Business-IT Strategies

Vol. 6, No. 12

Executive Report

CUTTER CONSORTIUM

Finding the IT Improvement Zone

by Bob Benson, Tom Bugnitz, and Bill Walton, Senior Consultants, Cutter Consortium

How can the IT organization deliver a bigger bang for the IT buck and at the same time control, and even reduce, the bucks needed to accomplish this? In this *Executive Report*, three senior consultants share their method for improving IT's bottom-line impact while reducing expenses, with the ultimate goal of reaching the IT Improvement Zone.

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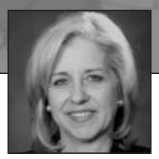
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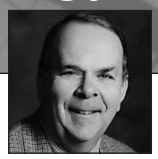
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Finding the IT Improvement Zone

BUSINESS-IT STRATEGIES ADVISORY SERVICE

Executive Report, Vol. 6, No. 12

by Bob Benson, Tom Bugnitz, and Bill Walton, Senior Consultants, Cutter Consortium

This report is based on a simple principle: a company should spend money only on IT efforts that directly support its business strategy and operational effectiveness and should not spend money on IT that doesn't. The scarce resources of a company (usually management attention and money) need to be spent only on activities that advance the business. Money that is wasted on poorly performing IT projects, systems, and services is money not spent on other areas of the business (including other IT) that could potentially provide more return.

The practical issue is how to determine whether or not the IT activity "directly supports the business strategy and operational effectiveness" — and if it does, to what degree — and what to do about it if it doesn't. Although organizations spend an enormous amount of time and planning effort to find and prioritize new IT investments, 80% or more of IT costs are in ongoing "lights-on" budgets. We believe that management does not spend a proportional amount of time examining the costs and benefits of existing lights-on activities and is therefore missing enormous opportunities for improving the cost and effectiveness of its entire IT spending.

This report addresses how companies can better control IT spending and significantly improve IT's bottom-line impact. By applying a set of principles, processes, and tools, senior and line managers can successfully increase the bottom-line impact of the company's IT investments.[1]

By looking at all of the IT spending, by reducing underperforming IT expenditures, and by ensuring that every IT dollar supports the company's strategies, IT's bottom-line impact and cost profiles can be improved. Through strategy-based prioritization, IT's strategic impact will be improved. Together, this puts the company in the IT Improvement Zone.[2]

To do this, the management team needs to apply a consistent set of management practices focusing

[1]This report is developed from our new book, *From Business Strategy to IT Action — Right Decisions for a Better Bottom Line*, to be published by John Wiley & Sons in February 2004.

[2]IT Improvement Zone ©2003 by The Beta Group.

on portfolio management, which uses prioritization, alignment, planning, innovation, and performance measurement practices. These are all directly connected to business strategy. A Strategy-to-Bottom-Line Value Chain provides the framework for these practices.

To assist in adopting these practices, management must apply change processes through IT impact management and culture management; it also should set goals for process change through the Business Value Maturity Model™.[3]

The practical solution is a set of principles, processes, and tools, broken down below into 13 distinct steps.

Principles

1. **The IT Improvement Zone:** define the company's goals
2. **Affordability and Impact:** ask the right questions
3. **Strategic and Operational Effectiveness:** connect IT to the bottom line

Processes

4. **Portfolio Management:** understand costs and assets
5. **Controlled IT Costs and Improved IT Impact:** focus on the right things
6. **Connected Business and IT Management:** Adopt effective processes to produce action
7. **IT Impact Management:** tackle the practical problems

Tools

8. **Prioritization and Alignment:** make the right decisions
9. **Demand/Supply Planning and Innovation:** plan for the right results
10. **Performance Measurement:** keep score
11. **Culture Management:** implement the right decisions, right results
12. **The Business Value Maturity Model:** chart the path to implementation
13. **IT Impact Management:** a program for implementing a road map

These 13 items translate into specific management steps that companies can use to move from business strategy to effective IT action. The rest of this report details each of the above steps and suggests ways executives can integrate these steps into their companies' existing processes.

THE OBJECTIVE: CONTROL IT SPENDING AND IMPROVE THE BOTTOM-LINE IMPACT OF IT

Companies spend as little as 2% and as much as 10%-15% of their revenue on IT. As shown in Figure 1, this includes the ongoing cost of keeping existing IT operational activities going (the lights-on budget) as well as new investments in development and enhancement projects (the projects budget). In looking at what management can do to make IT perform better for the business, we must examine all of the IT spending, both projects and lights-on activities. Most of what a company spends is in lights-on costs, often 70%-80% of the total. To be

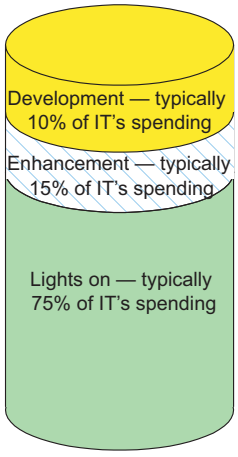

Figure 1 — Spending categories.

[3]The Business Value Maturity Model is a registered trademark of The Beta Group.

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serious about controlling cost and increasing IT's impact on the bottom line, we have to address all IT spending, not just new projects.

We have two basic objectives: (1) to better control and reduce the cost component of IT; and (2) to improve the impact that IT has on the business and its bottom line. (Bottom-line impact is a shorthand expression for improving a company's strategic and operational effectiveness.) With the right management frameworks and management practices, companies can successfully control the growth of IT costs while improving the business bottom-line impact of those costs and investments.

The Goal: Move the Company into the IT Improvement Zone

Historically, company executives have spent most of their IT attention on evaluating and prioritizing new IT projects and investments. Considerable management energy is spent on prioritization and dealing with the politics of project selection. As a practical result, this effort applies to only 20%-30% of overall IT spending. The other 70%-80%, the lights-on budget, is larger but attracts almost no attention from management.

This has led to an "entitlement" mentality within the lights-on budget areas, in which each business manager expects that the information systems now in place will continue with current or improved levels of support; likewise, the CIO tends to expect that the base budget for current applications support, including infrastructure, will continue at current or increased levels. The entitlement mentality affects not only project prioritization (managers fight for *their* projects to be done by *their* project people) but also the ongoing costs of supporting each manager's applications. It can be very difficult to reduce support to existing individual applications, making it very difficult to control and possibly reduce the lights-on budget over time. As a result, rather than pursuing both the goal of reduced cost *and* improved bottom-line impact, managers focus on one or the other.

Our goal of controlling IT costs and improving IT's impact on the bottom line is addressed by examining every part of the company's IT spending, thereby addressing the entitlement mentality. By doing so, the company can reduce underperforming IT activities and effectively direct IT spending toward the company's strategies. The result is that the company can move into what we term the IT Improvement Zone (see Figure 2). IT's impact is improved by eliminating proposed projects that do not support strategy and by creating new (better) projects that directly support strategy. IT's costs are reduced by eliminating the underperforming and unconnected components of IT spending.

As a way of portraying the concept of integrating these goals with the company's business processes, we introduce the Strategy-to-Bottom-Line Value Chain, on which we have based our 13-step approach (see Figure 3). Readers may recall

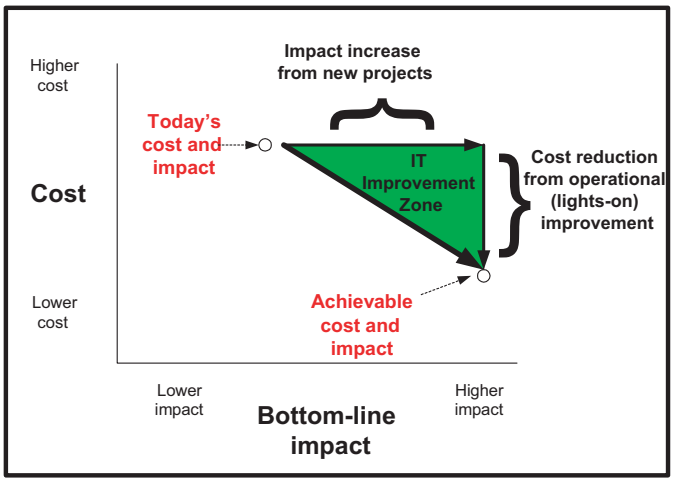

Figure 2 — Improving cost and impact: the IT Improvement Zone.

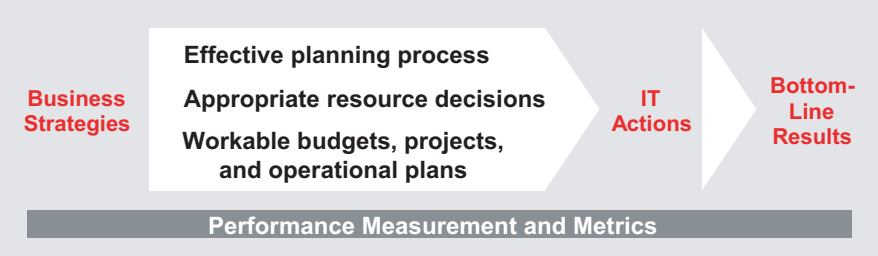

Figure 3 — Strategy-to-Bottom-Line Value Chain.

author Michael Porter's work on competitive analysis.[4] He proposed that enterprises have a value chain of connected, coordinated activities that individually and in concert add value to the products and services an enterprise produces. We take that basic idea and apply it to the management processes that connect the company's planning and strategies to IT planning, budgets, and actions as well as to performance management that tracks the results. In the Strategy-to-Bottom-Line Value Chain,[5] as in Porter's model, each individual management process adds value; and, working consistently with the other processes, works in concert to reduce or control IT costs; and at the same time improves IT's contributions to the company's bottom line. By examining each management process and applying the tools and practices outlined in this report to those processes, a company can connect the dots in terms of its processes and optimize its Strategy-to-Bottom-Line Value Chain.

