From Cost to Performance Management
This book is dedicated to Robin Cooper and H. Thomas Johnson: the ones who lead the way.
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Preface

Progress or Poison: Developmental Disciplines for Cost and Performance Management

What is food to one man may be fierce poison to others.
—Lucretius—De Rerum Natura. iv. 637.1

Why do organizations continue to struggle with cost management? Why do so many performance management projects fail to deliver the promised results over the longer term? After all, cost and performance are the very blood and bone of an organization, as ancient as commerce itself. We should know by now how to orchestrate and manage them. There certainly is no lack of technical solutions, from enterprise-wide software systems, to balanced scorecards, to strategic cost management and target costing. The workforce is more highly educated than any other time in history. Competent employees show up at work day after day. For the most part, well-intentioned executives do too. Still, success in managing cost and performance is elusive to the point that true successes almost seem random, and unrepeatable due to a unique set of ideal causes and conditions.

In an era of computer hubris and the proliferation of other technical communication devices, it is maddening that the same core issues remain for many organizations:

- Uncertain financial performance
- Unpredictable costs and expenses
- Doubtful success of expensive change initiatives
- Questionable sustainability of implemented changes

Add to these the outright despair among executives faced with unprecedented failures in the ethics and structure of business and capital institutions. Mix in a healthy dose of employees who are burned out and who feel betrayed by financially driven restructurings, mergers, and acquisitions, not to mention occasional outright criminal executives. Such weary workforces often remain apathetic, if not bitter, in the face of any manager who dares bring forth another slogan of the week or silver-bullet project of the quarter. Why is it so difficult to make progress? What is missing?

There are those who offer to solve these dilemmas. As scholars continue to pump out new theories of cost and performance in the publish-or-perish world of
academia, enterprising consultants quickly grab hold and market the best and bright-est of these ideas for a management world struggling with endemic uncertainty and change. The consultants, if not always the academics, get richer, but problems, at best, are frequently solved only partially or provisionally. Executives and managers, working to improve cost and performance in their organizations, generally adopt these management methodologies with the philosophical and brand loyalty and rivalry of Ford/Chevy pickup truck customers.

The purpose of *From Cost to Performance* is to index the specific advantages and shortcomings of the most widely used cost and performance management methodologies practiced today. Using this relatively familiar foundation, a tested and proven scientific viewpoint layers on a lifelong learning and developmental perspective. But first, some additional context . . .

**PROGRESS OR POISON?**

Virtually every product and service in the western market is evolving to address consumer desires with greater and greater degrees of specialization and customization. Why then, do the so-called cost and performance experts typically adhere rigidly to the constraints of a single cost or performance management paradigm, even when these limited means frequently fail to meet the organization’s needs or support the sustainable changes that an organization requires?

One of the root causes of such perennial difficulties lies at the source of the expertise and the market conditions imposed on management specialists. Whether a scholar, a consultant, an entrepreneur, or some combination develops a new management methodology, the idea is typically publicized and/or introduced in a competitive marketplace, and the idea has to beat the competition. Competing against one another, management specialists work to influence organizational executives to adopt their new ideas and methods for improving perceived cost and performance shortcomings without including the cost and performance managers that implement and apply them. Generally, the management specialists do so by marketing their ideas as comprehensive solutions—a logical outcome in the context of intense management methodology market competition.

A second part of the cause of frequent change initiative failure can be found in the knowledge base of the management specialists advocating their new systems. They often demonstrate a lack of competence outside a single discipline, usually finance and accounting, information technology, or manufacturing operations. Those who claim multidisciplinary management expertise may lack experience with strategy and organizational behavior. It is the rare advisor who has scientific training; rarer still is the trainer who has rigorously studied human behavior. This competitive consulting market does not establish competency criteria for the people peddling wares purported to accomplish one of the world’s most complex activities—guiding organizations to continuous improvement.
Clearly, as currently practiced neither business nor economics are hard sciences. Economics is largely a game of mathematical models that, as the old saying goes, never reach a conclusion when laid end to end. Current business practices are, for the most part, a blend of mechanical/technical expertise and financially driven behavior patterns, with an occasional nod to those troublesome human beings called employees.

A third piece to the puzzle of change management failure is so embedded in business practice that it is in essence invisible. Consider these terms: industrial revolution, financial capital, scientific management, information age, process improvement, strategic objectives. Compare these with the terms trust, leadership, meaning and purpose, constituents, culture, integrity, community awareness. Just for a moment, get the comparative feel of the two lists. Notice the difference. If you are open to this moment, you may experience something like the following when reading the first set of terms: hard, tangible, business-like, no-nonsense, actionable, martial. As a member of today’s management value system, you may react to the second list with disdain. We hope that this book will change the way you see this second list in terms of the ways it can be applied to initiate sustainable positive change for your organization.

As a unit, these three root causes of change management failure spring naturally from sincere human endeavor: desire to improve, focus of specialization, and efforts to make things work. Each is valuable under certain conditions and times. However, these three are no longer sufficient on their own to create successful enterprises that are also humane places to earn a livelihood. These three simply do not provide a comprehensive viewpoint. Recently, each of these three conditions has been challenged by explorative paradigms. Market competition has yielded ground to practices such as strategic alliances (often with competitors) and interorganizational cost management. Business experts have begun exploring the physical and life sciences in search of improved models for managing organizations. Mechanical and martial cultures find themselves confronted with upstart organization structures that are more humane, autonomous, and adaptable.

PARTIAL PROGRESS

The new frontier buzzwords appear more and more regularly, like groping hands searching for the lantern that will reveal the mystery of management. Terms include the likes of complex adaptive systems, chaos theory, enterprise agility, culture transformation, relationship management, and, of course, the now ubiquitous customer intimacy. These healthy explorations push the edges of our communal understanding of the organization and how it works. All yield new insights. However, to date, the fragmented expeditions into these territories have delivered mixed results—as would be expected from any greenfield effort. How many product/service launches actually become successful? As organization managers probe
these cross-disciplinary channels for ways to improve their lifeblood of cost (i.e., valuable resources), and to strengthen the bones of their performance activities, commonalities begin to emerge. Six insights capture the progress made in the development of our collective wisdom so far:

1. Organizations are only partially composed of technical/mechanical and financial capital; the remaining components reside in human capital.
2. Command-and-control models are inappropriate, and even harmful, for many organizations, especially with autonomous, educated workforces, and advances in telecommunications.
3. Financial results remain important; however, they must be viewed as results of prior processes and activities carried out by motivated, skillful people.
4. Change is not a periodic disturbance; rather, change is a natural and healthy condition of anything composed of matter, especially if it is alive and sentient.
5. Being able to learn and adapt is more valuable and productive than putting effort toward maintaining outmoded structures and activities.
6. Ethical and moral boundaries are breached when financial/technical concerns are primary, and the human community is forgotten. In other words, to keep the financial/growth-only model running, executives will inevitably have to sell their souls.

Two common threads seem to be emerging:

1. The living and human dimensions must be integrated with technical/mechanical expertise for a complete organization perspective.
2. Learning leads to intelligent action and behaviors that, in turn, fuel individual and organizational success.

This is not an either–or choice between financial/technical and some ill-defined soft-side elements. As with most solutions to complex problems, the organizational dilemma requires an and solution. Integrating the working components of the human and learning dimensions with cost and performance practices creates synergistic advantages in the marketplace, and well being within the organization. We all know this, but we remain confused about the details of how to adapt and change. We all want more happiness in our organizations, and less suffering, yet we are frustrated and sense some essential, missing insight that would help us take the next steps.

THE MISSING PERSPECTIVE: DEVELOPMENT

If any currently practiced management methodology were truly comprehensive, it would work for everyone, every time. Even Microsoft applications don’t do that. If such a panacea existed, we would all know about it, and its inventor would
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dwarf the fame and fortune of Bill Gates. Since no such methodology does or ever will exist, the intention of this book is not to provide a one-meal, single-answer fish, but rather to instruct on the art of fishing. It carries no guarantees of catching anything, but it describes the whereabouts of some secret fishing holes, and vastly improves the chances of a satisfying supper at the end of the day.

Again, the purpose of *From Cost to Performance* is to index the specific advantages and shortcomings of the most widely used cost and performance management methodologies practiced today within the context of how organizations develop. It is time to entirely stop using either-or viewpoints with cost and performance—the old and tired “either we contain costs or we improve performance.”

Using familiar cost and performance foundations, a tested and proven scientific viewpoint—development—layers on a lifelong learning management perspective. In other words, a benefit/shortcoming index requires an appropriate context, and this book uses organizational development as a natural choice since organizations are made up of living (always), developing (usually) human beings. This expanded perspective encourages starting with valuable resources, typically defined as costs, and using them to create excellent performance—thus, *from cost to performance*.

This unusual developmental perspective provides the essential missing information to increase survival and success odds for any cost and performance initiative, regardless of brand or relative popularity. Not for a moment are the financial and technical factors forgotten. Throwing these out would discard centuries of human progress. And no, there is no claim to have the one, comprehensive, works-every-time solution. Rather, this book-length exploration presents a management navigational chart to aim for organizational maturity milestones (a journey, not a destination) and to track progress, regardless of planned objectives or technical method choices.

Why development? First, human development is a rich science. Much of the research and knowledge accumulated in this discipline can be directly transferred from the individual to the organization. Development is the most orderly, common, and reproducibly reliable way to look at meaningful human change over time. Within that context, the chapters that follow address how organizations mature by indexing the ways they understand and use cost and performance management methods.

Chapter 1 examines the shortcomings of existing change and growth management perspectives and introduces the fundamental principles of individual and organizational development that will serve as a reference for indexing the maturity of cost and performance management methods and systems in later chapters.

Chapter 2 addresses the developmental dynamics of the relationship between cost and financial accounting systems in terms of the profit imperative and how they shape an organization’s cost management system. In the process, the chapter indexes the value-focused design features people can use when evaluating the maturity of current cost management systems (CMSs). In transferring these value-focused design features into an existing CMS, people make the commitment to see cost in new ways.
Chapter 3 examines the traditional language of cost accounting in terms of its developmental shortcomings. As an organization learns and develops more mature ways to see its work, it must understand the limitations of the traditional cost terminology before new insights can be applied to cost management. This chapter specifies the ways that cost is a fundamental measure of performance. The broader and more precise the cost information base, the better the decisions made from it.

Chapter 4 utilizes the developmental insights into cost language from Chapter 3 to characterize the developmental shortcomings of the methods used by conventional cost accounting systems to manage cost—standards, budgets, and forecasts. Chapter 4 investigates these conventional practices in terms of more mature ways of seeing and managing costs and the commitment to discover the relationship between process and profits. As organizations see costs in new ways, they develop new methods of managing costs.

Chapter 5 creates a bridge between the conventional perspectives on cost and performance management and the steadily more mature systems that organizations develop through their life cycles. As a developmental starting point, the financial-cost perspective viewpoint characterized in the first four chapters gives way to more mature ways of seeing decision support by providing broader information perspectives. The necessary insight at this stage of development is operational information because the operations-process dimension increases the depth of management insight, thereby promoting decisions based on more complete information. Increased insight and information generate more options and choices that enhance the decision-making process. As described in this chapter, people learn to see traditional financial information as too late and too limited for day-to-day value creation, and they begin to learn to track value from the resources that create it.

Chapter 6 examines how some popular management techniques relate to the new, operational resource way of seeing cost and performance. Total Quality Management, Theory of Constraints, activity-based costing and Management, and resource consumption accounting are each indexed for their developmental maturity to give a better indication of when and how they should be applied to support organizational development.

Chapter 7 anticipates the formal use of strategy as the next phase of organizational development by indexing the developmental characteristics of seven management tactics: reengineering, value engineering, target costing, life cycle cost management, lean and agile management, supply chain costing, and interorganizational cost management. This chapter compares each management tactic against a strategic attribute array that details the way strategic advantage has developed in recent years.

Chapter 8 introduces the ways that formal intentional strategic management represents the next significant step in organizational development. Chapter 8 indexes the developmental advantages of three different coordinating systems designed to integrate organizational cost and performance management strategies:
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strategic cost management, value-based management, and performance management. Specifically, the chapter explores value-based management in terms of economic value added, and compares four different methods of performance management in terms of the developmental advantages of each, including the Balanced Scorecard. At this stage, organizations learn that it is possible to continuously coordinate all profit-producing activities.

Chapter 9 looks toward the future of organizational development as it is expressed in the practices of the world’s most mature organizations. Enticing as this may be, readers are urged to move through the book in an ordinal fashion, from the lowest page number to the highest because development occurs in a specific direction. At some point, everyone will encounter a paradigm in these pages that disturbs them because it seems either out of reach or preposterous. This is the way that you can discover the stage of maturity of your own organization and your own management thinking. All the paradigms in this book have been successfully and profitably mastered by someone, somewhere, and in some organization. We believe that if you and your coworkers address the immediate developmental needs of your own organization step by step, you will master them too. We invite you to begin.

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Minneapolis, Minnesota
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Chapter 1

Developmental Discipline in Cost and Performance Management

How in the world did human resources (HR) so quickly become a strategic priority in the world’s most competitive, successful organizations? Behind all the management focuses—cost, performance, operations, strategy—resides the actual engine of organizational life and work: its people. Unfortunately, from the beginning to the end of our professional education, universities and consultancies have taught the world to believe that cost, performance, operations, and strategy somehow exist as manageable components apart from people. For example, accounting textbooks carefully describe how costs behave rather than focus on how people behave when spending organizational resources. Performance gurus suggest ways to devise strategy, characterize objectives, align business units, and develop and cascade measures, but the human dynamics behind these activities remains relatively unacknowledged and elusive. Operations experts teach a variety of remarkably efficient processes for work relationships within the organization and with its suppliers, but only tacitly address the human interface of the individual employee. Last but not least, strategy mavens show executives how to briskly and nimbly move their organizations through the landscapes of competitive change, but they seem to forget that “the organization” is a collection of people.

