and doing the projects necessary to respond to those changing tactical requirements. If IT is unable to respond effectively, then asking questions about strategy is not relevant. Affordability issues are not helpful either, if the work being paid for cannot respond to tactical requirements.

Stage 4 deals with the ability to articulate and respond to strategic requirements. This includes the dimension of process change and change management. Again, if IT is not performing this well, then issues of strategic alignment are not as helpful as when they can perform well.

Stage 5 deals with IT's leadership in providing new strategies and directions to the company.

Filtering the "right questions" through the stages laid out helps define the agenda for addressing Right Decisions/Right Results. The goal is to control IT spending, and spend on the right things that will produce bottom-line impact.

The Impact Questions should drive down from the top of the model. We cannot get to the strategy-level issues (Stages 4 and 5) without dealing with the first-level questions. If IT is not performing, then asking about strategic investments is a waste of effort.

The Affordability Questions should drive up from the bottom, starting with operations, then development, then the tactical and strategic projects undertaken. This is because, first, that's where the money is, and second, that's where actions can be taken.

CHAPTER SUMMARY

Companies achieve great things when IT actually supports what company management thinks is important. This is critical, because it is not just IT acting alone, it is IT enabling what management thinks it wants to accomplish. This is the heart of what we want to accomplish in finding consistency and connection in management activities—to connect business strategy to IT action.

Our thrust is to connect IT investments to what is important to management, in ways that actually connect to the bottom line by consistently and persistently applying key ideas from planning through to performance management. By seeking the answers to the right questions, management is able to control IT expenses and improve IT's bottom-line impact.

Impact

- We translate our business strategies into IT actions that produce the right results.
- We invest in new IT resources in the right places.
- We get results, and sufficient value, from our current IT assets and resources.
- We balance our strategic and tactical investments.

Affordability

- We spend what we can afford.
- We reduce unnecessary IT costs.
- We redeploy unnecessary expenses to support needed projects.

The Strategy-to-Bottom-Line Value Chain and the NIE practices enable management to produce these answers to the right questions.

ASK THE RIGHT QUESTIONS: MANAGEMENT AGENDA

	Questions	Yes or No?	What Are We Doing to Correct the Situation?
Right Decisions	Are we investing new IT resources in the right places?		
	Do we know what we can afford?		
	Can we reduce unnecessary IT costs?		
	Can we redeploy expenses to support needed projects?		
Right Actions	Are we able to reduce the cost of poorly performing activities?		
	Are we able to translate our business strategies into IT actions that will produce the right results?		
Right Results	Are we getting results—and sufficient value—from all our lights-on resources?		
	Are we able to effectively control our IT costs?		

ADDITIONAL READING

The book's website contains additional information related to Chapter 2:

Website Note 1: IT and Economic Cycles

Website Note 2: IT's Value—A Definition

Website Note 3: IT, Bottom-Line Impact, and Government

Website Note 18: ROI and the IT Value Life Cycle

NOTES

1. We are indebted to Joe Barkley for putting words and meaning to this issue.
2. "Strategic Intentions" is a framework we use to define a company's objectives and strategies. The framework is described in detail in Chapter 3. See also Appendix A—Part 3, "The Development of Strategic Intentions, With Examples".
3. This example is from the Alignment practice, described in Chapter 8.
4. This example is from the Prioritization practice, described in Chapter 8.
5. Capital spending data from Morgan Stanley Technology Research, March 2002.
6. Percentage revenue data from META Group and Metricnet 2002.
7. Nicholas G. Carr, "IT Doesn't Matter," *Harvard Business Review*, vol. 81, no. 5, May 2003, pp. 41–49.

8. See, for example, Paul Strassmann, *The Business Value of Computers* (New Canaan, CT: Information Economics Press, 1990), and, by the same author, *Information Productivity* (New Canaan, CT: Information Economics Press, 1999).
9. Jack Keen and Bonnie Digrius, *Making Technology Investments Profitable* (Hoboken, NJ: John Wiley and Sons, 2003).