The balance of the report explores each of the 13 steps outlined above. The sections also further describe the IT Improvement Zone and the details of the Strategy-to-Bottom-Line Value Chain.

PART ONE: PRINCIPLES OF INCREASING IT'S BOTTOM-LINE IMPACT

The first three components of our 13-step approach define the basic principles that are the foundation for how companies control IT spending and increase IT's bottom-line impact. These steps are discussed below.

Step 1. The IT Improvement Zone: Define the Company's Goals

As stated above, we ultimately want to improve how much IT contributes to the bottom line of the company by reducing costs and improving business impact. The management team can control IT budgets and investments while improving IT's bottom-line impact by consistently and persistently selecting the best IT investments and eliminating existing IT systems and services that underperform.

Specifically, we propose that this goal be expressed as five separate targets for IT and business management:

1. Create better investment alternatives, or in IT terms, better ideas for development projects.
2. Choose the right investments and projects from the alternatives.
3. Eliminate nonperforming and poorly performing existing IT resources from the current spending.
4. Improve the performance of the remaining existing IT resources.
5. Implement and follow through on the right investments and performance improvements.

These ideas are simply stated but difficult to achieve in practice. Most companies have existing processes that are targeted on these issues; but in most cases, those processes are disconnected from each other and, ultimately, from the management processes that actually determine what gets done in the business: creating annual operating budgets. If we set goals such as those above, we

[4]Michael E. Porter has written some very important works, including *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (Free Press, 1980) and *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, 1985).

[5]Strategy-to-Bottom-Line Value Chain ©2003 by The Beta Group.

must also admit that we are going to take steps to change the existing management and budgeting processes to reflect the decisions we make regarding IT. Without changes in those processes, nothing of long-term value will occur.

Fundamentally, the questions are: What are the company's goals? Which of the five targets mentioned above dominates as the primary goal? Through the use of the principles, processes, and tools described in this report, a company can accomplish all of its goals.

Step 2. Affordability and Impact: Ask the Right Questions

Businesses feel three pressures when trying to control IT spending while improving bottom-line impact. First, the overhang of existing IT activities (legacy systems, infrastructure, personnel, etc., which we will call the lights-on expenses) usually requires annual spending increases. Second, business is more effective each year in defining new IT investments (which we refer to as projects), thereby 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 cycle. 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, the business management team places spending constraints on the organization, forcing a close examination of all IT expenses.

In many companies, the lights-on budget has a feeling of entitlement surrounding it, and there is little examination of the value of those continuing expenses. Consequently, controlling IT spending means controlling the costs of new investments; new projects are squeezed out rather than reducing the costs of 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 to create 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:

1. Affordability questions:

- What can we afford to spend on IT?
- Can we reduce or eliminate unnecessary IT costs?
- Can we redeploy resources 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.

2. 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; they also get at IT's performance with respect to doing the "right" projects and understanding the "right" way to allocate IT resources.

In addition, we want to point out a question that we are *not* asking: we are not being distracted by the "IT value" question. There are many incarnations of ROI calculations, cost-benefit analyses, and other purely financial measures directed at proving the value of an IT application. While ROI

and other financial measures can play a role in understanding the value of IT, they should not be the sole determinant. Considerable energy has been expended in IT organizations, consulting firms, and academic circles to answer the "What is the value of IT?" question. We do not believe at this stage of business and IT development that 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.

Step 3. Strategic and Operational Effectiveness: Connect IT to the Bottom Line

A company performs better if it gets more adept at implementing its strategies (strategic effectiveness) or improves the performance of its operations (operational effectiveness). To quote Porter: "*Strategic effectiveness* means performing different activities from rivals' or performing similar *activities* in different ways. *Operational effectiveness* means performing similar activities better than rivals perform them."[6]

By extension, bottom-line impact occurs when the company improves its strategic and operational effectiveness.

[6]Michael E Porter, "What Is Strategy?" *Harvard Business Review*, November-December 1996, p. 62.

Our basic approach for connecting to the bottom line has the following elements:

- By prioritizing all IT investments in terms of bottom-line impact (including risk), the company improves overall bottom-line performance by choosing the high-impact investments and eliminating or reworking low-impact investments.
- By aligning the lights-on IT spending (e.g., infrastructure and existing applications) to the business, the company improves overall bottom-line performance by changing or eliminating the low-impact activities.
- By understanding the cost of elements of IT spending and by assessing the performance of the lights-on IT spending in terms of technology, architecture, quality, and service level, the company improves overall bottom-line performance by eliminating costly, poorly performing IT activities.

Managers improve IT's impact on the company's bottom line by controlling IT spending and evaluating all parts of IT spending according to bottom-line impact.

We define three ways that the total IT spending connects to the bottom line. First, and most obviously, company money expended on IT is a cost to the company, so eliminating project work or reducing lights-on costs affects the bottom line. Business-driven prioritization and alignment exercises can achieve this. Second, a new IT investment can directly produce revenues or reduce expenses and thereby directly connects IT to the bottom line. The financial analyses on project business cases highlight this direct financial return. If management increases directly measurable ROI by choosing the right projects, the result shows directly on the bottom line. Doing so requires selecting only those projects with achievable cost reductions or revenue enhancements. Business-driven prioritization can achieve this, with appropriate selection of prioritization factors. Third, and most critically, an IT expenditure can enable or support a business activity that itself affects the bottom line. There can also be a direct cause-and-effect relationship between an IT expenditure and the success or failure of management's efforts to change the business in some way. This is the most powerful bottom-line connection, because to the extent that IT enables the success of management's strategies, IT is a direct contributor to the overall efforts of the business to impact the bottom line.

The first and second categories, though real, are very much in the minority of opportunities in companies today. The biggest challenge — and opportunity — is controlling IT spending and improving bottom-line impact

when projects and lights-on budgets do not produce simple cost reduction or immediate financial returns. IT is at least one step removed from direct bottom-line impact. Business units apply IT in their business processes, and it is through those processes that the company's expenses are reduced or revenues are improved. In other words, IT's bottom-line impact is filtered through the activities of other functional areas of the business. This is ultimately where strategic and operational effectiveness are improved. Below we'll discuss these ideas in even more depth.

Bottom-Line Principle 1

The first principle we'll explore states: IT's bottom-line impact is based on direct contribution to profitability. Of course, improved bottom-line performance (i.e., profitability) is the fundamental goal for companies. Whatever we do with IT, at the heart of it, we do it to directly or indirectly improve bottom-line performance. That's the result that the management team is always seeking. For government or nonprofit entities, the equivalent goal is mission performance; whatever we do with IT, we do with the expectation of improving the agency's mission performance.

The problem is, what constitutes direct contribution to profitability? The easiest answer may be direct cost reduction; when IT reduces costs, it directly contributes to profitability. Or, IT could directly produce revenue by offering services directly to the customer. For example, IT could be the mechanism for selling information from a database. But beyond these simple examples, the idea of direct contribution to profitability becomes murkier. Where IT's direct contribution to cost reduction or revenue improvement can be measured, it should be, reflecting IT's financial contribution. However, this is done in only a minority of situations. In most cases, IT's contribution is reflected in improvements in some aspect of business organizational performance.

The reason is that IT is, fundamentally, an *enabler* of business activity. IT may enable managers to manage better or marketers to target more profitable markets or customers. IT may enable the reengineering of business processes to reduce time cycles and therefore reduce errors, to improve service quality, or to increase customer satisfaction. But in all these cases, IT's contribution is to *enable* a more efficient or effective business activity, which, *in turn,* results in improved profitability. IT is a partner in the bottom-line result, but it isn't the only factor.

Traditional IT financial analysis works to translate IT's enabling character into concrete estimates of reduced cost or increased income and thereby produce a measure of IT's contribution to profitability, or ROI.[7] This is laudable, but it confuses IT's basic contribution of enabling and improving business activity with the financial measure of its contribution.

So to reiterate: the first bottom-line principle states that IT's bottom-line impact is based on contribution to profitability, with the understanding that directly measuring it may be difficult.

Bottom-Line Principle 2

The second principle states: IT's direct contribution to improved profitability is based on improving the company's operational and strategic effectiveness. IT can certainly enable improvements in a company's operations. Improvements can take the form of cost reduction, time reduction, improved flexibility, increased quality, and so forth. If these business operational improvements reduce cost or improve revenue, IT will have contributed to profitability. Such improvements may be measured by estimating the amount of cost reduction or revenue improvement; consequently, an ROI can be calculated. In other cases, the process improvement can be measured (for example, in terms of time, quality, or error rate), but the connection to profitability may be less clear (for instance, improvement in

[7]For most of this report, we use the term ROI as a generic label covering financial computations of expense, revenue, and return.

customer satisfaction or customer loyalty).

IT can also enable the success of a company's strategy. For example, for a medical insurance company, a key strategy is increasing customer loyalty through improved customer service. If IT provides the environment and information for improved customer service, or if it enables the reengineering of business processes to improve customer service, then IT has bottom-line impact because it enables the success of the strategy, which in turn will result in improved profitability.

To reiterate, IT's bottom-line impact is based on improving: (1) the company's operational effectiveness and (2) the company's strategic effectiveness. In the first case, the operational performance improvement in some instances is measurable and possibly directly connected to profitability. In the second case, the strategic effectiveness is connected to the bottom line through management's intentions and through the strategy to improve company performance.