At virtually all levels, the world of business uses a static, component-based language to mechanically represent the organization and its activities. While business units, divisions, departments, and functions are useful component terms that give complex organizations a conceptual, manageable structure, most management teams speak as if they believe that these conceptual components actually do the work of the organization rather than the individual employees. The leaders of a few organizations have come to realize that human resources represent their most valuable competitive edge. Even so, these same relatively mature leaders struggle to leverage their people assets because management science has given them an inadequate vocabulary to manage the ways people learn and develop in an organizational context. Lacking an appropriate human management vocabulary, it seems easier to manage business units, divisions, and other conceptual components of the organization rather than people, giving rise to an inherent disconnect between leadership and the workforce.
Developmental Discipline in Cost and Performance Management

The purpose of this first chapter is to carefully characterize cost and performance management in the context of managing the development of the people within the organization. As organizations develop and come to require more mature ways to manage their costs and performance, what do people need to learn and how do they need see differently to be able to use applications and systems of greater maturity? A vocabulary of human and organizational developmental disciplines helps address these questions. It is used to specifically guide and direct people as they work to better understand and manage their own cost and performance behaviors. Importantly, this initial chapter provides developmental concepts and terminology used throughout this book.

Because cost accounting provides the basic vocabulary for cost management, the next few chapters discuss cost accounting foundations in some detail. However, the discussion moves gingerly into developing skills in managing valuable resources, including human beings, their attendant costs, and their potential to create value through better performance.

A DEVELOPMENT PERSPECTIVE

Like so many important words—strategy, tactics, vision, system, ethics, love, in-law—the word change means different things to different people. Consider the array of definitions for the following three commonly interchangeable nouns: change, growth, and development.

1. Change
   • The act, process, or result of altering or modifying
   • The replacing of one thing for another; substitution
   • A transformation or transition from one state, condition, or phase to another

2. Growth
   • The process of growing to full development; maturity
   • Development from a lower or simpler to a higher or more complex form; evolution
   • An increase, as in size, number, value, or strength; extension or expansion

3. Development
   • The act of improving by expanding or enlarging or refining
   • A process in which something passes by degrees to a more advanced or mature stage
   • The process of an individual organism growing organically; a purely biological unfolding of events involved in an organism changing gradually from a simple to a more complex level
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Of these three—change, growth, development—only development consistently implies the creation of value within a learning process as an integral component of its meaning. Virtually all senior executives routinely confront heavily marketed change management services and methods to manage growth, as if these activities guaranteed organizational cost and performance development. A brief examination of the obtuse challenges embraced by some of the more common change and growth management methods demonstrates two things. First, they lend themselves to a mechanical, component-based language. Second, they need a disciplined characterization for managing human development as a means to create sustainable organizational value over time.

Origins of Growth and Change Concepts

Examining the origins of the services and methods dedicated to change and growth management, some common but imprecise practices emerge:

• **Change.** Formal change management initiatives usually imply one of two practical scenarios. In the first scenario, the organization’s management has experienced the pain of *not* practicing good transformation management principles, and has consequently generated unhappy employees, failed projects, unmet objectives, or other undesirable outcomes. Humbler and wiser, executives now seek to avoid past mistakes. In the second and unfortunately more common scenario, a disconnected executive group blames employees for poor organizational performance and uses formal initiatives in an attempt to force change, and thereby, improve performance.

• **Growth.** Although it is frequently displayed in terms of sales or revenue, growth actually means positive economic profit. Capital markets and owner/investor expectations drive executives to seek pathways to continuous profit growth through better cost and performance management.

Not surprisingly, major initiatives generally fall under the categories of change or growth management. For example, implementation of a new IT system focuses on catching up to market growth that has already occurred, preparing an information structure to handle expected growth, or changing existing applications for improved ease, speed, and capacity. Organizations commonly use performance measurement projects to change the information used to manage the company in the interest of enabling steady growth. Think of any major project, and it will be about either catching up or growing up, and it will always be about change. Change and growth are also the central tenets of human development. Logically, human and economic change and growth cannot be separated.

Managing Change—Naturally

Since the entire physical world and everything in it is subject to constant change, categorical *change management* stands as one of the most absurd management
notions ever concocted. Change in the physical universe generally takes two patterns: (1) entropy—the gradual loss of order and increase of randomness in any closed system as occurs in the life cycle of a solar system; and (2) autopoiesis—a network of processes of production (transformation and destruction), which (a) maintain their defining organization throughout a history of environmental perturbation and structural change and (b) regenerate their own components in the course of their operation. 

Physicists and biologists developed the terms entropy and autopoiesis to describe the forms of change they observe in the systems they study. Entropy works quite well for physicists and mechanical systems. Entropic systems characterize change as it occurs in mechanical systems and, interestingly, in most organizational change management efforts. The mechanical representations used to characterize organizational change management efforts are all too familiar: linear organization charts to describe the new design, Gantt charts for project milestones, and strategic objectives with their cascading business plans. The organization is managed and understood in terms of its conceptual components. As components of physical entropic systems, solar systems and all the objects and machines they contain eventually and predictably break or dissolve, lose energy, and run down.

Autopoietic systems characterize change as it occurs in living systems, a paradigm discussed but rarely applied in current business management. Autopoietic systems use enduring but adaptable templates to guide production processes. Genetic material allows species to reproduce, produce, and adapt to slowly occurring environmental changes, one individual at a time. The template leads the process of energy utilization. Autopoietic systems change and consume energy continuously, but they enhance themselves and their constituents as they do so. The individual is the essential component of the successful autopoietic system.

From this foundation, two concerns naturally arise in a cost and performance change management context. Each relates to the most limited of all organizational resources: management attention. First, since entropy and autopoietic patterns govern the behavior of everything in the physical world, people navigating cost and performance management change exclusively from the component-based entropic perspective prioritize their attention and activities by fixing the most broken thing first. In terms of management morale, the fire-fighting world of day-to-day organizational management engages an unwinnable battle and leaves little time for organizational development and subsequent value creation.

Second, randomly introduced change initiatives will only run the system into the ground more quickly. While people spend their energy resources trying to keep up with wear, tear, and resource consumption, the organization uses growth mandates and the profit imperative to hold them accountable. Growth and profit directives continually demand the creation of more, more, more. Unlike autopoietic systems that provide templates for the processes of production, the exclusively entropic cost and performance change management systems attempt to create value (profit) by spending resource energy on value-creation efforts that are
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ad hoc, emergency in nature, and insufficiently directed. Sustainable value can only be created in the autopoietic system by people who are encouraged and who understand how to do so.

Strategy can serve as the template that leads the cost and performance processes of the organization engaged in change management, but only when all employees understand strategic application personally. People in strategically sterile organizations spend their time fixing the broken because they do not know how to create value despite profit imperative mandates.

Think about human effort (i.e., energy) applied in ever-increasing amounts to the type of customer—and we all know them—who can never be satisfied. The more the supplier gives, the more the customer expects. Frequently, this type of customer is inept at cost and performance management, and tries to make up for these poor practices by increasing demands on suppliers. Moreover, while some inanimate objects and hierarchical environments readily receive enforced change, humans must become ready to accept change. Other than survival scenarios or military environments of voluntary enlistment into a culture of chain of command, forcible change efforts, even in the name of strategy, are recipes for disaster.

Currently, most organizations focus on the material, tangible components of transitions and transformations: Are the accounting systems merged? Have we terminated redundant or nonproductive employees? Is the information technology (IT) application up and running? Do we have all the measures and data for our scorecard? These are all examples of important physical/mechanical system changes. In contrast, few companies have focused attention on intangible, energy-related components such as learning required by individuals and groups, impacts on communities, or development of organizational leaders. These omissions are some of the causes of change effort failures.

A developmentally healthy organization does not gird itself for change as a test of endurance. Instead, a developing organization sees change as a persistent, underlying management condition, and carries out its activities accordingly. Importantly, these activities take place in several simultaneous dimensions including:

- Individual and group
- Organization and community
- Complexity and scope of change
- Degree of urgency and time available for change

Whether or not developmental disciplines are practiced, these factors are all operative every day in every organization.

Managing Growth

Applying the same scrutiny to growth management as a means of negotiating organizational change, more focused and less mechanical options emerge.
Everything changes, but not everything grows. People assigned to promote growth focus on specific sectors, market share, retail outlets, and on specific clients and consumers—women, teenagers, athletes, for example. As a more specific form of change, growth management provides people with more direction on what is to be done, as well as with a higher level of discipline in how to do it. For instance, if a cigar manufacturer wants to expand its sales to high-income women, the market sector is clear, and the advertising and marketing functions will play a key role in creating the new sector context.

What about profit growth? People assigned this responsibility must identify very specific avenues of value creation and direct their resources and energies accordingly. Generally speaking, growth managers must also manage assets with an eye to realizing long-term, sustained performance and positive resource investment outcomes. The gardening metaphor applies to the efforts of people with growth management responsibilities. Gardeners use tools with natural systems to maintain sustainable components that simultaneously generate goods useful for current consumption while contributing to the health of future growth.

While growth management represents a more focused way to negotiate change management, its scope is too narrow to encompass the complexity of today’s organizations, and it also falls prey to a mechanical, component-based management vocabulary. Two of the most common growth management contexts—investment portfolios and urban planning—illustrate the essentially conservative nature of the growth management perspective. In each case, asset managers acknowledge certain limits in terms of realizing long-term, sustained performance and resources (e.g., return rates in the market, infrastructure capacity in a city). A similar constraint exists for people in today’s business climate. As usually interpreted in most organizations, the profit imperative stands as an urgent and primary mandate challenging the degree to which executives and managers can sustain the mandates of growth management over the long term.

### Strategic Change Management

The twentieth century witnessed a strong trend for more and more organizations to employ formal strategic plans to direct change and growth activities. At last count, scholars and organizations belong to one (at least) of ten different schools of strategy. Strategy is not the only framework to organize activities, but it currently dominates the organizational landscape. Acting much like the information stored in the human genome, strategy can articulate what an organization will become and how it intends to enhance and perpetuate its successes.

Most approaches to strategy boil down to different ways of seeing the organization as an active agency in a defined environment, but all share one common characteristic: Each endeavor to make an educated guess about the best means to achieve a specific end, and all frameworks involve four basic steps:
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1. Explore and compare opportunities.
2. Choose opportunities.
3. Prepare and mobilize resources.
4. Implement.

Since strategy is a game of well-intentioned guessing, strategic change managers have at least two chances (but probably more) to make significant errors before implementation of change management initiatives.

1. Choose the wrong goal.
2. Prepare incorrectly.

Autopsy reports commonly list these two errors as the chief post-mortem findings for strategic unhappiness. Some subtle causes lurk behind these errors.

First, when strategic change management works within an overly compartmentalized organization that relies heavily on hierarchy and chain of command to maintain control, strategy becomes another mechanical exercise that focuses more on managing the conceptual components of the organization than on directing and aligning the activities of its people. Consequently, even with a sound strategic plan, the success rate for achieving strategic change management objectives is notably low.

Second, when strategic planning becomes mechanical, management fails to recognize what Eli Goldratt calls the organizational “prime measure”—the mother of all measures that tacitly drives all decision making and foils change efforts that challenge it. In socialist economies, the prime measure was number of units produced, regardless of type, demand, or quality. In a public university setting, the prime measure is often budget dollars acquired and spent. In the majority of American firms, the prime measure is one more related to profit and any product, service, or activity such as return on investment (ROI) or earnings per share (EPS). Although the prime measures seem logical, they reflect the organization’s unique brand of comfortable, cultural myopia, practiced and unchallenged for so long that it becomes invisible. Still, it remains the foundation of most management choices. Consequently, organizations rarely examine the prime measure’s relationship to the profit imperative and the impact it exerts on decision making and resistance to change.

While strategically aligned change management practices provide long-term perspectives for organizational cost and performance decision making, the profit imperative continues to be the prime strategic mover in most organizations. Strategy loses its power when executives and managers confuse profit goals and strategy by basing their decisions on profit implications and mandates alone. Profit is not a strategy; profit is a result of a strategy successfully implemented.

Third, strategic change management efforts naturally fail when people don’t understand their own purpose within the strategic context. Subtle? So it would
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seem. Strategy must be interpreted uniquely so that each employee understands general organizational strategic intentions within a personal context. How many change initiatives attempt to do this? Daily choices made at every level of the strategic organization are based on how much the person making decisions can see choices within a strategic context. Leave the organization’s people out of the strategic process as a surefire guarantee of strategic failure.

No Lack of Methods and Tactics

There is no lack of methods and tactics for working toward change, growth, and strategic goals; there is no guarantee that they will work. Many executives and managers have come to believe that change management efforts fail because either the tools or the people who use them are defective. This view clearly falls within the mechanical, direct cause-effect perspective. Something is broken. When an activity-based costing or a Balanced Scorecard implementation fails (yes, some actually do), what was the cause of failure: Strategy? Method? People?

From its inception as a military concept, strategic realization has always depended on tools for implementation, commonly called tactics. A wide variety of business tactics and methods are now available. Some of the most well-known include total quality, reengineering, Theory of Constraints, activity-based costing, resource consumption accounting, the Balanced Scorecard, Economic Value Added, target costing, supply chain management, and enterprise resource planning. These are examples of the common, popular management tools for sale in the change management marketplace.

As a mechanical metaphor, tools are instruments of work designed to make things better and fix what is broken. Organizations that adopt new management methods and tactics expect these tools to fix problems, and they spend large amounts of money to meet those expectations. However, most management tactics and methods are complex and specialized solutions that only work in the proper context when expertly applied. Too often, organizations purchase and begin to use these tools with all the forethought of a parent putting a chainsaw in the hands of a 13-year-old. Management methods only function when implemented in the correct context and administered by people of appropriate maturity. As tools to effect change management intentions, organizations select tactics and methods mechanically or arbitrarily and place them in the hands of unqualified, unprepared employees. The result: both the tools and the people seem broken.

Historical context sheds some light on the roots of all these tendencies to treat the organization as a machine rather than a collection of people who hold a stake in its success. Management science is rapidly emerging from the black-and-white simplicity of Frederick Taylor’s mechanical Scientific Movement, the paradigm that fueled the industrial age. As executives and managers search for ways to understand the black box of the new management challenge, the Human Factor, they discover that sound change management strategies, methods, and tactics cannot be implemented without engaged people. People cannot and will
not voluntarily engage a strategy, method, or tactic unless they see the point—unless they become interested.