We cannot overstate the importance of this point. The identification of the cause-and-effect factors influencing strategic effectiveness and operational effectiveness is the basis for defining strategic intentions for Prioritization and Alignment and underlies our approach to integrated planning.

Other authors have reached similar conclusions. Robert Kaplan and David Norton's work on the balanced scorecard is based on cause-and-effect linkages between customer-, internal process-, and people-related measures and financial performance. Their notion of "leading" and "lagging" indicators is, at heart, an elaboration of cause-and-effect relationships. Also, consider Porter's contributions to the understanding of competitive strategy. He defined generic strategies of cost leadership, differentiation, and focus. In developing these ideas in his 1996 *Harvard Business Review* article, Porter remarked on the difficulty that companies have in defining and executing strategy: "The root of the problem is the failure to distinguish between operational effectiveness and strategy. The question of productivity, quality, and speed has spawned … management tools … and bit by bit, [they] have taken the place of strategy."[8] His point is that operational effectiveness — things like productivity, quality, and speed — are important, but strategy (and, in our words, strategic effectiveness) is equally important. Porter echoes author James McTaggart's point: "The essence of strategy is in the activities — choosing to perform activities differently or to perform different activities than rivals."[9] The key is choosing among alternatives — which is the heart of integrated planning — and following through on the cause-and-effect chain to implement IT solutions that support and enable those choices.

This defines the cause-and-effect relationship between IT enabling improvements in operational or strategic effectiveness and the company's bottom line.

Bottom-Line Principle 3

The third principle states: IT improves strategic and operational effectiveness by carrying out management's strategic intentions. By focusing on strategic and operational effectiveness, management is encouraged to focus on the company's bottom-line impacts. That is, management has to define what it intends to do to improve the company's performance through its strategic intentions. At the same time, management defines the basis for its operational goals — the improvements in cost, performance, customer satisfaction, product quality, and all the other dimensions of the company's activities. Again, management defines its objectives for such improvements, always with an eye toward improving financial performance by improving operational effectiveness.

[8]Michael E. Porter, "What Is Strategy?" *Harvard Business Review*, November-December 1996, pp. 113-118.

[9]Michael E. Porter, "What Is Strategy?" *Harvard Business Review*, November-December 1996, p. 115.

This is bottom-line, impact-based management. By extension, the management practices outlined in this report apply these ideas to IT and the contributions IT makes toward strategic and operational effectiveness (see Figure 4).

For example, in Prioritization, the management team assesses how each IT project increases strategic or operational effectiveness. (As an example, Figure 4 shows a summary of management's assessment for a development portfolio, linking project dollars with individual strategic intentions.) In Alignment, the management team considers how the IT lights-on spending connects to strategic and operational effectiveness. In planning and innovation, the objective is to define exactly what IT can do to promote improved effectiveness.

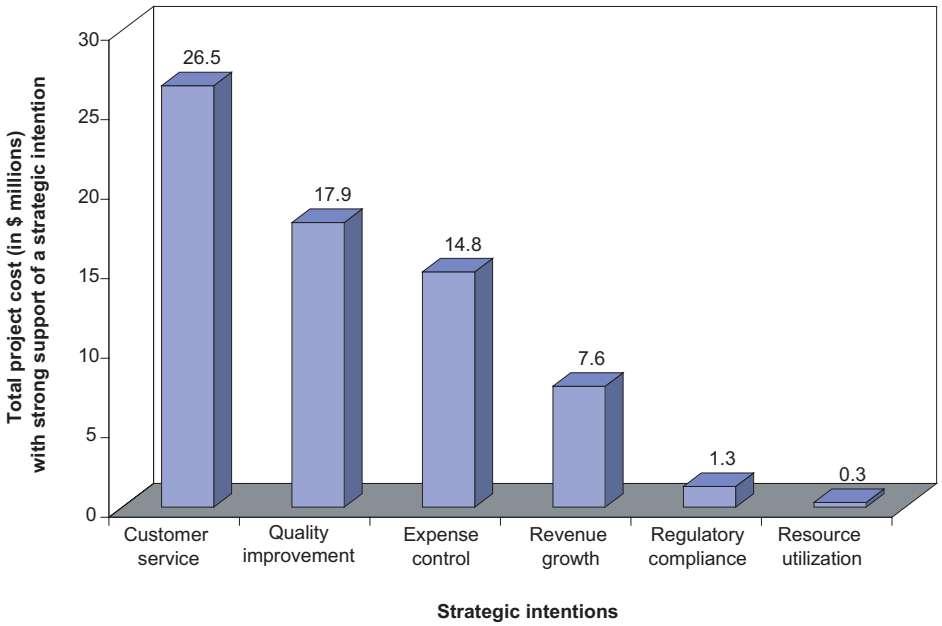

Figure 4 — Linking project dollars and management's strategic intentions.

PART TWO: PROCESSES FOR INCREASING IT'S BOTTOM-LINE IMPACT

Step 4. Portfolio Management: Understand Costs and Assets

If we are to effectively control costs, and at the same time improve impact, we must first understand those costs. We propose that the best way to organize costs and resources for managing them most effectively is to consider IT as a set of portfolios to be managed, rather than as a line item in budgets or planning systems.

Consider, for example, a listing of all applications a manager is responsible for, as shown in Table 1.

This example, however, does not demonstrate the real power of portfolio analysis. Rather than examining an individual case, a portfolio enables the management team to look at the entire portfolio holistically, allowing the team to identify the *set* of resources that performs the worst, is weakest in quality, and so forth.

The purpose of portfolio management is to enable analysis and decisionmaking about the individual elements of the portfolio within the context of the portfolio. Table 1 shows the line items that an application portfolio might consist of for a manager. In the table, each application is assessed by business management for service level, quality, alignment value, and intensity of use; its cost to operate and maintain is also a part of the assessment data. Service level and quality are assessed on a 1-5 scale from low to high, with each value on the scale representing a specific description of the service level or quality. Intensity of use indicates the depth and breadth of the application's use in the organization. Finally, alignment value is a summation of business management's judgment of the application's impact on achieving all of the company's strategic intentions. While the actual scale and calculation are not important for this discussion, the relative value of applications is the critical concept. Applications with higher numbers have been judged to have more impact on the company's strategic intentions. In the portfolio shown in Table 1,

Table 1 — Sample Application Portfolio

Applications	Cost (in $ millions)	Alignment Value	Service Level*	Quality*	Intensity of Use
Sales force automation	4	25	3	1	Low
Sales decision support	1	42	5	4	Low
Sales/marketing database	3	12	1	2	High
Accounts payable	8	39	1	2	Medium
Financial consolidations	3	16	4	2	High
Five-year customer	1	43	2	2	Medium
General ledger	1	32	2	4	Low
Ecosys	4	27	4	4	Low
RiskAdv	2	39	1	4	High
Customer information	4	15	2	3	Medium
Total application cost	31				

*Service level and quality are assessed on a 1-5 scale, from low to high. Alignment value is a summation of management's judgment — actual scale and calculation are not important here.

a manager can correlate the cost of the application with its service level and quality assessments. In this example, the highest-cost application (accounts payable) is also almost the lowest in quality and service level. The manager could ask: Why are we paying so much to use a resource (the application) that performs so poorly? Similar questions can be asked about alignment value versus cost.

Figure 5 captures the intent. The list is a portfolio of applications, ordered in "business impact" sequence. The items at the top are those with the highest business impact.

In this example, the purpose of portfolio management is to reduce the number of low-impact applications. By examining the entire set of lowest-value applications, management can determine which application should be abandoned or replaced. Further, combining business-impact information with cost information could help management focus on the major targets of opportunity for improvement — the low-impact applications that carry high costs.

Step 5. Controlled IT Costs and Improved IT Impact: Focus on the Right Things

We recommend that management teams adopt the following five goals for taking business strategy and IT action to the bottom line.

1. **Translate enterprise mission and strategy into actionable, commonly understood strategic intentions.** We believe company leaders need to translate their mission, goal, and strategy statements into statements of strategic intentions, which tell everyone in the organization how the company will make progress in its business. IT, as well as other parts of the company, needs high-level direction on *how* an enterprise intends to achieve its objectives, as well as clear direction on *what* those objectives are. The litmus test is simple: if a manager in an enterprise looks at the strategic intentions, the manager should be able to describe in specific terms what

will be done differently tomorrow to help achieve the objectives and how the manager's functional area can contribute to moving the enterprise forward.

2. **Assess the impact and get the right bottom-line results from all current and future IT spending by evaluating the impact on strategic intentions.** Strategic intentions tell us what management intends to do to improve strategic and operational effectiveness in order to improve financial performance. Therefore, we assess the bottom-line impact of plans, initiatives, and current resources based on their impact on those strategic intentions. This is accomplished through formal and consistent practices that identify and assess the cause-and-effect links between plans, initiatives, and resources and the enterprise strategic intentions. The idea is for all plans, initiatives, and resources to be connected to the goal of achieving enterprise strategic intentions.

3. **Manage the culture and define management roles regarding the use of IT to achieve business strategic intentions.** Business managers generally know what IT is doing for them in their functional areas because of their tactical, day-to-day dependence on IT in their operations, but managers are largely unaware of what IT accomplishes elsewhere in the enterprise. To successfully link business strategy with IT action, business managers must participate in IT planning and decisionmaking based on enterprise strategic intentions and with an enterprise point of view. Management's role and responsibility in IT planning and decisionmaking requires an understanding of the full range of IT possibilities across the enterprise, the possible IT demands in the business, and the organizational requirements for successful implementation.

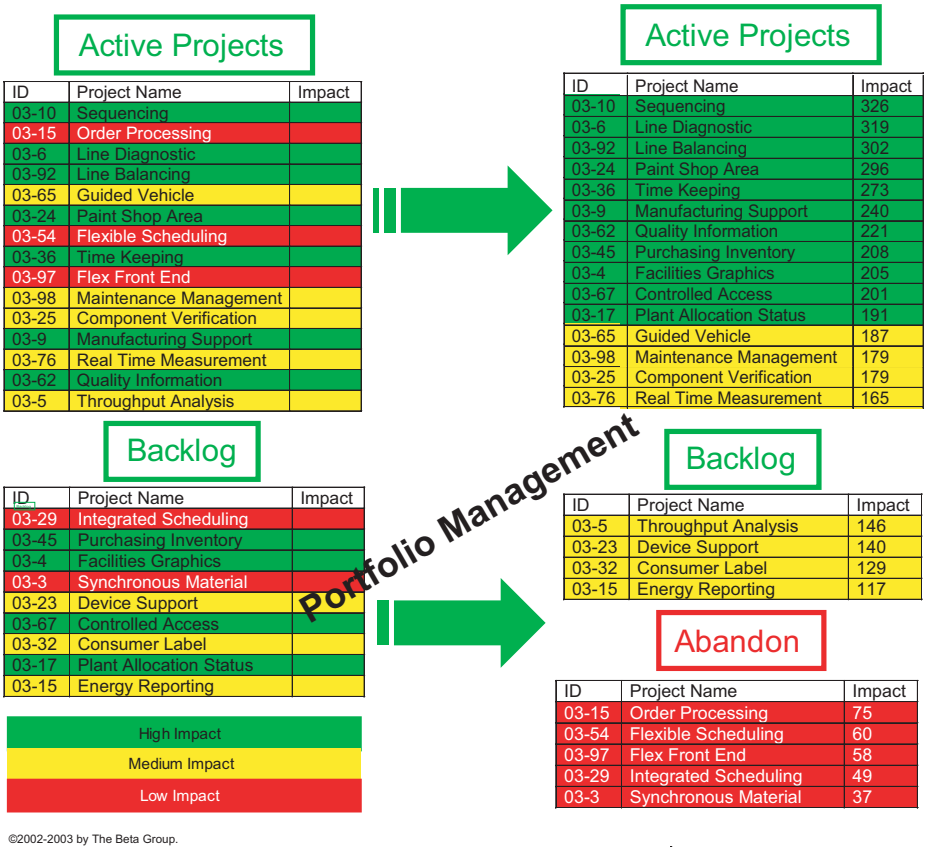

Figure 5 — Portfolio management: reducing low-value activities.

4. **Manage IT as a set of resource and process portfolios.** It's not just investments in new IT capabilities that are important to improving a company's strategic and operational performances. Most of a company's IT expenditures are for the more mundane maintenance, operations, and infrastructure activities. To be effective at improving operational and strategic effectiveness, a company needs to manage the impact of all of its IT investments, not just new development. Portfolio management is the foundation for accomplishing IT-impact

improvement through increasing operational and strategic effectiveness.

5. **Produce the right actions and bottom-line results and use budgets, projects, and performance measurement to achieve them.** The consequences of portfolio management must be explicitly connected to budgets; this results in channeling resources to the activities that most support strategic intentions. This is also done by tracking the performance of IT projects against strategies and, in particular, by tracking the performance of managers in terms of the budgets, portfolios, and projects they manage. This, ultimately, is how change is produced in the practices and cultures of an organization.

Step 6. Connected Business and IT Management: Adopt Effective Processes to Produce Action

We make three basic points here. First, a company should formally adopt a connected set of management processes to produce the 12 elements of the Strategy-to-Bottom-Line Value Chain. Second, we recommend that management employ five management practices (strategic demand/supply planning, innovation planning, prioritization, alignment, and performance measurement; see Part Three on page 14 for a detailed discussion) to be embedded in this connected set of management processes. These five practices will strengthen the deliverables and will significantly strengthen the connections between them. Third, we encourage the management team to focus on producing action through the Strategy-to-Bottom-Line Value Chain (see Figure 3) and the management processes.

We emphasize the third point because merely having good answers to the questions about IT's alignment and affordability and using good management practices to get the answers are no longer sufficient for most companies. Actions, and the resulting bottom-line impacts, are what matter.

We have defined the Strategy-to-Bottom-Line Value Chain as a series of connected management processes that culminate in project and operational budgets as well as the performance metrics to monitor action and bottom-line impact. This value chain is made up of effective planning, appropriate resource decisions, and workable budgets, projects, and operational plans.

Effective planning generates IT strategies, programs, and initiatives driven by business strategies, goals, and operational needs. The Strategic Demand/Supply Planning practice defines the company's strategic intentions and produces the "IT Strategic Plan." The portfolios for lights-on IT spending — covering applications, infrastructure, services (e.g., help desk), and management activities — are assessed for alignment to strategic intentions, quality, service levels, and technology. These assessments, together with business strategic intentions, provide the input to the IT Strategic Plan. The effectiveness of planning is determined by the quality of the new investment projects defined (driven from business strategic intentions) and the intensity of attention paid to lights-on portfolios (in terms of eliminating or replacing the underperforming or nonaligned elements).

Appropriate resource decisions include reviewing investments and prioritizing strategic programs, initiatives, and projects, resulting in resources allocated to IT projects. The planning outcomes, in terms of strategy-driven projects and assessed lights-on IT spending, are subjected to alignment and prioritization. These are both driven from the business strategic intentions and, consequently, produce an IT spending plan and resource allocation decisions designed to maximize IT's impact on the bottom line.

Having workable budgets, projects, and operational plans means establishing the operating budget for the year and determining the schedules and goals of IT actions and projects, resulting in IT actions that will produce the desired business results. This is the key step often overlooked in a company's processes. Without influencing how money is actually

spent, planning and resource decisions are meaningless. This means that the IT planning processes, assessment, and prioritizations must connect directly to the company's budgets and directly to the business and operational plans of the many parts of the business. This connection is vital.

Twelve deliverables make up the Strategy-to-Bottom-Line Value Chain (see Table 2). They provide the information context within which each management practice operates, and they establish the basis for the process and information connections that lead from business strategy to the bottom-line outcomes.

In addition to being a connected set of information represented by the deliverables, the Strategy-to-Bottom-Line Value Chain is also a connected set of processes. The corporate/business processes of corporate strategic planning, business unit planning, budget, procurement, capital budget, and measurement interact with the value chain processes by providing the basic business information and, critically, operationalizing the results through budgets and performance measurements. The IT management processes of enterprise architecture, project management, systems development, and the administrative processes interact by providing technical direction and, ultimately, the lights-on and project budgets.

Step 7. IT Impact Management: Tackle the Practical Problems

What does it take for a company to implement this framework? What are the practical problems involved?

Good management processes alone are not sufficient. The best planning and prioritization practices will fail when senior management does not accept the results or act on them. The best alignment and performance measurement practices will fail when line management does not understand the results or does not consider them important enough to affect management's areas of responsibilities. The best innovation practices will fail to generate new ideas and business opportunities when the management culture does not accept them. In proposing the kind of management processes necessary to improve IT's bottom-line impact, we treat management culture and disconnects as a critical element.

A company cannot successfully adopt the value chain and the

Table 2 — Strategy-to-Bottom-Line Deliverables

		Deliverable Name	Deliverable Description
Strategic Planning	1	**Business strategic intentions**	Mission plus weighted strategic intentions
	2	**Assessed portfolios**	As-is alignment, service, quality, technology, use
	3	**Strategic IT agenda for use of IT**	Strategic intentions to strategic initiatives
	4	**Strategic IT plan**	Strategic intentions to strategic initiatives
	5	**IT Strategic requirements**	Initiatives — three-to-five-year horizon — portfolio format
	6	**Projects**	Real, doable projects
Annual/Tactical Planning	7	**Annual project plan**	One-year annual horizon — with portfolio format
	8	**Annual business plan**	Documentation according to company practices
	9	**Annual IT plan**	Documentation according to company practices
	10	**Annual and capital projects budgets**	Documentation according to company practices
	11	**Annual lights-on budget**	Documentation according to company practices
	12	**Performance measurement metrics**	Documentation according to company practices

related management practices without the proper culture and without management taking necessary actions. Thus, we explicitly describe the relationship between having good "mechanical" processes and the related cultural and management behavioral requirements. The distinction is between simply executing step-by-step processes and the commitment necessary to transform the management processes to produce results consistent with the values and necessary outcomes. These are the cultures and behaviors necessary to transform mechanical *processes* into an effective set of management *values* applied in *decisionmaking*, producing decisions in which management believes and for which it is willing to invest time and resources.

The fundamental challenge is to translate the company's business strategies and goals into the right IT actions to produce the right bottom-line impact. This is done by effective planning, appropriate resource decisions, and workable budgets and operational plans. The objective is to control IT spending and improve IT's bottom-line impact. But the management team that's committed to doing this faces serious practical problems, including the following:

- **Management disconnects.** Management is unable to consistently carry through from business planning to IT action to bottom-line results.
- **Legacy and entitlement.** The company's existing IT applications, infrastructures, and project backlogs are the legacy of the existing strategy-to-results management practices and prevent the company from starting with a clean slate. Managers feel entitled to "their" systems and support.
- **Management roles.** The company's management culture prevents business and IT management from playing the roles needed to effectively direct and apply IT resources to achieve improved bottom-line impact.
- **Company processes.** The new or changed management practices that connect business and IT will have to coexist and work with many other existing company management practices (e.g., capital budgets, HR, management performance/compensation, corporate budgets, and purchasing).
- **Management expectations.** Senior company managers only expect financial return from IT and simple measurement of its alignment and affordability.
- **It ain't broke.** Individual managers get what they need with the processes they currently use.
- **Multiple perspectives.** The company does not speak with one voice.