Making Change Interesting

Three conditions characterize people’s ability to see the point of changing a cost or performance management strategy or method:

1. Threat to survival
2. Incentive
3. Readiness

Threats are unpleasant and incentives are expensive. As an alternative, executives and managers need a well-tested method that invites, or even creates, a noncoerced readiness to embrace change. Fortunately, managers in the last two decades of the twentieth century gained some important insights into a different context for managing human factor variables—organizational culture. Consider the root definitions of culture:

- A particular civilization at a particular stage
- The tastes in art and manners that are favored by a social group
- All the knowledge and values shared by a society

A civilization, a social group, a society—why not a business? The best research in the human resources discipline seems to confirm that each organization has its own unique culture of values, knowledge, tastes, manners, and developmental readiness for something new. In fact, the Consortium for Advanced Manufacturing–International (CAM-I) has begun to build readiness diagnostics into activity-based costing implementation methodologies. These readiness instruments assist CAM-I members in laying groundwork for successful initiatives. Many experienced and developmentally mature activity-based costing/management (ABC/M) practitioners dropped their egos for the good of the whole and laid out explicit reasons for ABC project failures. From that list, CAM-I developed the readiness assessment. The intention is to stem the tide of ABC/M project failures.

Beyond the relatively simple parameters for organizational participation such as personal preferences or willingness, readiness in a developmental context means the capacity to engage and use a new way of seeing. Personal preferences and willingness change from day to day based on many individual factors. In contrast, the capacity to see in new ways is a permanent acquisition. Management methods and tactics have the potential to give employees at all levels a new way of seeing the organization, its assets, its activities, and even its purpose.

Children need to learn basic arithmetic and algebra before they can learn calculus. The best educators rely on proven human developmental patterns and
defined readiness capacities in K–12 curricula. Likewise, developmental sciences provide a map for assessing and creating organizational readiness so that people can embrace and support cost and performance management change initiatives. It is just as futile to give a tome on an advanced business method to an inexperienced employee, as it is to give an average eight-year-old a calculus book. In other words, none of the business tactics listed earlier can be successfully implemented by following a blueprint of milestone steps that map the way to completion. The real implementation work lies between the milestones where learning and practice take place, and where readiness develops naturally.

As executives and managers pick and choose from the variety of available change management tools, organizational developmental principles can help them choose methods and prepare their employees more precisely. The chapters that follow characterize the most common cost and performance management methodologies in terms of what they can offer organizations, leadership, and employees at different levels of developmental readiness and maturity. To facilitate this presentation, the remaining sections of this chapter introduce the essentials of organizational development and learning.

DEVELOPMENT AS CATALYST FOR RELIABLE, RAPID CHANGE

In chemistry, catalysts provide a more efficient path for molecules to interact and transform themselves into a new product. In this discussion, a catalyst efficiently and predictably brings two or more discrete participants into productive relationship. In essence, catalysis is a transformative event for all participants in the relationship. The catalyst allows change to occur more easily, more quickly, and more efficiently, and more reliably than if the catalyst was not present. The disciplines of human development work like a catalyst for people and groups of people within an organization as they work to negotiate and produce meaningful change.

Because individual and group activities take place in a physical world based on the energies of many discrete participants, the scientific principles of catalysis translate directly into organizational life. Importantly, without a catalyst, participants enter successfully into productive relationship only by random chance.

Imagine molecules (or people) in a glass beaker (or company headquarters) moving randomly by each other with an occasional productive interaction. Just as the molecule follows the random path created by its own momentum and the influence of recent collisions, each person moves about according to a sense of professional roles and responsibilities as guided by personal experience and organizational mandates from the budget, strategy, incentives, or other control mechanisms.

Catalysts work by decreasing the activation energy of an event—the amount of energy normally required for an event to take place when participants interact randomly. Activation energy is the amount of energy expended by all participants over time for a reaction to occur. Most of the reactions that occur in living cells
Developmental Essentials

would occur too slowly (if at all) to support life without natural, biological catalysts called enzymes. Some enzymes increase reaction rates in human cellular processes by a factor of more than one billion. As catalysts, enzymes are highly specific. Catalysts provide a unique structural surface that brings the key components of an event into optimal position for a rapid, stable, predictable, controlled reaction.

Like molecules, people participating in a productive change relationship must come into a precise alignment with one another for the relationship to bear fruit. Molecules have it easy. They require only a precise physical relationship with one another. When it comes to new change management practices, different people within the organization must learn to see how their personal work roles and responsibilities align with entirely different roles and responsibilities. This alignment is the arena of developmental disciplines as catalyst for organizational learning during strategic and tactical management changes. This section reviews the essential principles of human and organizational development in terms of cost and performance change management applications.

DEVELOPMENTAL ESSENTIALS

A specific definition of human development applies, whether the context is individual or organizational: *Integrating the capacity to see relationships between the self and the environment in new ways.* Within this definition, *integrating* means that the new capacity becomes a permanent ability or competence; *capacity* implies a new faculty for potential growth, development, or accomplishment; *see* literally means that perspectives on relationship broaden; and *new* has several shades of explicit meaning. A new capacity to see means seeing something never seen before, not just more of what has always been there. A new capacity to see adds more comprehensive perspectives that do not negate the previous simpler perspectives but instead add meaning to and complement them. For example, companies that use performance management often claim that using a set of strategic financial and nonfinancial measures increases the effectiveness of communication of strategic priorities throughout the firm. Similarly, an ABC framework gives people new ways to see the organization’s cost and resource utilization behaviors.

Several schools of human psychology have each created a specific perspective on human development and behavior, and as a subsystem of the overall process of development, each school characterizes its own set of steps that normal people move through as they achieve greater levels of maturity. Some of the more meticulously characterized subsystems of human development include cognitive, moral, social, needs, and self-identity shown in Exhibit 1.1.

Despite this wide range of focus, the subsystems of human development demonstrate five essential consistencies that apply to the capacity of organizations to learn and implement new management methodologies.
1. All developmental processes follow a fixed sequence of stages, and all individuals master the stages of maturity in the same order.

2. While some may learn more quickly, no one skips any stage, and the lessons learned in all earlier stages are retained. Early stages contain lessons that are necessary for mastery of the stages that follow.

3. Consequently, developmental learning is truly an integrative process. Developing beings experience lasting change as they move to more mature stages. Unlike the lessons of an MBA statistics course, developmental lessons become a permanent part of one’s outlook.

4. In the normal process of developmental integration, subsystems co-evolve. Individuals are as mature as their least mature subsystem (see Chapter 9). The idiot-savant who calculates \( \pi \) to 150,000 digits but cannot tie his own shoe is less mature than the five-year-old girl who knows \( 2 + 2 = 4 \) and dresses herself.

5. The self-assessment of one’s current stage of maturity is inversely proportional to actual progress. The less an organization has learned, the more advanced it believes itself to be. Ask any parent.

### Cognition and Organizational Development

A cognitive subsystem is the best single representative of these developmental essentials as they relate to organizations for several reasons. If we truly find ourselves in the Information Age, then we depend on our cognitive abilities to make data and information meaningful. Practically speaking, beyond technical terms, most executives and managers today find themselves overwhelmed by moral, social, emotional, and identity vocabularies in the business literature, so to use

#### Exhibit 1.1. Subsystems of Human Development

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Moral</th>
<th>Needs</th>
<th>Self-Identity</th>
<th>Psychosocial</th>
</tr>
</thead>
<tbody>
<tr>
<td>sensorimotor</td>
<td>punishment &amp; obedience</td>
<td>survival</td>
<td>symbiotic</td>
<td>trust vs mistrust</td>
</tr>
<tr>
<td>preoperational</td>
<td>instrumental hedonism</td>
<td>safety</td>
<td>self-protection</td>
<td>autonomy vs shame and doubt</td>
</tr>
<tr>
<td>concrete operational</td>
<td>law &amp; order</td>
<td>membership</td>
<td>conformity</td>
<td>industry vs inferiority</td>
</tr>
<tr>
<td>formal</td>
<td>universalism</td>
<td>self-esteem</td>
<td>conscientious</td>
<td>identity vs role confusion</td>
</tr>
</tbody>
</table>

1. All developmental processes follow a fixed sequence of stages, and all individuals master the stages of maturity in the same order.

2. While some may learn more quickly, no one skips any stage, and the lessons learned in all earlier stages are retained. Early stages contain lessons that are necessary for mastery of the stages that follow.

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5. The self-assessment of one’s current stage of maturity is inversely proportional to actual progress. The less an organization has learned, the more advanced it believes itself to be. Ask any parent.
these softer developmental subsystems seems like another unwelcome extra burden. More importantly, information technology has expanded so rapidly that the technology literally informs and supports the ways our conscious and unconscious cognitive processes now do their work. The roles of the other developmental subsystems will have to wait until Chapter 9.

But first things first. People who hope to manage organizational development require at least a passing familiarity with cognitive development essentials before organizational applications can begin. As the twentieth century’s foremost authority on cognitive development, Jean Piaget (1896–1980) researched developmental psychology with a singular question: How does knowledge grow? This same inquiry has now captured the minds and imaginations of companies who spend large sums on IT systems for knowledge management like customer relationship management systems. Piaget found that the growth of knowledge is a progressive construction of embedded logical structures that supersede one another by a process of inclusion of lower less powerful logical capacities into higher and more powerful ones as human beings grow from childhood through adulthood. Significantly, less mature modes of thinking begin in forms that differ entirely from those of adults, so individuals in early stages cannot begin to imagine what it is like to see and think like those at a higher stage of development, nor can they be forced to do so. Some details of Piaget’s cognitive subsystem of development appear in Exhibit 1.2. Consider any IT-enabled knowledge management system in

**Exhibit 1.2. Milestones of Cognitive Development**

**Sensorimotor Stage**

<table>
<thead>
<tr>
<th>Focus of Awareness:</th>
<th>The body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>0–2 years</td>
</tr>
<tr>
<td>Information Processes:</td>
<td>Sensation, perception, impulse</td>
</tr>
</tbody>
</table>

**Milestone:** Differentiate physical self from physical environment

**Preoperational Stage**

<table>
<thead>
<tr>
<th>Focus of Awareness:</th>
<th>The self</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>2–7 years</td>
</tr>
<tr>
<td>Information Processes:</td>
<td>Emotions, images, symbols, and concepts</td>
</tr>
</tbody>
</table>

**Milestone:**
- Represent external environment internally
- Classify external environment according to common identities

**Concrete Operational Stage**

<table>
<thead>
<tr>
<th>Focus of Awareness:</th>
<th>Society/culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>7–11 years</td>
</tr>
<tr>
<td>Information Processes:</td>
<td>Rules and roles</td>
</tr>
</tbody>
</table>

**Milestone:** Use rules and roles to organize components into systems

**Formal Operational Stage**

<table>
<thead>
<tr>
<th>Focus of Awareness:</th>
<th>Global—the space of all possibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>11 years on</td>
</tr>
<tr>
<td>Information Processes:</td>
<td>Perspective</td>
</tr>
</tbody>
</table>

**Milestone:** Simultaneous “relativistic” perspective
your experience and compare its developmental structure with the principles in this exhibit.

This rudimentary summary of Piaget’s work shows an important, emerging awareness in the evolution of developmental thinking as it occurs in the organization as well—developmental milestones. Like markers on any well-traveled road, milestones identify how far an individual has moved along the developmental path to greater levels of maturity. From a slightly different angle, developmental milestones are a way of measuring and tracking performance capacities. When mastered, each milestone represents the integration of a new way of seeing and an expanded awareness of the relationship between the self and the environment. Consider the difference in perspective between an organization (or function within an organization) that views its relationships as a form of warfare as opposed to a company that seeks mutually profitable strategic alliances with its competitors.

Staging Organizational Development

In the last 20 to 25 years, academics and consultants have pioneered significant improvements in management methodology. Quality methods facilitate an end-to-end view of the production process—certainly this amounts to seeing more comprehensively. Activity-based methods create greater visibility to costs and resources. Systems thinking approaches like the Theory of Constraints school of thought promote working with functional interrelationships. Performance scorecards with nonfinancial perspectives make constituent interrelationships and priorities more visible across financial and nonfinancial perspectives on the organization. Development is not an explicit part of any of these business methods, however, it is clearly evident in retrospect as each new paradigm unfolds.

In 1998, Robin Cooper and Robert S. Kaplan described four stages of cost management system evolution in Cost and Effect.11 Gary Cokins has extended the Cooper and Kaplan model to include a fifth stage as illustrated in Exhibit 1.3.12 As it stands, Exhibit 1.3 is already a “Milestone View” of cost and performance management system development. Notice that as organizational cost management systems mature, they move through the descriptive elements listed for each stage in the exhibit. As with any evolving viewpoint, several critical questions remain unanswered by this simple, static map. How do organizations actually make the move to more mature stages? This map focuses on specific methodologies like ABM and performance management as milestones of maturity, but the question remains, how were the methodologies successfully integrated into the organization’s IT, decision-support, and cognitive faculties? What allows maturity to happen?

Achieving Developmental Milestones through Developmental Dynamics

While milestones mark the completion of a stage of developmental work, the real work of each stage of development lies in the day-to-day dynamic learning and
integration processes that fall between milestones. A mathematics teacher cannot simply hold up an algebra book, describe the general theory, and expect the students to become “algebratized.” Consider an ABC system implementation. The implementation milestone is reached only after the hard work and long hours of system strategy, design, construction, testing, and the parallel processes of organization-wide learning that occurs during each of these activities. Milestone achievement demonstrates organizational learning. Exhibit 1.3 does not show how organizational learning takes place between milestones, only the order in which system milestones are learned.

Knowledge of the order of system milestones is not enough. Executives and managers who want to proactively guide and encourage their organizations towards greater levels of maturity must know the dynamic developmental process work that people accomplish between each milestone that they want the organization to achieve. In addition, executives and managers of organizational development must understand the developmental process work for each key individual and employee group that has an active ownership part in system implementation.