We suggest a program management approach, called IT Impact Management, to the planning and implementation of the frameworks and processes. This approach is based on addressing each of the practical problems and focusing on affecting the way the company and its managers make decisions and allocate resources. The IT Impact Management framework addresses the key practical problems.

The result is a road map for managers to use to craft the specific solution for their company's circumstances. The goal of the road map is to provide guidance for what's next. Because companies, cultures, and circumstances are unique, there is no single right answer. There are, however, general guidelines that can be followed.

(IT Impact Management is further described as part of Step 13.)

PART THREE: THE TOOLS FOR INCREASING IT'S BOTTOM-LINE IMPACT

Step 8. Prioritization and Alignment: Make the Right Decisions

The underlying decisionmaking philosophy is that company resources devoted to IT are finite. As a consequence, choices have to be made among alternatives. There aren't enough resources to do everything; and therefore, choices have to be made as to which things will be funded and which will not. This is the crucial point. We are not using a "hurdle rate" or strong business case to justify individual projects

or ongoing expenses. That is, we are not trying to make a specific go/no-go decision about a specific project or line item. We proceed as though every potential project or individual lights-on line item has been based on an appropriate business case. Rather, the problem is choosing among the desirable alternatives that exist in a project portfolio or lights-on asset pool. "Make the right decision" means choosing the best alternatives — those that will improve IT's bottom-line impact the most. At the same time, by positing that resources are finite, we enable management to exercise appropriate control over IT spending.

The decisions are based on a comprehensive total portfolio assessment of development and enhancement projects (Prioritization) and the lights-on budget (Alignment). The key questions are whether the IT development investment options make business sense and whether the lights-on budget is the best way to spend scarce IT dollars. (We continue to note that although most of the IT money in a company is spent in the lights-on area, as in the typical company allocation in Figure 1, management tends to focus on the new investments in projects. We recommend careful examination of both.)

Comments from two CEOs who participated in Prioritization and Alignment activities illustrate how such a comprehensive portfolio analysis can address senior management questions about IT spending. The first CEO, when working on his prioritized portfolio, which showed more projects than the company had resources to do, asked whether work was proceeding on projects that fell below the affordability line. When told the answer was yes, he said: "Stop them. We want to work on the most valuable projects, so put the resources from those lower-value projects to the higher-ranked projects." The second CEO, when shown the prioritization results, commented on the new credibility of the portfolio's connection to business strategies and goals, then increased the budget available to development.

Decisions about strategies, plans, and budgets, where resource allocation is the key outcome, occur throughout the management processes in the Strategy-to-Bottom-Line Value Chain. In all these cases, management needs to decide among alternatives and choose the best use of company resources. Strategic decisions determine choices of strategies and the use of IT to fulfill those strategies. Decisions during annual planning determine the projects to be undertaken and the lights-on budget components to be supported and used in operations. Decisions about budgets determine exactly how much should be spent on projects and lights-on budgets. The outcomes that can result include the items in Table 3.

The notion of a "right decision" means making finite resource allocations to those projects (prioritization) or lights-on budgets (alignment) that have the greatest potential bottom-line impact. A number of factors enter into the assessments that support such decisions, such as risk, quality, service level, performance metrics, and status of the technology (e.g., obsolete, unsupported). The Prioritization and Alignment management practices offer many options for which decision factors to include in the process to match the requirements of the management team making resource allocations.

The process permits the management team to holistically consider all possibilities and choose those

Table 3 — Outcomes Resulting from Budget Decisions

Development projects	• Ensure a high level of strategy support • Make stronger business cases • Minimize and/or mitigate business and technical risk • Balance the overall project portfolio
Enhancement projects	• Invest in applications based on strategic intentions • Invest in well-performing applications • Balance the overall project portfolio
Lights-on budget	• Squeeze out poorly performing applications • Reduce support of underutilized applications

that are best for the company, based on all the considerations included in the assessments. The prioritization itself is not the final decision on the projects. Prioritization is part of the decisionmaking process that creates the project plan from the candidate list of projects. The prioritization exercise gives management the tools to make the decisions.

The process for the lights-on budget is a management process to examine the investment strategies for each line item in the budget. Two questions are asked: First, is the level of budget support appropriate to the application? (For example, if costs are too high for the alignment/quality of the application, then the application might be abandoned or support levels reduced.) Second, should the application be replaced through outsourcing, acquisition, or design/development?

Overall, the business leadership team, in viewing the complete application asset pool, can determine how well the lights-on budget is performing. As in Prioritization, the lights-on Alignment and alignment-assessment processes do not make the decisions. The business leadership team does, using the tools and assessments provided.

Step 9. Demand/Supply Planning and Innovation: Plan for the Right Results

In the previous section, we introduced methods by which managers can achieve controlled IT spending and improved IT bottom-line impact. They can achieve these goals by selecting the best projects that have the most potential bottom-line impact and by examining the lights-on budget and eliminating or replacing poorly performing resources.

When we talked to a CIO about this, though, he remarked that "if all we're doing is prioritizing the same old projects, and if all we're aligning is the old set of application and infrastructure portfolios, [then, that's not enough]. What we need are better projects and better portfolios." In short, what he was seeking was a new approach to effective planning that creates realistic IT plans (producing new projects and renewed portfolios), strongly connected to and driven from real business requirements.

Two problems immediately confront us. The first is that connected business-IT planning has two very different aspects: one we call demand/supply planning and the other innovation planning. The problems to be addressed, the appropriate processes that follow, and the outcomes to be reached are closely related but quite different between the two. The second problem is that business and IT planning are often disconnected in companies. This has to be addressed in order for companies to succeed in getting better projects and portfolio line items.

We recognize that there are two planning relationships between business strategic intentions and IT. The first is alignment, in which we want IT strategies, plans, and actions to carry out the business's strategic intentions, enabling them and the required business changes to achieve the outcomes needed. This alignment relationship is the basis for demand/supply strategic planning. Demand represents what the business requires from IT; supply defines how IT will satisfy that demand. Demand/supply planning ensures that supply is consistent with demand.

The second relationship is impact, in which IT can innovate and contribute new business-strategic intentions, as well as contributing new means for achieving the business-strategic intentions. This relationship is the basis for innovation strategic planning. Impact works to change the demand because of new or different business opportunities created through IT.

Industry is awash in planning processes intended to provide "road maps" and "blueprints" for "setting future directions" and "implementing mission statements," etc., to use some industry speak. Typically, these corporate strategic planning processes often fail to explicitly account for IT activities and strategies, either on the front end as drivers for new business strategies or on the back end as enablers of strategic intentions. The point of high-level

strategic planning is to translate the company's business strategic intentions into actionable IT strategies and thereby create the actions and produce the desired business results. The Strategic Demand/Supply Planning Practice starts with high-level business intentions and creates strategies and action plans to drive the IT activities needed to address them.

So, what does a strategic demand/supply plan look like?

Properly establishing the strategic demand/supply plan requires a clear definition of the business strategies, as expressed through its strategic intentions, as well as the relationship between those strategies and what we expect IT to do about them.

Like all such planning descriptions, this should be looked at as a template. Every company is different, and every organizational/political setting is different. Numerous issues such as participants, process, timing, and planning responsibility come into play in approaching the planning process. Nevertheless, the basic concepts are central to addressing the business-IT planning disconnect.

The ideal planning process deals with these elements:

- Inputs
  - — The business's strategic intentions
  - — Portfolios and their strategic management
  - — Performance management and measurement
- Results
  - — The strategic agenda for the use of technology
  - — The IT (organizational) strategic plan
  - — Strategic IT requirements
- Connections
  - — Direct connection to the processes for developing projects
  - — Direct connection to the business and IT's annual planning processes
  - — Direct connection to the company's and IT's annual budgets

The results form the basic table of contents of a company's strategic plan for information technology. The first, the strategic agenda for the use of IT, defines the strategic intentions of the company and management for applying IT to carry out the company's strategy and goals. This is the first part of the strategic IT plan. It expresses the demand for IT — the requirements for technology applications and the intentions of management to apply IT in its organizations. The second is the IT Strategic Plan, which describes the IT organization's strategies and plans for fulfilling the requirements for IT. It expresses the supply for IT, including organization, development, and delivery.

Portfolios and their strategic management are the critical connecting element among all the pieces. Four basic portfolios define IT organization resources and responsibilities: the application portfolio defines existing and future IT applications. The infrastructure portfolio defines the elements of the supporting technologies. The services portfolio defines the IT organization's interactions with internal company customers and external customers. The management portfolio defines how the IT organization manages itself and its portfolios. The planning processes address each portfolio.

Step 10. Performance Measurement: Keep Score

Performance measurement is based on three fundamental ideas: (1) IT managers need to manage their resources and investments to improve their contribution to company strategies and goals — and thereby the bottom line; (2) to accomplish this, IT managers need a measurement capability that brings attention and focus to the activities and behaviors that best support IT's contribution; and (3) this measurement capability must include business-related measures that can be connected to business activities and are relevant to business managers.

Measurement and management are two sides of the same coin. Presumably, all organizations manage IT, albeit with varying

levels of quality and effectiveness. By extension, presumably, all organizations also measure IT via some combination of explicit and implicit measures. The question for IT, then, is rarely *whether* to measure but primarily *what* and *how* to measure.