Exhibit 1.4 presents a more comprehensive working view of Piaget’s cognitive model demonstrating how developmental dynamics work on an individual level. Within the cognitive context of the individual’s dominant focus of awareness (e.g., body, self, society/culture, global), focus-specific information processes (e.g., sensation for body awareness) first require the ability to perceive, followed by behavioral integration. Anyone who has ever witnessed a two-year-old in a public place can recognize the enormous power that simple sensation, perception, and impulse.
have over a two-year-old’s cognition. In this body-focused stage of development, 
the developmental work dynamic is one of control.

Before moving on to higher cognitive endeavors, each of us must learn to man-
age the impulses that arise from our sensation and perception. With each ensuing 
developmental stage, we face similar integration work with a new focus-specific 
information process. To reiterate, although other developmental subsystems also 
apply directly to organization management, the cognitive subsystem is emphasized 
here because it focuses on how information is received and processed—the pri-
mary concerns of cost and performance management systems. In contrast, if this 
were a discussion of corporate ethics, the moral developmental subsystem would 
be of more interest. If the focus were on organizational leadership, the self-identity 
and psychosocial subsystems would be more helpful.

Clearly, cost and performance management systems endeavor to present 
decision-making information and to report on progress toward goals. People 
focus on cost and performance information to help coordinate activities, hope-
fully in relation to the larger environment. Decision makers rely on cost and 
performance insights to cognitively paint a picture of themselves, their organi-
zations, and the larger world.
Developmental Essentials

Application of perception and integration dynamics to organizational cost and performance management system development requires a few important modifications that create a more rigorously consistent and dynamic developmental model (see Exhibit 1.5). For example, while the Cooper/Kaplan and Cokins models (see Exhibit 1.3) characterize Stage 1 development as “Broken,” the system appears broken only from the perspective of the more mature system dynamics. Stage 1 is not so much broken as it is less mature. Borrowing from the focus approach in Piaget’s cognitive model of development, the focus of the Broken stage is actually on the budget. In somewhat more mature Stage 3 organizations, information from the financial statements is included. In Stage 1, however, even though financial statements may be present (e.g., the income statement), they are seen through a budget lens, a less comprehensive view.

Stages 1 and 2: Budget and Finance. Stage 1 executives and managers make most or all of their decisions based primarily on budgetary considerations—budgetary information creates the greatest impact on decision-making priorities. In short, a budget-only focus is a “dances with numbers” game. People in these organizations simply have not learned to see beyond the budget. Education and government sector organizations frequently fall into this stage. Such an organization has at best only learned the internal part of the lesson of basic fiscal self-control.

Stage 2 systems integrate a view of the organization that allows management to see beyond the budget, but financial performance mandates replace budgetary mandates as the primary information source impacting decision-making priorities.

Exhibit 1.5. Stages of Cost Management System Development

<table>
<thead>
<tr>
<th>System Milestone</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Dynamic</td>
<td>Budget</td>
<td>Finance</td>
<td>Operations</td>
<td>Strategic Integration</td>
<td>Holistic</td>
</tr>
<tr>
<td>Data Sources</td>
<td>* control</td>
<td>* compare and coordinate</td>
<td>* apply</td>
<td>* adapt</td>
<td></td>
</tr>
<tr>
<td>Data Management</td>
<td>* general ledger</td>
<td>* general ledger</td>
<td>* activities</td>
<td>* employees, customers, &amp; partners as an integrated unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* regulatory mandates</td>
<td>* Wall Street</td>
<td>* resources</td>
<td>ecological economics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* ops variances</td>
<td>* benchmarks</td>
<td>* partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* controlling the numbers</td>
<td>controlling the numbers to create profit</td>
<td>* comparing the numbers to the resources that create them</td>
<td>applying goals to resource utilization proactively</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* learn to change activities and goals as soon as opportunities arise</td>
<td></td>
</tr>
<tr>
<td>Management Dynamic</td>
<td>* commit to learn a better way to see costs</td>
<td>* discover the relationship between process and profits</td>
<td>* learn to track value from the resources that create it</td>
<td>* continuously coordinate all profit producing activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* support the well-being of the entire economy</td>
<td></td>
</tr>
<tr>
<td>Sensorimotor</td>
<td>Preoperational</td>
<td>Concrete Operational</td>
<td>Formal Operational</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sensorimotor Preoperational Concrete Operational Formal Operational
The organization has learned the external lesson of basic fiscal self-control, but has not learned to see management information beyond the income statement, balance sheet, and budget. The Financial Stage is an unbalanced, incomplete view that uses profit as the prime measure.

**Stage 3: Operations.** As a natural progression, Stage 3 organizations compare profit to the resources that generate them. They start managing processes, and allow financials and budgets to remain tentative guides and results reports. Exhibit 1.5 expands the model of organizational development beyond the simple systems descriptions of the milestone view. Here, Stage 3 becomes “Operations” rather than “Customized/Stand Alone.” Stage 3 organizations have learned to see beyond the financial perspective and to focus additionally on operational information from activity-based and resource-consumption accounting viewpoints to complement the impact of budgetary and financial information on decision-making priorities. The organization has learned how to *compare and coordinate* budgetary records of resource utilization and financial records of overall performance with actual activities and resource utilization patterns. Stand-alone activity-based costing, resource consumption accounting, and performance measurement systems allow the organization to represent the internal environment on its own terms rather than by exclusive identification with the budget, balance sheet, or income statement. During this process, management learns how to use the new information focus to improve activities and resource utilization patterns.

**Stage 4: Strategic Integration.** And the Strategic Integration organizations belonging to Stage 4? Remember the second essential consistency found across all developmental systems: While some may learn more quickly, no one skips any stage, and the lessons learned in all earlier stages are retained. Early stages contain learning capacities necessary for those that follow.

Stage 4 organizations have learned to use a database of integrated budgetary, financial, operational, and strategic information to create a greater impact on decision-making priorities. The stand-alone systems can be coordinated and work together when strategy assigns systems roles and rules of interaction within the overall organizational operational context. Strategic management provides the first developmental opportunity to introduce and realize long-term organizational goals. Strategic management can, of course, be introduced at any time during the developmental life cycle of an organization, but the decision-making processes are relatively impotent without an integrated set of budgetary, financial, and operational information and employees that understand the interrelationships of these information sources and processes.

Stage 4 organizations have learned to integrate the information capacities of earlier stages and to test long-term intentions with their strategic plans. Consequently, rather than merely tinker with isolated internal operational efficiencies, a common pitfall of misapplied quality methods, a strategically integrated information system permits Stage 4 organizations to apply organizational learning in
practical ways that create value internally and externally. In this equivalent to Piaget’s Concrete Operational stage of development, the organization uses rules and roles to integrate its many systems into a unified whole. The Balanced Scorecard stands as one of the healthiest examples of this rule/role structural maturity.

Stage 5: Holistic. Last, but not least, the Stage 5 organizations have learned to see themselves holistically in the context of Piaget’s global focus—the arena of all possibilities. In this valedictory stage, the holistic perspective goes far beyond geographic concerns, and the arena of all possibilities extends far beyond opportunistic choices. Stage 5 organizations see their short- and long-term activities, resources, and strategies as a part of an economic ecosystem—damaging the economic ecosystem eventually comes home to haunt the organization. Nobel Prize–winning economist Amartya Sen describes how the few organizations that have reached this stage of development actually manage development as a resource pool of freedoms.13

The Developmental Dynamics of Organizational Cognition

Exhibit 1.5 builds on the descriptive elements of the model in Exhibit 1.3—data quality, external financial reporting, product/customer costs, and operational strategic control—by characterizing primary data sources and the management dynamics behind the organization’s cognitive learning and developmental processes. As decision-support data resources move beyond the limited views of general ledger, balance sheet, income statement, and of Wall Street, Stage 3 organizations learn to see and manage activities and resources. In Stage 4 when strategy integrates the stand-alone systems into a unified decision-support information system, the organization can apply the information to manage all profit-producing activities from a long-term perspective.

Note that the developmental view in Exhibit 1.5 does not throw out the Cooper/Kaplan and Cokins work, but rather complements it with guidance for executives and managers who are leading organizational development. For example, Gary Cokins added a fifth stage, Decision Support, in the interest of highlighting the importance of the careful design and development of information systems. The developmental viewpoint in Exhibit 1.5 threads his concern throughout the model. Simply put, high-quality information is the substance of all organizational development because organizations manifest their maturity by the ways their people make choices. High-quality information is an underlying, foundational requirement for mature choices. Concurrently, the developmental perspective recognizes that the most sophisticated information systems remain unused and silent if the people who are supposed to use them are not competent to understand and manage what the system has to offer.

The new rows in Exhibit 1.5 characterize how stage-specific developmental dynamics correspond to the static technical milestones for cost and performance management systems—data, reporting, costs, and control in Exhibit 1.3. When
combined, the information contained in these two exhibits gives a better characterization of why and how organizations in various stages of cost management system (CMS) development give priority to specific forms of information (e.g., budgets as opposed to performance measures). The characterization of the maturity of information resources is one of the first steps in the process of deliberately managing organizational development. In Exhibit 1.5, a Developmental Dynamic listed for each stage shows the focus of work prior to achieving the milestone in each stage.

*Data Sources* listed at each stage of CMS development characterize the information used by decision makers in making choices among opportunities. In the dynamics of development, the best way to characterize a stage is in terms of the information sources that direct decision making. This development insight provides a deeper, richer, more specific, and visible view to people who want to promote maturity within the organization. The kind of information that people most value reveals what the organization values.

*Data Management* further characterizes the developing organization. Identifying the data sources is a good first step; examining how the data is used to manage provides deeper developmental insights. Stage 5 executives and managers may still use budgets and financial information, but they use them differently than their counterparts in Stages 1 and 2.

*Management Dynamic* asks the question: What must the people within the organization learn to move to the next stage of maturity? Stage-specific activities and practices answer the question. People in Stage 1 must commit to learn a better way to see costs than offered by the budget perspective alone. In the Stage 2 organization, everyone must discover the relationship between process and profit and the relationship between leading and lagging indicators. The milestone of a current stage is the hurdle to get to the next stage. Executives and managers managing organizational development must always keep one eye on the next step, or stagnation sets in.

**CREATING AN APPROPRIATE DEVELOPMENTAL SEQUENCE**

Whether individual or organizational, developmental lessons cannot be imposed—they are a matter of an ever-changing blend of cultural context, ongoing learning, and a state of readiness. Everyone learns developmental lessons in the same order but not at the same rate. The same is true for executive teams, functional departments, and whole organizations. Individuals in executive leadership positions should be the most mature in the organization. Below the executive leadership, most organizations can be developmentally characterized in terms of two additional learning groups: (1) managers responsible for processes, and (2) specialists charged with executing specific activities such as sales, production, or customer service—in many ways the employee closest to the customer (see Exhibit 1.6).
Creating an Appropriate Developmental Sequence

**Exhibit 1.6. Organizational Learning Group Matrix**

![Organizational Learning Group Matrix Diagram]

<table>
<thead>
<tr>
<th>Role</th>
<th>Work Focus</th>
<th>Management Responsibility</th>
<th>Productive Accountability</th>
<th>Primary Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Executive</td>
<td>Strategy</td>
<td>Direction</td>
<td>Precision</td>
<td>All Stakeholders</td>
</tr>
<tr>
<td>II Manager</td>
<td>Process</td>
<td>Resources</td>
<td>Accuracy</td>
<td>All Employees</td>
</tr>
<tr>
<td>III Specialist</td>
<td>Activity</td>
<td>Productivity</td>
<td>Quality</td>
<td>Customers</td>
</tr>
</tbody>
</table>

Organizations manage cost and performance through the interdependent activities of these three groups of people. Within the context of organizational cost and performance management, the members of each group have a unique work focus, management responsibility, productive accountability, and set of primary relationships. Consequently, as the three groups work together to realize organizational objectives, especially management system changes, each must share a common level of developmental readiness. Otherwise, the interdependent relationship will fail to integrate and use new management systems. The degree that participants are mismatched in terms of their ability to see how their work focus, responsibility, accountability, and primary relationships determines the degree of trouble in achieving objectives. To create a common developmental readiness for change, each of the three groups needs a customized developmental set of experiences in carefully designed sequences.

**Learning Organization Dynamics**

Learning. Knowledge. Information. Intelligence. Are these all synonymous? One might think so the way people use them interchangeably as their organizations seek to tap into the limitless potential of human creativity. Terms like *human capital, intellectual capital,* and *knowledge management* appear regularly in the professional media. What are they all looking for? Organizational learning and development is implicit in each term.
Since developing beings integrate the capacity to see relationships between the self and the environment in new ways, each identifiable, distinct group within the learning organization follows a unique developmental sequence. Each group has its eyes on different domains of activity, responsibility, accountability, and primary relationships. Each group must simultaneously be teacher and student because each has important cost and performance management insights and perspectives that the others do not. Executive leadership must see and chart the direction for the organization as a whole. Developmentally, executives must also create and align learning experiences that allow groups and individuals within the organization to be able to see new directions in terms of personal work responsibilities and activities. On the learning side, executives need to learn how to support managers. In turn, managers must assist specialists in adapting to revised organizational objectives.

More specifically, people in the manager role must see and create ways to customize technical methods and management system resources to both support new leadership directions and make the organizational resources available to the specialist employees. On the learning side, people in the manager role must learn how new executive directions place different demands on management systems and how new directions change the resource needs of the specialist employee.

Specialist sales/production/service employees must see and create ways to communicate their experiences with the customer to complement new executive directions and emerging management system enhancements. On the learning side, specialist employees must learn how to directly align their day-to-day activities with leadership vision and attendant management system resources. Here are some example learning experiences for each of the three groups:

1. **Executives.** Learn how to identify and ameliorate ego behaviors, how to appropriately deal with various types of conflicts, and how to competently communicate vision and strategy using best-fit forums and media.

2. **Managers.** Learn how to function as liaison communicators between executives and specialist employees, how to use best-fit management tactics to improve processes, and how to understand behavior dynamics where measurement and incentives are involved.