The key management issue around performance measurement is having a measurement capability that brings attention and focus to the activities and behaviors that best support and improve IT's contribution to the business. The measurements must be connected to business activities and be relevant to business managers. These issues can be restated in the form of management questions, discussed below.

- **Is IT doing things right? Are IT's capabilities and services being delivered with appropriate efficiency and effectiveness?** Most IT organizations have existing cost-efficiency metrics. These measures historically reflect the need to manage IT as a cost center. However, these metrics focus on IT's internal operation and do not connect to the needs of the business. Many of these efficiency measures and even most customer satisfaction surveys only look at outcomes (lagging measures) rather than at the activities and processes that drive those results (leading measures). Lagging measures are useful for signaling a problem but cannot point to a solution. These organizations need to balance efficiency metrics with process measures and an increased focus on customer-oriented measures like alignment, service level, and quality. It is necessary to continually match the right measures to the right purpose within the right context.
- **Is IT doing the right things? Are IT resources allocated to the right set of business activities and initiatives?** This question is primarily a question about alignment. An IT organization is exposed to many conflicting demands. Legacy applications require emergency maintenance; new system development time lines shift as requirements evolve; and demands on the infrastructure expand in unexpected ways. IT managers need to have tools that allow them to continually reassign and reallocate resources to the "right" activities and projects. Consequently, IT managers need consistent information about a system's impact on the business to support rational allocation decisions that involve that system. Importantly, the question of "doing the right things" is a question for both IT and business management. Adequately answering the question is dependent on fully understanding the strategic and operational goals of the business while also knowing how IT's resources are being deployed.
- **Is IT implementing its strategy? Is IT achieving its own goals for improvement and change?** In addition to business-oriented projects and services, IT will have its own set of strategic initiatives that are also linked to business requirements. For example, IT's strategy for the development of infrastructure — standards, common services, and functional robustness — exists because the business requires, or will require, the resulting capabilities. The performance measurement practice needs to have a framework for tracking and reporting progress on the implementation of IT's own strategic agenda. This measurement capability is important because it indicates IT's readiness to fulfill business requirements and to provide (and anticipate) future technical capabilities. This is not a doing-things-right issue. Rather, it is about getting the technical destination right and succeeding in getting there. The rest of this section will focus on elements of the performance measurement framework, specifically portfolios, strategic alignment, functional alignment, cost performance, quality and service levels, and process measurement.

Portfolios

IT portfolios form the foundation of the performance measurement framework. Two types of

portfolios are used: resource and process portfolios. Resource portfolios contain and describe IT systems, projects, and services. Examples include application portfolios and infrastructure portfolios. Attributes of line items within these portfolios include class, cost, service level, quality, and alignment. The process portfolio contains and describes IT management and delivery processes. Examples of process portfolios include planning/organization and delivery/support. The Software Engineering Institute's Capability Maturity Model® (CMM®)[10] and COBIT[11] serve as useful models for process portfolio items. Attributes of processes include maturity factors, key performance goals, and key performance indicators.

Strategic Alignment

To address the question of whether IT is doing the right things, the performance measurement practice framework uses a strategic-alignment assessment process that evaluates the connection between elements of the IT portfolio and the strategic intentions of the company. An important aspect of the strategic-alignment assessment is that it actively involves business management in the evaluation and ratings of IT's connections to business goals.

Functional Alignment

To address the question of whether IT is doing things right, the performance measurement framework uses a multidimensional approach that includes elements of service level, quality, and process measurements (see Table 4). These three dimensions are interconnected, and IT management needs to recognize and be aware of these performance relationships. There is an intuitive understanding of the relationship between cost and quality or service level. Less intuitive is that the specific relationship between cost and quality is determined by the quality of the processes involved (i.e., the marginal cost of an improvement in project delivery is determined by the quality of our project management processes).

[10]The Software Engineering Institute, Carnegie Mellon University. *The Capability Maturity Model: Guidelines for Improving the Software Process*. Addison-Wesley, 1995.

[11]COBIT stands for Control Objectives for Information and Related Technologies. See the *COBIT Management Guidelines*, 3rd Edition. Information Systems Audit and Control Association (ISACA), 2000.

Table 4 — Functional Alignment Factors

	Elements of Service Level	Elements of Quality
Application Development Portfolio	• Availability of the development resource • Responsiveness of the development resource	• Reliability of the development process • Reliability of the development result
Applications Portfolio	• Availability of the application • Responsiveness of the application	• Functionality of the application • Accuracy of the application and its data
Infrastructure Portfolio	• Availability of the infrastructure element • Responsiveness of the infrastructure element	• Functionality of the infrastructure element • Reliability of the infrastructure element
Services Portfolio	• Availability of the service resource • Responsiveness of the service resource	• Reliability of the service process • Reliability of the service result

Cost Performance

Cost performance and cost metrics will always be part of the IT performance measurement suite of measures. Organizations will continually be looking to save IT-related costs wherever possible, but the methods for doing so are not always obvious, and cost analysis is not always straightforward. For example, although the value of e-mail systems is indisputable, the cost to operate them can be the subject of much controversy. Ascertaining costs is a crucial aspect of any cost-saving exercise, so a granular and accurate breakdown of system expenses is mandatory for identifying potential savings.

Within the context of IT as a cost center and with the *primary* goal of IT being to manage and control costs, cost measures then are appropriate indicators of success. When the context changes and IT is expected to *add value*, then new measures are needed to support the new criteria for success. Indeed, within the new added-value context, managing with cost performance as the guiding star could land the organization on rocky shores. So additional performance measurement dimensions are needed.

Quality and Service Levels

As the performance context for IT shifts toward value-added services, the measurement framework must give more emphasis to customer-focused metrics such as service level and quality.

Process Measurement

Although cost and service-level data can be useful, they are lagging indicators that communicate results but are not appropriate as levers to manage or implement change. Process measurement (and management) is a way to affect the IT organization's performance drivers. Measuring and managing processes is about measuring and managing the causes behind cost and service-level results.

Step 11. Culture Management: Implement the Right Decisions, Right Results

Culture can get in the way of adopting the management practices we've described in this report.

A good definition of *culture* is: "Underlying values, beliefs, and principles that serve as a foundation for the organization's management system, as well as the set of management practices and behaviors that both exemplify and reinforce those principles."[12]

Using this definition as a starting point, this step addresses management culture in four ways. First, we describe the impact of culture and explain it as a set of factors that need to be identified, understood, and dealt with in the course of applying the five management practices. Second, we explore the need for management culture change in the Strategy-to-Bottom-Line Value Chain and how this affects the ability of a company to change its process and adopt management practices. Third, we introduce 15 categories of culture issues that separate business and IT managers. And fourth, we define the Culture Management support practice to deal with the culture issues. Our intention is to offer a set of diagnostics that enable a management team to understand the specific cultural hurdles it faces, and what it may do to overcome them.

Our experience shows that, however successful and appealing the five management practices may be, their success cannot be sustained or repeated year after year unless the cultures in both business and IT are compatible. In all cases, these culture issues get in the way of the fundamental goal of management: enabling the company to move from business strategy to IT action to results.

Most managers do understand that the management culture must change in order to make the kind of progress that is possible. We encounter very little argument about the need for or the value of the five practices we suggest; rather, we hear about the practical problems in actually applying the practices due to existing attitudes among both senior and mid-level managers directly affected by IT.

[12]Taylor Cox Jr., *Cultural Diversity in Organizations: Theory, Research & Practice*. Berrett-Koehler, 1993, p. 161.

The biggest single impediment to any IT-enabled innovation is resistance to change — the underlying culture that supports the old way and resists and resents the new way of doing things. Here, the problem is even more severe because we're dealing with basic management processes of planning, prioritization, and so forth directly changing the role that managers play in those processes and changing the expectations managers have about the outcomes to be produced.

The five practices we recommend affect the relationships between business and IT and change the existing roles and relationships between business and IT managers. While the management solutions introduce effective management processes, they require both IT and business managers to do new things and play new roles. So IT and business managers have to change their views of their roles and responsibilities with respect to IT and business.

The indicators of management culture regarding IT fall into three categories:

1. **IT's business role** — culture that defines IT's business role and impact
2. **Business and IT relationships** — culture that defines the organizational relationships between business and IT
3. **Business and IT process** — culture that defines the way IT and business managers work together

The boundaries between these categories are gray. Management's attitude and behavior about IT's role and impact also influences the organizational structure and, accordingly, the kinds of management processes that operate between business and IT. Nevertheless, it is helpful to understand and diagnose the culture characteristics in these three categories.

Culture becomes an obstacle when the success of management practices (and the Strategy-to-Bottom-Line Value Chain) depends on the engagement of business and IT management. That is, we need managers to play certain roles in order to overcome silos and other cultural issues and to ensure that everyone is in agreement with the results. These roles are played by various groups of business and IT managers, called "leadership teams." Each team has specific well-defined roles in each of the practice areas.

These roles are specified in terms of the deliverables in the value chain; that is, what is the responsibility for producing each deliverable? These deliverables are created in the company processes that deal with the topic. For example, the strategic intentions and the strategic IT plan deliverables are a result of the company processes that perform business and IT planning.

The leadership teams are defined as:

- **Senior leadership team** — typically made up of the CEO and direct reports; these direct reports can include the chief executives of lines of business as well as functional ("CxO") reports
- **Business leadership team** — typically made up of direct reports to the senior management team
- **Technology leadership team** — typically the CIO and direct reports

In addition, there's the value-chain process owner responsible for the strategy to action value chain processes. This may be someone from either business or IT, typically a direct report to the CFO or CIO who has been charged with addressing the business-IT connection issues.