3. **Specialists.** Learn how to understand resources and capacity, how to examine and improve activities, and how to check for activity alignment with strategic priorities.

Notice the frequency of the word *how*, and think about the related terms, *know-how* and *how-to*. The word *how* is an ancient stem from Old Saxon English. *How* is the most intimate question asked in the learning process because it begs other questions: For what reason? In what way? On whose account? By when? On closer inspection, *how* begins the sequence of questions that provide greater learning definition.
Creating an Appropriate Developmental Sequence

Since the three primary groups within an organization work together to unfold their combined change management activities in a specific sequence, that sequence ought to be visible and understood. Supported by a physical and information infrastructure, the sequence is:

Vision $\rightarrow$ Strategy $\rightarrow$ Processes that use specific methods and tactics and organizational resources $\rightarrow$ Specific process activities to utilize resources productively $\rightarrow$ Achievements $\rightarrow$ Reflection and learning $\rightarrow$ Modifications $\rightarrow$ and back again to Vision and Strategy

Intuition suggests that each time leadership creates a new direction for the organization the responsibilities for creating an appropriate developmental learning sequence for establishing organizational readiness should flow in a parallel direction:

Executive leadership $\rightarrow$ Process managers $\rightarrow$ Activity specialist

Not so. Organizational learning is an interdependent parallel process between the three groups where each group both teaches and learns alongside their counterparts. As one of the first of many distinctions between individual and organizational developmental processes, groups of organizational members must co-facilitate the creation of new ways to see for one another across groups because each group carries specialized, otherwise sequestered knowledge necessary to a common solution. Put another way, organizational learning is not part of a static hierarchy; it functions in a dynamic matrix.

Executive leadership often has brilliant new ideas but never sets foot on the shop or service floor, and so has little concept of the physical constraints there. Managers work in an environment with shorter horizons than the executive leadership. Their nuts-and-bolts focus is on managing system and process resources with the best available decision-support information. They are immersed in essential day-to-day activities, and therefore, usually are permitted less thinking time devoted to the far-reaching executive horizon.

Further immersed in local detail, specialist employees work with the shortest event horizon but the greatest stock of practical operational information because they directly engage the very materials and processes designed to create value for the customer. Production-line employees frequently know best why products break and how to fix the problems. Customer service employees have the keenest customer ear because they listen to customers all day long. Yet how many times do executives learn from the collected wisdom of their hands-on specialist employees?

Think about what each group sees and cannot see. In terms of sustainable organizational success and continuous improvement, the experiences of each group mean little without the insights of the other two, but each sees the organization through different levels of maturity. This doesn’t mean that executives are
more mature than production/service employees; nor do people involved with the finest level of detail always have global solutions. It is the many perspectives brought together that create learning and fit solutions for the organization as a whole.

Obstacles to Developmental Learning

And the dynamics for managing organizational development through learning experiences? Learning has no beginning or end points once in motion. Ideally, executive leadership sets the direction and pace. First, executive leadership informs the process managers of new intentions. Ideally, these new intentions are not based only on some impractical and arbitrary quarterly earnings target. If the new intention has a prayer of success it will be largely based on the interpreted collective wisdom of the entire organization. Managers who understand the work process and information resource implications of the new executive intentions then work with the specialist employees to design feasible methods and tactics for implementation and performance measurement of the new intentions and concurrent executive, manager, and specialist group learning.

In practice, most organizations need to clear a number of developmental roadblocks before this matrix can be regularly engaged. Some of the most common developmental roadblocks that impede positive transformation and progress include:

- Executive leadership placing unrealistic demands on an unprepared and/or inadequately supported management group or production/service group
- Executive leadership’s inability or unwillingness to see the wisdom of local recommendations, especially when they come from process managers
- Manager-recommended changes that are unsuited, or too advanced, for organizational needs, or investments in human and mechanical capital that support parochial interests at the expense of the organizational community as a whole
- Managers holding too closely to familiar (i.e., comfortable) suboptimal systems
- Specialist employees aggressively stepping out of the scope of their usual activities, with incomplete knowledge of the global picture, pushing for process changes
- Valid process improvement suggestions made by the specialist employees going unrecognized
- Specialist employees’ recurrent “ignorance” about any new system, method, tactic, process, or strategy while the organization regularly experiences high turnover and related poor-quality products and services

These and many other similar behavior patterns boil down to one of three basic dysfunctions in organizational development scenarios:
Creating an Appropriate Developmental Sequence

1. A more mature group sees beyond the abilities of the other two but does not know how to communicate its perspective.
2. One group or the entire organization is stuck in a developmental delay that even with intense communication efforts seems insurmountable.
3. Employees at all levels are reluctant to see beyond their own local set of responsibilities and interests.

Scenario 1 represents a temporary developmental imbalance across the groups. Scenario 2 represents an identifiable pathology. Scenario 3 describes an invisible pathology—like a serious medical health condition recognized too late for best remedies. Each situation requires its own unique developmental sequence as a remedy. The following chapters will address ways to correct healthy imbalances of maturity across organizational groups. Scenario 2 requires targeted intervention, usually by experienced human resource professionals or a particularly empathic executive. Since the people in Scenario 3 are all unaware that there is a problem, fundamental personal and organizational reformation is in order, and is not the subject of this discussion.

Developmental Dynamics across Employee Groups

Recall that catalytic agents facilitate events by bringing the participants into optimal position with respect to one another. Chemical reactants must come into precise alignment for the reaction to occur. Without a catalytic agent, random chance encounters determine the rate of the reaction and the yield of the desired reaction product. Catalysts work to eliminate randomness-associated time and energy waste by creating a precisely structured template that brings the reactants into the exact position required for the reaction to take place. Developmental principles serve a catalytic function for organizations approaching new executive intentions or transformative initiatives by preparing employees in each group to be able to see new forms of information, process structure, and activity alternatives.

Naturally, the executive, manager, and specialist employee groups become the analogs to the chemical reactants. Likewise, their developmental differences must be aligned to begin a controlled, reliable reaction—in the context of this discussion, the implementation of a new, more mature cost/performance management system. When the three groups manifest different levels of developmental readiness for CMS and performance initiatives, organizations can use developmental principles to identify each group’s learning requirements and develop a learning sequence, so that each becomes ready to openly engage the other groups and the new methodology. As a catalyst for change management, these principles correct developmental and readiness imbalances so that the new work might begin quickly and demonstrate consistent, reliable results.
Developing Management Readiness

I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrongdoing.
Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course.
—Hippocrates

As one of the most important aspects of the organizational developmental sequence and course of learning, all groups need to learn to see from each other’s perspectives. This is as simple to say as it is difficult to put into practice. Remembering how to see the perspective of a group at a developmental level that lacks certain more advanced experiences can be every bit as challenging as learning to see a totally new, more developed perspective. The chapters that follow take a Hippocratic “Do no harm” posture by objectively indexing the spectrum of cost and performance management methodologies in terms of the strategic attributes they do and do not have. This serves to separate the remedies from the poisons for any given stage of an organization’s developmental readiness. The chapters call out readiness requirements for each group as well.

Importantly, each chapter uses Exhibits 1.3 and 1.5 and adds a new layer of cost and performance management maturity suggesting how organizational groups must learn their way into the capacity to see and use a new form of information for making better decisions together as a unified team. Creating a unified team is more a matter of precise management than meticulous management. Reports with lots of numbers to the right of the decimal point may be meticulous, but a meticulously prepared report may not fall anywhere on the strategic map. Similarly, meeting a quarterly earnings-per-share (EPS) target to the penny may look like meticulous management, while simultaneously, executives are blinded to precise and more critical business needs by their meticulous EPS reconciliation myopia. Developmental learning and readiness bring employees into precise position for appropriately chosen change initiatives. Development creates alignment through readiness. The chapters that follow chart how organizations can prepare for new developmental milestones within their cost and performance management systems.
Chapter 2

Cost Management: Control and Profitability

*Y*’*see it’s sort of a game with me.*

*It’s whole object is to prove two plus two equals four.*

*That seems to make sense, but you’d be surprised at the number of people who try to stretch it to five.*

—Dalton Trumbo

Cost management lies at the heart of organizational development because today business is still the business of numbers, and the most compelling number in business is the one on the bottom line. Two things determine the bottom line: cost and revenue. As organizations move from cost to performance, the cost management system (CMS) in all stages of maturity always remains servant to a higher liege. Importantly, the CMS acts as part of the overall organizational control system, but in each stage of organizational CMS development, it serves a more comprehensive (if not wiser and more mature) authority. In a Stage 1 CMS, the highest authority is the budget; in Stage 2, financial profit; in Stage 3, operations; in Stage 4, strategy; and in Stage 5, the needs of the wider business ecosystem.

While the CMS remains subservient, cost management systems mature as the organization matures; if the CMS fails to develop, the organization fails to develop. In the normal process of developmental integration, *subs* *ystems co-evolve.* Individuals are as mature as their *least* mature subsystem. A maturing organization develops new ways of seeing itself in relation to its environment, and the cost management system contributes to organizational maturity when it creates new cost information perspectives that accurately represent new organizational viewpoints and priorities. Consequently, as the chapters of this book unfold, cost management system maturity will always be an essential element used to trace new levels of overall organizational maturity.

Cost is always an essential measure of organizational performance. However, the relative emphasis placed on cost, as well as the way costs are viewed and managed, differs greatly across the five stages of CMS development. Following the same patterns of individual human development, cost skills and insights from earlier stages are not discarded as development proceeds. Instead, they serve as fundamentals that provide the platform to make the next milestone achievable. Development proceeds according to the dynamics of integration and
accumulation, not substitution or abandonment. In this light, cost is a constant companion, but the perspective and understanding of cost evolves and matures.

This chapter provides important additional context for the entire book. Here the context concerns the realm of cost accounting fundamentals and their impact on the ways that a CMS matures. Cost accounting generates the data for cost management, which in turn, becomes an information source for performance management. Simply summarized:

Economic events based on resource consumption create transactions captured by cost accounting systems that are then compiled in formats meaningful for decision-making regarding cost and performance management.

Cost accounting has its own set of disciplines. It operates within a much more flexible set of standards than does financial accounting. Importantly, with rare exceptions (e.g., government contractors), cost accounting is not regulated. The fact that the majority of any organization’s income (profit and loss) statement is made up of data provided by a cost (and expense) accounting system gives pause for thought. Currently, almost all of the debate surrounding accounting practices focuses on financial reporting, financial instruments, Generally Accepted Accounting Principles (GAAP), and the governing bodies responsible for corporate reporting integrity, such as the Securities and Exchange Commission (SEC), Financial Accounting Standards Board (FASB), and the American Institute of Certified Public Accountants (AICPA). Anyone interested in financial statement integrity needs to be equally concerned with a deeper understanding of the role of cost information embedded in financial reporting.

ESTABLISH THE FOUNDATION OF COST MANAGEMENT SYSTEM DEVELOPMENT

From the most general to the most detailed perspective, the conventional accounting system of most organizations can be characterized by the following five increasingly technical and elemental categories:

1. Financial Accounting System
2. Managerial Accounting System
3. Cost Accounting System
4. Cost Types and Costs
5. Budget and Standard Cost Systems

As an aid to understanding foundations of CMS development, this and the next two chapters of this book will examine the interrelationships of each of the conventional components in these five categories; however, this is no Accounting 101 review. Chapters 2, 3, and 4 examine conventional cost management assumptions
behind each of the five categories from a developmental context. Chapters 2 and 3 establish the essential components of Stage 1 and 2 Cost Management Systems. Chapter 2 examines the interrelationships between financial and managerial accounting systems and the essential differences of these two master accounting systems. Chapter 3 focuses on the foundations of the cost hierarchy, concerned with the basic building blocks of most cost accounting systems, cost types, and the cost categories that meet financial statement requirements. Chapter 4 demonstrates the various ways that organizations use cost types, as well as how budget protocols and standard costs help control human spending behaviors. All three chapters, 2 through 4, define seminal cost accounting terminology and concepts in ways that reveal how more mature systems have integrated them into a more comprehensive understanding of cost as a measure of performance.

From this foundation, Chapter 5 begins to explore the more mature CMS Stage 3 territory where accounting systems directly connect with operations and start to address nonfinancial performance perspectives. Chapter 5 discusses the traditional workhorse methods within the cost accounting discipline that managers may use for planning and running internal operations, such as inventory and expense item management.

Chapters 6 through 9 describe strategic and other mature cost and performance management approaches that have developed beyond the shortcomings of conventional cost accounting approaches in an effort to provide information in a form that can support decision making across all functions. In other words, the second half of the book deals predominantly with the Stage 4 CMS and sets the foundation for the evolution of Stage 5 systems. In Stages 4 and 5, the CMS is more accurately called a CPMS—cost and performance management system.

**FIRST THINGS FIRST**

By definition, organizations do not formally manage nonfinancial performance until they introduce a Stage 3 CMS. In Stages 1 and 2, the common approach is management by the financial and cost accounting numbers. By Stage 3, operations gets management attention, but usually with conventional tools, or at best, with first-tier maturity tactics such as activity-based costing and quality management. In Spartan terms, this means that until Stage 3, organizations do not have a formal, organization-wide system to manage nonfinancial performance, no matter how many excellent isolated operations tactics they use. The unassailable logic that nonfinancial activities generate financial results is the developmental lesson to be learned by the people in Stage 1 and 2 firms.

Executives and managers in financially driven Stage 1 and 2 organizations often chafe at suggestions that the CMS must change to enable greater organizational maturity. They commonly cite a multitude of initiatives and implementations that they have put in place to emphasize nonfinancial management—Balanced Scorecard projects, enterprise resource planning (ERP) systems, and so on. Truth be
known, even with these worthwhile tools, when executives and managers continue to see and be driven only by financial goals and incentives, so goes their energy. Financial goals direct their attention and how they spend resources—their own and the organization’s—no matter how many nonfinancial projects proliferate as simply more state-of-the-art management window dressing. Experience has shown that the existence of an operations or balanced measurement project does not guarantee its use in running the business. Like the developmental fixation of a person trapped in the Peeping-Tom, voyeuristic stage of human sexual development, the financial statement focus perpetuates a fixation on immature forms of cost; the fixation delays the appropriate developmental focus on a cost/performance balance for the entire organization. The natural, developmental sequence laid out in this book, as well as the causes of developmental delay and arrest, help clarify both difficulties and solutions. From a practical viewpoint, this comprehensive picture of cost and performance management development should assist professionals to:

- Assess current cost and performance systems.
- Compare these systems to competitor levels.
- Evaluate the cost and performance management systems of business partners: suppliers, venture alliances, and potential merger/acquisition candidates.
- Plan for needed CMS system and parallel human development.

**THE PROFIT IMPERATIVE: DEFINING THE OBJECTIVES OF COST MANAGEMENT**

All people in the organization account for cost, and most managers engage in capital investment decisions, forecasting, pricing, and product or service management. These business activities are all deeply embedded in the work of cost accounting, and cost-related tasks consume a significant amount of management time at all levels of the organization.

A business professional must understand the organization’s cost accounting practices to competently manage a specified area and understand how personal accountabilities are calculated and tracked. Bellwether organizations that employ mature management systems still commonly run their accounting systems according to basic cost accounting principles. Importantly, conventional practices shape the development of mature techniques; therefore, more mature methods cannot be fully understood without reference to their predecessors. As a baseline, an organization’s executives and managers must establish management/cost accounting practice foundations that serve decision making and operations, first, and financial accounting, second, before moving to more mature systems. To accomplish this, executives need the ability to distinguish system alternatives.

The functions and purposes of a CMS are ideally designed around specifically articulated objectives. The more mature the organization, the more its people will
expect from their CMS. Nearly all business professionals know the major components of a general ledger, financial accounting system, or at least two of the important reports generated by it: the income statement and the balance sheet. Far fewer managers can describe a CMS—and with good reason. An effective CMS is customized to match an organization’s internal environment and specific cost structures. While an experienced financial professional and many nonfinancial managers can move from company to company and quickly understand the financial statements of each, even practiced accountants need considerably more time to understand the intricacies of different cost management systems from company to company. A CMS is less constrained by exacting professional standards and reporting formats than are financial systems, with a few exceptions like the regulated cost guidelines of government contractors.

Profit calculation is a chief concern of both financial and cost accounting. Profit and its components are reported in financial accounting formats, chiefly, the income statement. Profitability, variously interpreted as net income, equity value, and return on investment is a results-focused performance indicator watched more carefully than any other performance measurement category. But if these measurements depict results, what measurements show the dimensions of performance for the processes that lead to those results? A brief review of the two major branches of accounting shed some light on this question.

The accounting profession is divided into financial and management (or managerial) accounting. The latter is synonymous with cost accounting. The term management refers to the comparatively internal focus of the cost accounting field compared with the external focus of financial accounting. The word traditional, when used to describe cost accounting methods, refers to the standard practices taught in basic management accounting courses and practiced in most North American firms. The standard practices include cost systems and procedures, methods of determining costs, points of cost accountability, forecasts, cost comparisons (e.g., standard cost systems), and budgets (operational, project, and capital). The purpose of cost accounting is to assist in the wise and prudent stewardship of overall organizational resources.

In the midst of the current intense corporate and financial accounting scrutiny, an important fact is ignored: The distinction between financial and managerial accounting is an arbitrary convention. The rationale for the two branches is based on a dated paradigm of two distinct information groups: internal users of managerial accounting and external users of financial accounting information. Consider the potential pitfalls of having two systems, and two views. Specifically, consider the implications of cost accounting systems operating without regulatory requirements, even though its information comprises a significant proportion of regulated financial reporting.

Distinct from cost accounting, financial accounting is the branch of the accounting field concerned with formal, aggregate reporting of transactions related to the income statement (revenue minus expense equals profit/loss), the balance sheet (assets, liabilities, and owners’ equity) and other related statements
(e.g., working capital, cash flow). Standard report forms used across companies and an external, shareholder focus, characterize financial accounting. See Appendices A and B for generic examples of the income statement and balance sheet, keeping in mind that as this is written, financial reporting requirements are under intense scrutiny and subject to significant change.

Standard financial accounting practices enable most business professionals to understand at least the rudiments of financial accounting. In contrast, cost accounting and management maintain some general principles, but in practice, organizations customize them significantly. To understand, in foundational terms, how a cost system works, some essential terms formally defined in the glossary of this book include:

- Cost
- Cost accounting
- Cost and expense distinctions
- Cost management
- Cost management system (CMS)
- Cost types
- Cost of goods sold (COGS), and cost of goods manufactured

Understanding the "nature and behavior of cost" really means understanding the incentive and spending dynamics of human beings. Other critical characteristics and functions of a healthy CMS include:

- Sets direction for resource consumption priorities and guides course corrections by emphasizing an accurate reflection of operations first and accounting practices second. The principle of putting operations accuracy first is a cost management developmental milestone insight that frequently leads to improved financial reporting.
- Specifically answers the demands of the profit imperative by supporting alignment of employee spending behaviors with the organizational strategy
- Promotes, tracks, and gives feedback on value creation for identified stakeholders
- Supports, tracks, and gives feedback on continuous improvement efforts
- Promotes improvement in cost structure—the chief responsibility of a CMS
- Assists management in wise use of resources

A high-functioning, mature CMS sets direction for resource consumption priorities and makes course corrections by emphasizing insight to operations. A CMS specifically answers the demands of the profit imperative when it aligns employee spending behaviors with the organizational strategy. The primary purpose of the CMS is to understand the nature and behavior of cost, and thereby manage valuable assets wisely through optimizing limited resources. In fact, this
purpose could serve as a mission statement for a maturing CMS at any stage of development.

The Path to Value

A CMS helps chart the path to value. When accountants talk about value, they refer to “any preferred object or interest therein.” Accounting valuation is “a judgment expressing or implying preference, or relative approval or disapproval.” These perspectives on value are specific to accounting. Value has recently taken on many new connotations. Terminology such as value-based management, value proposition, value-driven activities, and economic value each have a special twist on what value means. In the most general sense, organizations exist to become the provider of preference by conveying product and service value to customers, clients, and constituents. This is as true of a spiritual organization with a humanitarian mission as it is of a large corporation focused chiefly on shareholder wealth.

Naturally, the path to value is different for each organization, and value has many definitions beyond those of the accountant. In the last half of the twentieth century, the focus on value became rooted in the idea of creating shareholder value. However, other groups are concerned with value. What do customers and employees value? What do they really want? How can we differentiate ourselves from the competitor in terms of value? Should we be as concerned about creating value propositions for internal constituents (i.e., employees) as we are about customers and shareholders? How do all the converging interests of those with a stake in the organization’s success or failure work together to create a mutually satisfying sense of value?

None of these questions has an easy answer, but one fact is certain: The first and most common cause of enterprise failure is, simply, overspending—a basic failure in value management, usually as simple as too many expenditure dollars flowing out and too few revenue dollars flowing in. The solution to overspending behaviors involves little more than the skill set required to balance a checkbook; however, the maturity level required for responsible checkbook management is another matter. Creating value for the complex organization requires that clear and commonly understood cost management objectives be embedded in the cost management system.

Five-Stage Model Implications

A good context for beginning to understand the CMS is to ask not what it is, but rather how it functions. Refer once again to the CMS technical continuum in the five-stage model Chapter 1, Exhibit 1.3, which shows the increasing technical functionality and uses of a CMS as it typically evolves over the life cycle of a maturing organization. The staged perspective helps contrast conventional and more mature cost management systems and techniques, thus offering a practical
context for using the ideas presented in this text as they apply to current technical practices in the workplace.

For example, if a Stage 1 system is budget focused and not adequate for routine reporting, it cannot hope to deliver more mature information on product, customer, and operations costing. Such systems offer little in support of strategic control. Stage 2 systems are driven by financial reporting requirements, and they meet financial accounting standards. However, they remain severely limited in decision-quality data. They often distort both costs and profits, and they are not timely in delivering feedback.

Stage 3 systems are specialized, in that the cost and financial accounting systems use the same databases; however, the two systems remain isolated and specialized in their application. In this stage, activity-based costing and management (ABC/M) and performance measurement systems often emerge. Stage 4 systems are integrated. They use a common database so that reporting supports operational strategy. Financial and operations data, as well as budget and actual information, are all linked. In the fifth stage, Cokins suggests there is more. His additional stage seeks to bridge technical gaps by recommending more sophisticated applications such as linked databases, integrated ABC/M systems, and predictive costing. From a technical perspective, his suggestions can be used to enhance the design of information technology tools. However, the implementation failure rates indicate that something is still missing beyond the influence of technology—the disciplined developmental practices that center on the learning needs of the people designing, building, running, and using the technical systems. The point is that the solution is not either technical or developmental, but both, operating to promote opportunities for greater organizational maturity in a complementary fashion.

Organizations today remain spread across the five-stage technical spectrum. A healthy number of companies have moved to Stage 3; but true Stage 4 companies are rare. An ERP implementation does not guarantee a Stage 4 environment. Executives and managers can begin by determining in which developmental stage their current technical accounting systems operate, and then guided by developmental disciplines, progressively move the organization’s people and management systems forward in unison, stage by stage. As an early warning that echoes the step-by-step nature of human development, Kaplan and Cooper caution against the high failure rate of organizations that try to jump technical stages.

Operations Focus Is Primary

Keep in mind that only at Stage 3 does a CMS begin to address operational data and connect financial and nonfinancial information. In Stages 1 and 2, the accounting systems barely notice nonmonetary operations data, much less make it a primary cost management focus. Most of the cost management issues that arise in the first two stages occur because people in these organizations have not yet learned to recognize the importance and interdependence of operational information.
Typical Stage 1 pathologies include:

- Confused managers who, although they have stayed within their only performance measure—their budgets—are reprimanded for not meeting expectations. Usually, these expectations surface in annual reviews. In the worst cases, performance expectations are never articulated.
- Business units that fail to generate a profit even though they stay within their budgets
- Excessive rules, regulations, and accounting effort aimed at controlling spending behaviors, including burdensome travel and expense reporting, extensive labor reporting systems, and focus on headcount management

Typical Stage 2 pathologies include:

- Functional managers who experience excessive effort and difficulty when trying to explain monthly or quarterly financial statement results
- Managing manufacturing processes primarily through accounting variances (material, labor, and overhead)
- And one of the most typical and dangerous—primary focus on earnings and profit management

In contrast to these scenarios, the primary focuses of an effective CMS are operations and the support of management decision making. In addition to routine bookkeeping, the objectives of a CMS that supports decision making include 10 specific accountabilities:

1. Display past, present, and future expenditures.
2. Mirror the organization’s cost structure and behaviors to support ongoing improvement and control.
3. Support realistic, reliable strategic planning and explicit management intention.
4. Influence individual and team behaviors toward goal accomplishment.
5. Monitor and control resource use against mission and strategic intentions.
6. Provide warning when unhealthy financial thresholds are imminent.
7. Facilitate the repositioning of resources.
8. Hold specific individuals and groups accountable for standards of performance.
10. Display a 360-degree unbiased view of the organization’s cost structure that is understood and actually used in decision making by all executives and managers.
Admittedly, this is a bold list, and all 10 characteristics only appear in a Stage 5 CMS. At this point, the list provides a high-level view of benchmark CMS quantities. In such development efforts, exposure to new ideas and relationships comes first, then learning, followed by understanding. Only then can application and experimentation begin. In the interest of exposure and learning, each of the 10 characteristics is discussed in more detail in the following sections.

Display Past, Present, and Future Expenditures. This means that historical, current, and prospective (i.e., forecast, simulation, predictive) expenditure data are accessible, timely, and accurate. Accessibility is primarily judged on ease of use. In other words, can nonfinancial managers use system data and information in practical ways? Accuracy is based on compliance with cost system design and with data-gathering integrity. Timeliness is based on proximity to real-time information. In the Cokins five-stage technical model, Stage 1 systems frequently fail all these criteria and almost never address future expenditures except in budgetary terms. Stage 2 systems are more reliable for past and present data but often fall short in accessibility and timeliness. Only in Stage 3 do CMS designs begin to fulfill all three criteria. Obviously, if executives work with less than the full timeline (i.e. past, present, and future), their focus will most often be on historical data, while current and future cost conditions elude them.

Mirror the Organization’s Cost Structure and Behaviors to Support Ongoing Improvement and Control. The CMS design must serve operations and management decision making first and bookkeeping second. An effective cost system endeavors to clearly exhibit the sources, movement, use, and funding of organizational resources. This includes visibility of the people responsible for obtaining, managing, and spending resources. The system must reflect how resources are actually used and how resource use aligns with or deviates from management intentions and plans. Only in Stage 3 do CMS designs begin to reflect these attributes.

Support Realistic, Reliable Strategic Planning and Explicit Management Intention. In practice, profit generation has only two components: revenue/sales and expenditures (i.e., costs, expenses). Therefore, when planning for profitability (or breakeven) CMS information that fairly and accurately represents expenditure information promotes realistic planning and achievement targets. Again, these attributes do not appear before the Stage 3 CMS. Management intention must be highly disciplined and mature to manifest this characteristic. Within such mature discipline, there is no room for unrealistic, unsustainable earnings chases, or for ego-based bids for glory.

Influence Individual and Team Behaviors toward Goal Accomplishment. This attribute is among the most important for a CMS. If people do not find the cost system relevant to their daily activities and long-term responsibilities, they
will not use it. Relevance includes accountability for predetermined performance standards, the prudent management of resources, and visibility of company-wide cost structures and behaviors. A Stage 3 CMS provides opportunity for achieving this desired criterion; however, only Stage 4 provides the level of integration needed to maximize this goal, and only Stage 5 considers the health of the business ecosystem.