These teams are described as being enterprise-wide. For example, the business leadership team represents all the business functional areas and the key lines of business (if they are freestanding strategic business units). Examining the roles we've identified for each of these teams looks very similar to the governance roles these groups should play in the management of IT (see Table 5).

The role of the senior leadership team is to review and approve the basic resource allocation and

Table 5 — Roles of Leadership Teams and Value-Chain Process Owners

	Deliverable	Senior Leadership Team	Business Leadership Team	Technology Leadership Team	Value-Chain Process Owner (IT Impact Management)
1	**Business Strategic Intentions**	Approve and weight strategic intentions	Revise and review strategic intentions		Create initial draft, strategic intentions (straw man)
2	**Assessed IT Portfolios**	Review	Assess portfolios/ alignment, service, quality	Contribute to portfolio development Assess portfolio/ technology	Manage portfolio development, manage the assessment process
3	**Strategic IT Agenda for Use of IT**	Approve	Develop IT agenda	Participate in IT Agenda process	Create the initial drafts (straw man)
4	**Strategic IT Plan**	Review	Review IT plan	Develop IT plan	Create the initial drafts (straw man)
5	**IT Strategic Requirements**	Review	Develop requirements, prioritization, recommend decisions	Participate in IT requirements process	Drive the process
6	**Projects**	Review, approve, large projects	Create project requirements and business cases	Form detailed projects and technical requirements	Ensure that project formation works correctly
7	**Annual Project Plan**	Make decisions or approve funding	Prioritization, recommend funding	Establish annual project plan and schedules	Drive the process
8	**Annual Business Plan**	Approve	Review IT plans, establish business unit plans	Advise	Ensure that this happens
9	**Annual IT Plan**	Approve	Review	Develop IT plans, establish budgets	Ensure that this happens
10	**Annual and Capital Projects Budgets**	Approve	Develop budgets	Participate in budget planning	Create initial draft (straw man)
11	**Annual Lights-On Budget**	Review	Review	Develop budget, initiate plans	Create initial draft (straw man)
12	**Performance Measurement Metrics**	Approve	Establish business performance metrics	Establish IT performance metrics	Ensure this happens Create initial drafts (straw man)

budget decisions made through the strategy to action value chain processes.

The role of the business leadership team is to operationalize the main activities ranging from assessing the current as-is portfolios in the lights-on budget through creating and prioritizing projects and establishing budgets. The core of these activities is the business-driven establishment of requirements through projects, then determining the financial resource allocations to realize them.

The role of the technology leadership team is to support the process and generate IT plans and projects consistent with the business requirements established by the business leadership team.

The role of the value-chain process owner is to drive the process forward; to work out the organizational, cultural, and political deals; and to "make it happen."

Step 12. The Business Value Maturity Model: Chart the Path to Implementation

Maturity models have evolved over the past 20 years in areas as disparate as software engineering, project management, non-IT business processes, and data management. They share two basic characteristics. First, they are based on the original work of the SEI, supported by the US federal government, in developing the CMM for processes around the development of software. Second, they are used to assess the "maturity" of related management processes as a means to improve those processes in order to achieve organizational goals. This is based on the assumption that more effective and more mature management processes will produce better results — better software, better projects, better financial decisions, etc.

The Business Value Maturity Model is built around basic expressions of maturity, as shown in generic terms in Figure 6. The description of each level includes the characteristics of the management processes and their maturity with respect to achieving the desired outcome.

Through assessment and subsequent improvement, the model enables more effective and better-connected management processes. More effective processes that produce those results can be described as follows:

- IT and business planning are fully connected and integrated.
- IT-enabled innovations impact business planning and offer new strategies.
- IT investments are prioritized against business strategy.
- All IT spending is aligned with business strategy.
- IT business and technical performance is tracked.
- Business and IT management teams execute the processes

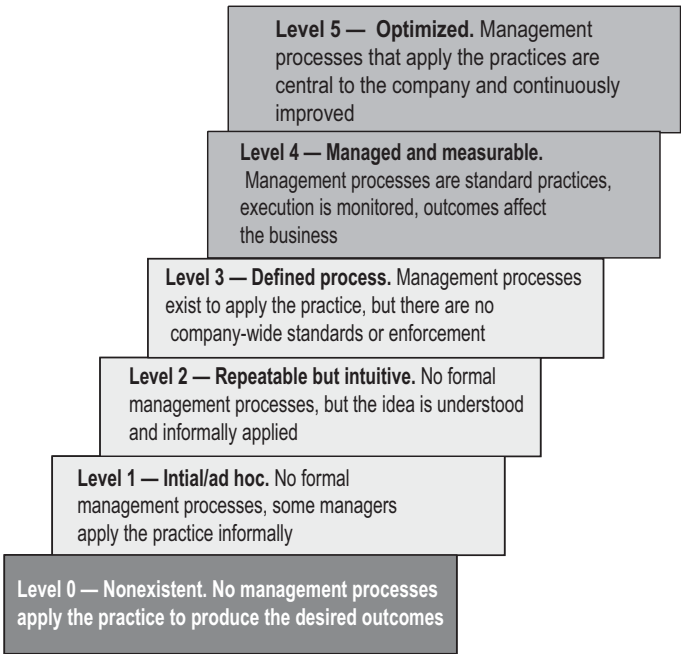

Figure 6 — Organizational maturity levels.

that improve IT's contribution to business performance.

- Planning and management processes focus on the entire IT investment.
- IT and business managers participate effectively in all management-enabled processes.

What Does the Business Value Maturity Model Cover?

The model, as shown in Figure 6, is based on the five management practices. At the same time, we are equally concerned with the overall connections of the management process, both among themselves and with other company processes. Consequently, the Business Value Maturity Model also assesses the maturity of the *connection* of management processes that deal with IT planning to business results for the purpose of assessing the *connections* among the processes.

Business Value Maturity Model Goals

The objective in using the Business Value Maturity Model is to overcome management culture barriers and improve the company's ability to act. But we are also dealing with the larger issues: How does one fundamentally change the ways in which the company manages its IT? How does one fundamentally affect the behavior of the company itself? The answers lie in setting goals, adopting new practices, and influencing the culture of the company in a way that shows both the long-term goal (where do we want to be?) and the road map for getting there.

Management action is necessary to produce the desired outcomes. Without regard to whether management practices are used, each of the nine deliverables is part of how the company manages itself and its IT. Success in getting from strategy to action (through the budget, annual, and operational plans of every component in the business) depends on the holistic collection of management actions. Management has to act, and the maturity of the processes themselves, and the connections between them, determine the likelihood of getting the right actions.[13]

Every deliverable that is important for getting from strategy to action is tied to a management practice. In other words, the management processes that do strategic planning, or prioritization, or create the annual plan require the kind of activity and discipline that the management practice brings.

Furthermore, each management practice requires considerable involvement and commitment by the business and IT management teams. The heart of each practice is how the management team makes decisions about the relative importance of business strategies, the priorities for IT initiatives supporting those strategies, the alignment of current IT investments, and so forth. The involvement lies in making the decisions. The commitment lies in following through to the next step and creating the desired business outcomes.

While this is being described in management process terms, the implications are more fundamental. It is similar to the statement "Without action, strategy is meaningless." Here, without action, all of the ideas, benefits, and potential outcomes to be delivered by management practices are equally meaningless. In process terms, it means getting to the annual plans and budget and getting management to commit to actions that will implement the decisions that are made, the priorities that are established, and the strategies that are identified.

Management roles are critical as well. Previously, we introduced the management roles required as a descriptor of the problems of culture that we need to understand and overcome. In order to get to action, management has to play the needed roles, which may require dealing with culture as well.

[13]Note that we do not disagree with constructs like the balanced scorecard that highlight the importance of measurement and management incentives that flow from business strategy. Indeed, we highlight performance measurement as an important management component. Our focus here is on the means for getting action to occur: the maturity of individual processes and the maturity of the holistic connection of those processes.

It comes down to changing management processes. To be effective, the five management practices need to be embedded into the company's management processes. While these management processes are company-specific, the management practices are standard toolsets that can be applied to any company's situation. The key is how the company's management processes apply the management practices and concepts and the principles that underlie them. The company cannot consistently achieve its goals of applying IT more effectively and increasing shareholder value through IT without integrating strategy-to-bottom-line practices into its existing management processes.

Effective processes make things happen. The better the processes are defined and followed, the better the performance from managers and organizations. Watts Humphrey said it best: mature processes lead to disciplined work, and disciplined work is what produces better and more predictable results.[14] Good practices enable the underlying processes to consistently achieve their goals while also establishing and reinforcing a congruent culture about those goals. It is important to assess the maturity of management processes with respect to the specific practices they use in order to determine the likelihood that those processes will actually proceed from business strategy to IT action to results: the basic goal of management.

Increasing maturity by improving management process connections is equally important. As noted above, we are equally concerned with the connection of processes, both within the management framework and between the IT-related processes and the rest of the company's business processes. If a company uses the Prioritization practice, higher-impact projects will come to the top of the project queue. But this is significant only if the result is connected to budgeting processes, to management's performance evaluation processes, to tactical planning processes, and so on. Using only the Prioritization practice will achieve little unless the Prioritization outcome drives budgeting and resource decisions.

The overall problem is translating a company's business strategies and goals into the right IT actions that produce the right business results. But just the adoption of one or more new practices isn't enough. As a result, the Business Value Maturity Model looks at the individual practice areas, as well as the overall, holistic set of processes that take the company from its strategy to IT action to results.

Culture affects and limits management processes by defining roles and expectations, especially the roles managers play in and around IT and how they play them. We want to assess the maturity of the management processes used to establish, encourage, and strengthen the desired culture. The critically important point is that the simple adoption of new practices such as prioritization is not enough to significantly change company performance. The worldwide CIO for a multibusiness *Fortune* 50 company expressed the issue: "The CIOs in each of our business units understand the principles. How do I get them to apply them?" This is the problem of organizational change and cultural change. Getting managers to adopt new ways of doing and thinking about things is never easy.

Through assessing as-is management processes, the Business Value Maturity Model helps identify the cultural problems and disconnects that limit the company's ability to act. It enables the establishment of targets for process improvement and helps the company determine where improvement initiatives are needed.

The business value assessment is a high-level, simple instrument that illustrates how a manager can self-assess the current maturity situation for the company. The instrument also provides for defining the to-be situation that the manager believes is necessary for the company to achieve its goals.

[14] Watts Humphrey, *Managing the Software Process*. Addison-Wesley, 1989. Note: Humphrey applied management process maturity concepts to software development and systems engineering. The premise is that more mature processes produce better software.

The person completing the surveys marks each goal, culture, or practice by answering the following basic questions:

1. Which maturity level best describes the situation in the company today? What is the maturity of the company's management process with respect to seeking the goal, influencing the culture, or applying the practice?
2. Which maturity level best describes what the maturity *should* be in order for the company to realize its strategic intentions with the aid of IT?

Two main ideas summarize the use of the Business Value Maturity Model. First, deciding exactly which management practices to introduce depends on where the company is with respect to its needs and its ability to employ the practice effectively. Selecting the correct starting point isn't a simple shotgun approach; the appropriate choices depend on the state of current management processes, expectations, and the understanding and acceptance of the problems to be solved. Second, new management practices aren't effective without considering all of the interactions between them and how the company behaves in related areas. For example, prioritizing projects does not achieve anything unless the results of prioritization affect budgets and actual work priorities and change business management's expectations about what IT must accomplish. It must also impact business managers' understanding of what *they* must do to make the process and management behavior changes to fully implement the IT projects being prioritized.

The Business Value Maturity Model addresses both points. It serves as a method to help determine the next steps in adopting the principles and practices of management and also helps in understanding the relationship between management practices and other related management activities.

The model represents a rational framework that a company can use to assess and improve its practices to better connect IT activities to business strategies and, thereby, increase the contribution of IT to the bottom line.

Step 13. IT Impact Management: A Program for Implementing a Road Map

The nature of a road map is a long-term, possibly multiphased effort. It is very unlikely, in our view, that company or IT management can accomplish all elements at one time. Given the culture issues, the difficulty of change, and the significant number of players affected, it may make more sense to explicitly adopt a multiphase, multi-process-cycle approach. This makes a program approach even more important.

Companies do best by adopting an overall "program" approach to implementing a road map. In addition to thinking through the above suggestions for defining the as-is and the culture management and maturity model instruments, a program approach establishes an overall framework for the effort. This framework identifies participants, establishes methods for communications, defines overall goals, and generally works to ensure that all management groups are on the same page with respect to the need for and the planned changes expected to be implemented.

A program for a particular company will depend on the specific problem and circumstances, as well as the company's culture and politics. Generally, however, a program consists of four basic elements:

1. Defining the program requirements
2. Managing the program stakeholders
3. Establishing program participants
4. Creating bottom-line impact

Note that this program discussion does not deal with content, that is, the specific practices or deliverables to be addressed. Those are defined by the road map approaches we described above. Here we assume that we know *where* we want to go (e.g., prioritization, planning); the issue now is *how* to get there, in general terms.

The primary flavor of this program is based on managing the many players and organizations affected. In simple terms, we are dealing with issues that cross the IT and business-unit barriers. But within that simplicity, we are dealing with multiple parts of IT (e.g., enterprise architecture, systems development, IT planning, IT financial management, and IT governance) and multiple parts of the business (e.g., corporate processes like budget and planning, business-unit management, and individual user departments).

Also note that we dealt with issues of management participation as parts of each individual practice (e.g., in Prioritization, who participates in scoring projects; who does business case development, etc.). Here we're focusing on the overall set of activities. We cannot lose sight of the fact that our success is ultimately based on making the connections all the way from business strategic intentions to the actions that ultimately affect IT spending and IT's bottom-line impact. As we've observed before, it is not merely a question of completing a practice (such as Prioritization); it's a matter of getting the results of that practice into annual plans, budgets, and, ultimately, action.

The focus here, then, is on the program approaches that will succeed in making the connections to action and ultimately bottom-line impact. The IT Impact Management program approach is designed to specifically overcome those impediments. They are presented in the nature of suggestions, since every company's situation is unique. But they are suggestions rooted in the experience of companies that have been successful in adopting the concepts and practices described in this report. Here's a review of the four basic program elements.

1. Define the program requirements. This is the process of defining exactly what can be accomplished and the tasks needed to accomplish it. The key is to match the program against culture, politics, and practical outcomes. A general framework appears in Table 6.

2. Manage the program stakeholders. This consists of the actions to keep the program on track and connected to the managers and business units it affects. The key is to communicate effectively to all managers involved. A general framework appears in Table 7.

3. Establish program participants. This consists of a single, basic step of establishing workgroups for each practice area. Though simple, this is an underlying foundation, for it addresses most of the major problems in doing this work. Getting management directly involved, from the senior level to each business unit to each process area, is the core idea for addressing culture and process disconnects and setting management expectations.

4. Create bottom-line impact. This is the outcome we're seeking. The key idea is to provide leadership and suggested content throughout all the practices and

Table 6 — Define the Program Requirements

• Build the program to be responsive to the politics in a positive, responsive way.
• Focus on doing what's practical, in terms of responding to the politics.
• Determine hurdles, impediments, and problems; strategize to respond to each with specific program elements.
• Establish a phased approach to the adoption of value chain and management practices.
• Plan the program to do something tactical and simple in the short term.
• Establish a clear, simple, practical vision of the problem being solved and the outcome to be produced.
• Establish continuing means for communicating this vision to all managers affected.
• Establish a clear and simple theme that communicates the essence of the program (e.g., we're examining lights-on budget, with a focus on affordability).
• Focus on measuring outcomes and, if needed, establish a parallel performance measurement/metrics project.

Table 7 — Manage the Program Stakeholders

- Establish one-on-one personal connections to the other corporate and IT process owners (e.g., budgets, CFOs, PMO, performance measurement, enterprise architecture), getting them onboard with respect to the problem and outcome.
- Create a straw man example of results and management benefits to be derived, providing an example of the endpoints and results of the process that management can expect to see.
- Conduct continuous communication of vision, outcomes, and intermediate results to peer managers, both within IT and the business.
- Hold the hands of every IT manager with respect to the process and the outcomes.

Table 8 — Create the Bottom-Line Impact

- Provide the leadership for each workgroup.
- Develop the straw man inputs to things such as strategic intentions.
- Use prototypes for data collection, analysis, and demonstration of outcome.
- Persist through several cycles.

through engaging all managers and workgroups. A framework appears in Table 8.

Although this discussion is intended as a framework with suggestions, experience has shown that these are the kinds of things needed to be successful.

CONCLUSION

It's clear what CEOs, CFOs, CIOs, and anyone else interested in the bottom line of the company want: controlled costs and better results from IT. We need to look at two parts of IT to do that: lights-on expenses and new development projects (including both their impacts *and* cost). Although we split IT budgets this way, clearly a dollar is a dollar everywhere in the business. Dollars spent on IT are dollars not spent on other parts of the company (and, more critically, are not profit), and dollars spent on unnecessary lights-on expenses are dollars not spent on new projects that will improve IT's impact.

The key to controlled budgets and better impact is hitting the IT Improvement Zone. No budget in any company is without "excess" expenses. By focusing management tools on the alignment, service level, and quality of lights-on budgets, management can improve IT's overall cost structure by eliminating or redeploying excess resources (and improving the bottom-line impact as well). In conjunction, by focusing all new IT development on the highest bottom-line impact projects, IT's contribution to the business can be increased dramatically.

Obviously, no company will hit the "achievable cost and impact" target due to cultural, process, and other constraints. But by using management practices wherever and whenever possible, the company can move from today's situation into the IT Improvement Zone and can achieve higher impact with lower costs.

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About the Practice

Business-IT Strategies Practice

The Business-IT Strategies practice area focuses on the intersection of business and IT. Through the subscription-based advisory service, the Business-IT Strategies team of Senior Consultants guides companies to optimize their IT investments by ensuring they validate business requirements prior to making investments in technology, technology acquisition strategies, and day-to-day management of technology.

Consulting and training services within this practice area are customized to meet your needs; they cover assignments such as harnessing IT as a competitive weapon through sound business-IT alignment, developing an IT strategic plan, and reorganizing and transforming your IT department.

The Business-IT Strategies Practice guides you to identify the IT investments that make the most sense for your business, avoid those that fail to support your business objectives, and position your enterprise so it can leverage IT for competitive advantage.

Products and Services Available from the Business-IT Strategies Practice

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- Mentoring
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- IT Management
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- Risk Management and Security
- Sourcing and Vendor Relationships

Senior Consultant Team

The Cutter Consortium Business-IT Strategies Senior Consultant team includes seasoned experts in the business technology arena. Several are former CIOs; many have served as business management consultants; others have served as professors at prestigious universities. Collectively, the Senior Consultants on the Business-IT Strategies team have decades of experience both inside corporate IT and business groups, and working with organizations in a consulting capacity. The team includes:

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