Monitor and Control Resource Use Against Mission and Strategic Intentions. This means that the cost management system assists in aligning and allocating resources where they will best serve management’s strategic intentions. The managers of organizations in Stages 1 and 2 of the Cokins technical model overlook this characteristic when designing the CMS, if they give any thought to system design at all. In less mature organizations, strategic planning is often absent altogether, or conducted in a marathon session that is disconnected from production/service operations. Sometimes budget planning and strategic planning are conducted in isolation by different people. When different managers perform budgeting and strategic planning processes at different times, the compartmentalization undermines strategic achievements that depend on appropriate resource alignment. Imagine an executive team energized from a strategic planning retreat returning to day-to-day operations, issuing mandates, directives, and a trainload of new projects, all without addressing resource allocation, budgets, or realignment of people, time, and facilities—an immature strategic planning scenario doomed to frustration and unhappiness.

Provide Warning When Unhealthy Financial Thresholds Are Imminent. A thoughtfully designed CMS provides an early warning system that identifies and averts overspending. It may also signal the need for additional resources due to volume and/or environmental changes. CMS Stages 1 and 2 provide reactive reporting, often long after a decision opportunity for changing an operational process issue has passed. Imagine the frustration of a manufacturing manager who is held accountable for subpar performance in material and labor efficiencies, but who receives efficiency reports two to four weeks after the damage is done. Only the CMS in organizations at Stage 3, 4, or 5 rectifies these demoralizing interactions.

Facilitate the Repositioning of Resources. This CMS accountability complements number 6 by overseeing the movement and realignment of resources to adapt to strategic changes. In many Stage 1 companies, once an annual budget is set, woe to the manager who overspends it. If the strategic plan, market activity, and the budget live separate lives, how can managers be expected to satisfy both?

Hold Specific Individuals and Groups Accountable for Standards of Performance. A recurring error in strategic planning is the failure to assign personal responsibility for action plans and performance targets. When properly designed, the CMS signals expectations for cost targets and identifies the individuals/groups
responsible for meeting those targets. The CMS links cost targets with appropriate nonfinancial measures that discourage managers from working on cost and financial performance in isolation from other important indicators.

**Assist in Analyzing Discrete Points of Profitability: Customer, Process, Product, and Region.** A financial accounting system provides an aggregate consolidated view of profitability. An effective CMS provides an analytical extension that searches for suspected areas of underperformance related to specific customers, product lines, market sectors, and other identifiable objects of analysis. Although a Stage 2 CMS may provide rudimentary historical data on these targets of analysis, only systems in Stage 3 and beyond provide decision-quality reporting through use of such techniques as activity-based costing (ABC).

**Display a 360-degree Unbiased View of the Organization’s Cost Structure.** This view should be understood and actually used in decision making by all executives and managers. A CMS that provides an open-book view of company-wide cost structures used concurrently by all managers to advance the organizational community’s well-being as a whole encourages management creativity in resource use as well as optimal use of available capacity. In most cases, only a Stage 4 or 5 CMS can satisfy this attribute requirement.

To effectively guide decision making, the cost management system needs to be much more than a set of bookkeeping procedures, and it must not be the sole source of information for decision making. Never use a cost management system in isolation for operational decision making. Just as financial accounting delivers an important but narrow stream of results information, cost accounting also displays a critical but incomplete viewpoint. Nonfinancial, noncost information is part of any mature performance analysis. This is particularly true for making business development decisions. For example, a research and development (R&D) function will usually show continuous losses when subjected to a profit-and-loss (P&L—i.e., income statement) approach. An undisciplined or immature executive may find this nerve-wracking, and may not have the stamina and wisdom to discern future benefits. The R&D function value remains invisible until seen in the context of potential future revenue and cost streams.

**DISCIPLINE, CONTROL, AND PROFITABILITY**

For discipline is the channel in which our acts run strong and deep;
where there is no direction,
the deeds of men run shallow and wander and are wasted.

—Ursula K. LeGuin
Every business professional wants to manage well by making the right decisions. Good decisions lead to profit. Effective management and profitability rely on control systems that discipline employee behavior. In turn, the control system depends on accounting reports that detail achievements and shortfalls in efficiency and profitability. Commonly, financial results are the bottom line of the control system and the ultimate point of accountability for most organizations.

Control, accountability, efficiency, profit—all good, solid, no-nonsense business words. But notice where the line of logic begins: “Every business professional wants to manage well.” Media headlines may portray the executive suite as a den of thieves, but even in the most extreme cases one must stop and ask: Where did good people go bad? Where did they turn the corner into antisocial behavior? Were they charlatans from the beginning? Sometimes they were—but not so regularly as headlines imply. The majority started out wanting to manage well. They did not so much lose their abilities to control or judge as they became dissociated from the source of their discipline.

The words discipline and disciple share the same root, focused on systems of control over human conduct. Control, accountability, and efficiency are concepts straight out of the Scientific Management discipline. Each was a necessary development, and for more than 100 years, these concepts have defined and driven accounting system discipline. Immaturity requires greater levels of control in almost all developing entities. As with all developmental processes, the trick is to integrate old lessons into a learning platform for more mature approaches. As organizations mature beyond the need for highly structured, authoritative control mechanisms, enforced control actually begins to undermine the process of further development. Mature forms of organizational discipline move away from arbitrary authority, centralized authority, and hierarchy to frameworks that allow individuals to think and choose interdependently. Discipline is a more mature form and relies on earlier developmental work in control. The new discipline frameworks create space for individual wisdom, discernment, and decision making.

Discipline frameworks used to control conduct and behavior feature prominently in upcoming chapters. For now, however, the task at hand is to understand the older development stage accomplishments as embodied in their logic: control + accountability + efficiency = profit. If simplified to its earliest form as developed and expressed by practitioners of Scientific Management, control = profit. Some additional distinctions between cost accounting and cost management shed some light on the reasons that this simple equation is still applied in the accounting disciplines of so many modern-day organizations.

**Accounting Distinctions**

Exhibit 2.1 recaps the fundamental differences between financial and cost accounting. Cost accounting can be thought of in terms of structured data elements intended to support accountability, control, and efficiency. Cost management can be thought of in terms of the information yielded by analyzing cost
accounting data elements for purposes of maintaining control and accountability, and for managing efficiency. Again, cost accounting includes cost systems, policies, and procedures, methods of determining costs, points of cost accountability, forecasts, cost comparisons (e.g., standard cost systems), and budgets (operational, project, and capital). Interestingly, in many companies, these legacy cost system functions exist but are not managed. Unless people create meaning out of the cost accounting data and reports, a good portion of cost accounting effort is wasted, and critical information for decision making remains veiled. Significant resources can be expended in cost accounting work, but if executives view cost accounting as simply part of financial accounting, meaning and insight will remain hidden within transaction data. Only cost management can extract and create insight and meaning from raw cost data.

The cost accounting obligation is simple in concept: **Provide accurate cost information.** Implementing a cost accounting system that is accessible, aimed at the right targets of analysis, and supportive of management decision making is a more sophisticated task. The cost management responsibility is equally clear: **Promote improvement in cost structure.** Making good on this prospect is even more challenging.

Make no mistake. Accounting remains part of the organizational control system. Similarly, controller is the title of the head accountant in many organizations. The primary purpose of the control system is to protect the organization’s assets. Asset protection may be a basic responsibility, but it is not simply jettisoned as more mature methods become available. Recalling that normal development is a process of integration, not substitution, it is intriguing to observe the important place that the accounting system occupies in the overall control system. Consider the implications of some basic accounting terminology. One common accounting definition of **assets** is “costs that have not yet been used.” The accounting term for this is **unexpired costs.** These unexpired costs represent current or future value to the organization. Finally, consider that the two conventional financial statements that reflect this control and safeguarding of assets are (1) the balance sheet, and (2) the statement of cash flows. All this clearly speaks to the control focus in
accounting activities. Used correctly and in perspective, all these practices serve important control disciplines; used exclusively and heavy-handedly, they strangle opportunities to see costs and their relationship to human spending behaviors more productively.

After safeguarding assets, the next most important function of the accounting system is to monitor *profitability* as recorded on the periodic income statement. Profitability results, in part, from effective discipline. All managers follow profit across the shortest available reporting interval. Responsibility for calculating profitability, however, lies with financial accountants, who in turn rely heavily on cost accountants.

To further understand, in foundational terms, how a cost system works, some additional key terms to be familiar with—and defined in the Glossary—include:

- Absorption costing
- Allocation
- Asset
- Consumption ratio
- Contribution margin
- Overhead
- Predetermined overhead rate
- Standard costs

As a discipline and system of organizational control, cost systems are the foundation of all more mature management stages. Consequently, all managers must possess a comfortable, ready understanding of these and several other key terms defined in the Glossary.

**The Shifting Focus of Control in Accounting Systems**

Organizations vary in the use they make of cost accounting systems to directly or indirectly discipline employee behavior, especially as the cost system signals activities that may impact profit. In conventional settings, accountants charged with the maintenance of financial and cost accounting systems do not care what is happening in an organization as long as it is recorded as a transaction and made available for reporting on the income statement and balance sheet. The focus of the mechanics of financial and cost accounting systems is distinctly different from the perspectives and priorities of internal control and audit systems that are greatly concerned with organizational events. Unfortunately, many executives and managers working in Stage 1 and 2 organizations often do not have a detailed understanding of their accounting systems. A clear understanding would reveal practical system shortcomings and foster cross-functional commitments to learning a better way to see costs.
While all accounting systems share two basic Stage 1 concerns—control and profitability—managers and executives must be able to specifically distinguish how financial and cost accounting systems uniquely contribute to control and profitability disciplines for all employees. Financial and management/cost accounting systems see business control and profitability from significantly different perspectives. Historically, the financial accounting focus has determined the organization’s overriding control and profitability perspective: return on investment, which by calculation includes profitability. The investor and the market in general also focus on short-term financial results. Stock options and other earnings performance incentives reinforce the primacy of the financial accounting perspective.

In contrast, cost accounting systems historically see business control and profitability from the operational perspective. Financial accounting sees the organization from an external perspective; managerial accounting sees the organization from an internal perspective. If these distinctions begin to blur, join a growing number of voices that call for financial transparency in a single accounting system. There is a long history behind the two branches, and it isn’t likely that the dual arms of the profession will merge any time soon. This doesn’t stop us asking the question: Should they?

Meanwhile, managers and executives committed to continuous development and improvement have learned not to wait for the month-end financial statements. They control and manage organizational performance based on process improvement disciplines that enable profit goals. This proactive approach is supported by cost and performance management methodology and technology innovations over the last 20 years that have helped elevate the status of internal operational information. Often, accounting systems have difficulty aligning with the shift to include an operations focus. For many accounting professionals, the dual focus—financial and operational—feels like double duty. Some accountants resist dealing with day-to-day operations activities. Often, people in operations resist the presence of so-called bean counters. Frequently, an impasse results. But when operational information becomes more important, the organization has matured, and the rules of the game have changed. Executives, managers, and specialists must prepare one another for new control disciplines that replace the implications of the control = profit equation.

In contrast, in mature organizations in which financial and operations staff are valued equally and there is a sense of teamwork and good communication across the artificial functional boundaries. The synergy of the two disciplines can be exponential. This fruitful exchange is simply not supported by the CMS structure before Stage 3 systems, and, even then, residual parochialism and biases may impede progress and good relations. Not surprisingly, recent theoretical research and actual practice have shown that operational, nonfinancial elements are equally important in creating success and strategic achievement. The financial accounting system provides the motivation; the managerial cost accounting system information provides the means to improve processes and achieve profitability.
Where Financial and Cost Accounting Systems Connect

Creating key points of connection between financial and cost accounting systems is a necessary milestone in Stage 1 and Stage 2 development. Even if accounting staff perform cost and financial work separately, their calculations must both serve a higher priority: Accuracy of performance reporting. In the early stages of development, performance reporting is typically confined to financial results. Even though later stages will correct this imbalance, integrity of financial results must be achieved first.

The five-stage technical model helps to narrow the range of the many possible permutations of cost accounting system technical design from stage to stage. Starting with an assessment of the organization’s current developmental stage of its cost accounting system, executives and managers can then deliberately shepherd their cost accounting systems toward more integrated levels. The remainder of this chapter and Chapter 3 use a Stage 2 cost accounting system as a starting point: adequate and reliable for financial accounting requirements (e.g., audits) but limited in its cost management capabilities. Again, it must be emphasized that all cost accounting systems must first meet the Stage 2 baseline before aspiring to more advanced levels.

When business processes and accounting methods are in ideal harmony, the aligned flow of a traditional, Stage 2 system would look like this:

1. Plan strategic objectives → then determine budget allocations → that create expenditures → that are assigned according to plan and budget. → Later, actual expenditures are compared to budget targets to show deviations → that lead to management intervention, as appropriate.

Financial and cost accounting systems work in tandem to track this overall process from financial statement and cost reporting perspectives. Next, consider the three primary connection points that tie the cost and financial systems together as they each monitor the flow of value through business processes: (1) inventories, (2) capital spending, and (3) period expenses (i.e., sales, general and administrative [SG&A]).

As each connection point is examined, consider how an accounting system might:

- Support understanding of the nature and behavior of cost—cost accounting
- Promote, track, and give feedback on value creation—financial accounting
- Assist management in wise use of resources—both accounting systems

Also reflect on:

- Restrictions or limitations to information flow, quality, and transparency
- Misalignments between these specific conventional connection points and the actual priorities of current business conditions
Keep in mind that in Stage 1 and Stage 2 systems, these three connection points comprise the bulk of the interface between financial and cost accounting systems.

**Connection Point 1: Inventories.** The first connection point, *inventories valuation*, flows as follows:

Material + labor + overhead → becomes inventory recorded on the balance sheet → becomes product cost → becomes cost of goods sold (COGS) reported on the income statement

Material, labor, and overhead are cost information items that flow through the accounting system from the inventory assets on the balance sheet to COGS on the income statement—from the cost accounting system to the financial accounting system. Chapter 3 details the technical budget and standard cost system mechanisms behind this flow.

**Connection Point 2: Capital Budgets.** The second connection point, *capital spending*, has a flow that looks like this:

Capital budget process selects investments → Purchase is made and recorded as an asset, usually long-term → Depreciation expense is recognized over the estimated useful life of the asset (tax methods aside) → Depreciation expense is recognized on income statement

In theory, traditional capital budgeting processes attempt to select long-term investments that will support strategic achievement over time. In practice, the process is often a lengthy cold-war battle between divisions, departments, or functions, wherein each attempts to garner as much investment money as possible for a parochial area. Once a capital investment is made—whether wisely or not—the expense of that investment is conventionally recognized over time by accounting formulas that do not necessarily reflect the actual use of the investment (e.g., machine, computer system).

From a human relations point of view and depending on the maturity of the organizational culture, a conventional capital budgeting process might actually encourage people to sink to immature, tribal behavior patterns as they scramble for limited resources. The relationship impact of such budgeting processes—especially where investment selection criteria are vague—fosters mistrust and lack of cooperation between functions. Where counterproductive attitudes exist, they must be exposed and resolved to enable development toward a Stage 3 CMS.

**Connection Point 3: Period Expenses.** The third connection point, *period expenses* (i.e., SG&A), has a flow that looks like this:

Administrative and selling costs are budgeted and then incurred → then assigned to the current time period → classified as SG&A → and reported on the income statement
Many Stage 2 companies run into financial difficulties because they fail to manage expenditures below the line—the SG&A expenses below the gross margin line on the income statement. In Stage 2 systems, managers usually view expenses in this category at a highly aggregated level—total year-to-date actual versus budget. Consequently, the items within this section of the income statement usually do not receive the detailed attention that the COGS section does. This means that sales, marketing, accounting, human resource, and other SG&A expenditures are not typically subjected to the same level of scrutiny and tests of productivity as the expenditures above the gross margin line.

COST ACCOUNTING AND OPERATIONS

If the primary responsibility of a cost accounting system is to support operations, does this create an inherent conflict between financial reporting requirements and operational reporting needs? Consider the following questions, this time specifically using the assumption that cost accounting’s highest allegiance is to operations, compared to its less mature management obligations to financial reporting requirements. How might the accounting system:

• Support understanding of the nature and behavior of cost
• Promote, track, and give feedback on value creation
• Assist management in wise use of resources

The answers lie in the design of the cost management system. Designing a CMS that promotes insight and control in operations, while simultaneously meeting financial system requirements is not within the grasp of Stages 1 and 2. Just as it is unwise to expect a six-year-old to competently use a map while traveling to new places, it is unrealistic to expect Stage 1 or 2 CMS information to help chart a reliable business course into the future. The necessary insight here is critical to the next stage of development: An operations-focused CMS delivers more reliable decisions and financial results simply because it more accurately mirrors the operational activities that generate the financial results. This logic makes the time and expense of evolving to a Stage 3 system worth the effort. In Stage 2, conventional procedures such as overhead allocations based on one or a few drivers, inherently distort the clarity of financial results. Stage 2 reporting may be meticulously accurate in accounting for every transaction and every penny, but too often it is also predictably imprecise in its ability to reveal the actual nature and behavior of cost dynamics.

Deliberate and careful design of a cost management system promotes organizational discipline that can focus a workforce. The managerial cost accounting system mandates specific control processes by means of the design of its cost management system. An increasing number of organizations look to their chief financial officers (CFOs), controllers, and accountants for vital decision-making
information and participation in strategic and long-term planning. In contrast, operations-oriented firms often see accounting systems as a necessary evil—required by government and creditor agencies, but for the most part simply a nuisance to internal managers. The difference in viewpoint largely depends on the accounting system design. CMS designs that remain in Stage 2 may quickly become irrelevant to management’s decision-making responsibilities.

The importance of CMS design penetrates the entire organization. Dr. CJ McNair summarizes the situation eloquently. “What cost management chooses to make visible—the focus of its work—will inform and constrain the organizations of the future. In choosing a future for cost management, the future of business will be shaped.”

Cost management system design is a conscientious and deliberate process that avoids irrelevant detail and integrates seamlessly with the financial system. CMS design requires rigorous, periodic review to ascertain its continuing relevance. To reiterate:

- Cost accounting exists for a conceptually simple purpose: Provide accurate cost information.
- The purpose of cost management is equally clear: Promote improvement in cost structure.

The next part of the discussion addresses the essential steps that executives and managers can take to achieve these elusive goals and thereby develop a CMS that is easy to use, aimed at the most important targets of analysis, and supportive of management decision making. In Cost & Effect, Kaplan and Cooper conclude their introductory chapter by describing the vision for such cost systems where, “cost and performance measurement systems are explicitly designed to produce the right information at the right time for essential managerial learning, decisions, and control.”

**Historical Perspective**

Any executive with even a few years of experience knows the sharp difference between an accounting function that is pro operations and one that is pro finance. Likewise, any experienced accountant can tell when other functions (e.g., operations, marketing) see the finance function as a necessary burden and when the function is appreciated for the value it adds to the organization. As in most complex situations, the ideal practice is a blend of both perspectives. Until this becomes true in their own organizations, executives and managers must come to understand and acknowledge the historical animosity and inherent conflicts between operations and accounting.

Passions would not run so high if the relationship between operations and accounting were not essential to business health. At the root of this friction, financial staff and operations people see their work from culturally different
perspectives and business worldviews. These unspoken viewpoints generate misunderstandings and outright conflict. The different perspectives must be discovered, exposed, and reconciled before they can be developmentally blended. All too often, nothing happens because both sides fear the loss of control, and each is reluctant to assume new roles.

Not long ago, a financial accounting professional might spend an entire career and never set foot on the factory floor or talk with a customer face to face. Huddled in back rooms with whirring pencils scratching numbers on green ledger (and erasing them, too), accountants literally were given no time for any activities other than tallying, ticking, and tying the numbers. Today, although computerized accounting systems have replaced the demanding drudgery of manual ledgers, some accountants take comfort and haven in the traditional expectations, seldom setting foot in the land of operations. Cost accountants who match this profile—then or now—cannot serve their organizations to the best of their abilities.

The connections and the conflicts within the accounting/operations developmental co-evolution are easiest to conceptualize in the manufacturing sector where the tangible nature of production dramatizes the conflict. In his book, *Making the Numbers Count*, Brian Maskell cites five key shortcomings with management accounting.7

1. Lack of relevance
2. Cost distortion
3. Inflexibility
4. Incompatibility with world-class approaches
5. Inappropriate links to financial accounts

By inversely examining each of these shortcomings as attributes, the inherent connections between cost accounting and operations emerge. So, a CMS can be explored in terms of (1) relevance, (2) cost visibility, (3) flexibility, (4) support for advanced approaches, and (5) appropriate links to financial accounts. For reasons that will become obvious, the order is reversed.

**Appropriate Links to Financial Accounts**

Financial statements address the information needs of a range of constituents and government regulators. Since financial statements target external users and are governed by external standards and formats, at best they provide internal managers with a highly aggregated and shallow “report card” of business performance. Consequently, while the CMS should provide external managers the necessary and sufficient information to meet financial reporting requirements, the system should do so with all due dispatch in terms of the needs of internal managers for information focus and efficiency. Inventory valuation, COGS, expense
classification, and absorption are among the few important connection points at issue between the financial accounting system and the CMS.

Supportive of More Mature Approaches

Because traditional accounting systems place cost accounting in the status of servant to the general ledger/financial statement system, a poorly designed CMS may consequently attempt to make vassals out of the other business functions. Practice the reverse. The most mature cost accountants have been given permission to support their executives to design a budgeting and cost reporting system that rapidly supports decision making, continuously encourages efficiency throughout the organization, and consistently requires value-added information from functional managers. In this context, all standard financial accounting–related routines should be automated and transparent to nonfinancial staff, requiring little to none of their time for practical, decision-making interpretation. This is definitely not the case in most Stage 2 systems.

Capital spending is another connection point between accounting and operations functions where CMS maturity can be assessed. Typically, North American companies use discounted cash flow (DCF) or return-on-investment (ROI) measurements to choose between capital spending alternatives. These financially focused frameworks are based on tenuous estimates and forecasts that frequently prove grossly inaccurate. Additionally, these traditional, exclusively financial analysis tools look for rapid returns on invested capital. This is not always congruent with operations management or long-term strategic plans. Lengthy and onerous capital budget procedures impede rather than support mature business approaches.

Flexibility

Protocols often become highly standardized when financial accounting perspectives control the cost accounting system. In contrast, when the CMS serves operations first and financial accounting second, its system and report designs readily adapt to changing operational environments.

Cost Visibility

As service organizations become a larger business sector and the business landscape loses its stability in terms of organizational structure (due to mergers, acquisitions, and virtual offices), traditional cost types become increasingly irrelevant. Cost types do not establish cost visibility—a transparency of the nature and behavior of costs and resource spending that facilitates informed decision making. This understanding is one of the most essential messages of this and the next chapter. More mature cost management systems such as activity-based costing and resource consumption accounting, clarify cost dynamics and enable wiser
choices grounded on business interrelationships that more closely reflect business performance.

Relevance

Closing the circle, a CMS that serves operations, supports more mature cost management approaches, adapts flexibly, and clearly displays the nature and behavior of cost, de facto, becomes relevant. In a relevant CMS, investments in cost work are generally viewed as value-added activities, and organizational management relies on them for essential decision making information.

When a CMS possesses these five attributes it becomes a valuable organizational asset. Inversely, for organizations with a CMS missing some of these attributes, the executives and managers see one more reason for nonfinancial functions to pay less attention to CMS information.

CONTROL AND PERFORMANCE MANAGEMENT SYSTEMS

At this point, it is worth making a final connection point. Since cost is such an integral element of the profit imperative, and cost management is an organizational and universal performance measurement, it is natural and inevitable that cost and performance systems become intimately associated.

Organizations with CMS designs in Stage 2 use financial-only accounting systems. If it exists at all, nonfinancial performance measurement is typically fragmented and isolated within the functional domains of an organization. Everyone wants to keep score, and without a formal measurement system, good managers will create their own scoreboard. For instance, a competent production manager always has a control system in place based on the principles of quality, Theory of Constraints, or some homegrown paradigm.

Companies developing into a Stage 3 CMS almost always navigate the same important barrier: exclusive reliance on financial measures for management and accountability purposes. As the organizational learning from Stage 2 to 3 develops, an intense struggle ensues between the financially based management system and the more mature emerging system that values nonfinancial measures as equally important. Consequently, this can result in two performance management systems within the same company—the original financial-based accountability framework and the more mature, balanced performance information paradigm. The subsequent conflicts are all too familiar but, eventually, they must be resolved so that the entire organization embraces a single performance measurement standard of accountability.

Once again, the primary responsibility of cost accounting activities is conceptually simple: Provide accurate cost information. The cost management responsibility is equally clear: Promote improvement in cost structure. These are not easy accomplishments, but when a cost system is an integral part of a
performance measurement and management control system, the task becomes possible and essential.

Cost and organizational performance are inseparable. The link between cost and performance may seem obvious today, but not long ago financial results were the organizational report card of choice. From a capital market perspective, the financials still reign supreme. That said, studies reveal the same market analysts paying more and more attention to nonfinancial measurements and intangible asset valuation, as well as short-term quarterly financial measures like earnings per share (EPS) and price/earnings (P/E) ratio.

Other operational frameworks, like the Quality Movement, helped shift the emphasis to some degree. However, when in the early 1990s, as performance measurement and management systems began developing independently from financial systems, performance managers found a structured way to move beyond the limited information constraints of general ledger financial systems. Powerful performance management methods and software applications increasingly support the development and reporting of nonfinancial information.

One framework, in particular, has been an instrumental model for showing people in Stage 2 and 3 organizations new ways to see the essential management interrelationships between financial and nonfinancial information: The Balanced Scorecard. Developed by Robert S. Kaplan and David Norton, the Balanced Scorecard (BSC) enforces a set of balanced information perspectives that include financial and nonfinancial, cost and noncost elements. Specifically, the four performance measurement perspectives of the BSC are financial, internal process, customer, and learning and innovation.

NEW WAYS OF SEEING

Since development is an exercise in seeing old things in new ways, this final section of each chapter addresses practical ways for all people in the organization to learn to see cost and performance more maturely. The primary developmental lesson of this chapter? Cost management systems controlled by the budget and external financial reporting focuses do not contain current operational cost management information and therefore cannot support long-term, sustainable decision-making quality. Financial reporting lag time is simply too great, and decision making becomes a reactive exercise. Exhibit 2.2 contrasts the technical and developmental positions of the Stage 1 and 2 cost management systems. People in these organizations need to learn how to control something other than numbers. In light of human behavior, they need to learn to see how the numbers represent the interdependent value of material, financial, and human resources. Returning to the Learning Group Matrix simplified in Exhibit 2.3, the responsibilities for organizational development become clear for each of the three groups when cross-referenced to Exhibit 2.2.
Executives increase their leadership precision by working to establish value-creation strategies and the corresponding organizational direction and supportive initiatives that improve the bottom line for all stakeholders. Since organizational development for Stage 1 and 2 organizations hinges on the ability to see cost in new ways, Stage 1 executives must look beyond conventional budgets and explore both alternative budget models and more mature ways to discipline the spending habits of employees. Stage 2 executives must look beyond the short-term expectations and pressures of shareholders and learn to see the ways operational cost information creates opportunities for more proactive decisions and fewer reactive decisions for themselves and their fellow employees.

In each case, Stage 1 and 2 executives frequently find themselves working within a hierarchical organizational design that uses a chain-of-command authority structure to control (and usually resist) change of all kinds. Since Stage 1 and 2

**Exhibit 2.2.** Seeing Beyond Current Technical and Developmental Practices

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</thead>
<tbody>
<tr>
<td>Data Quality</td>
<td>• many variances</td>
<td>• no surprises</td>
<td>Development Dynamic</td>
<td>• control</td>
<td>• compare and coordinate</td>
</tr>
<tr>
<td></td>
<td>• large error</td>
<td>• meets audit standards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Financial Reporting</td>
<td>• inadequate</td>
<td>• tailored to financial reporting needs</td>
<td>Data Sources</td>
<td>• general ledger</td>
<td>Wall Street</td>
</tr>
<tr>
<td>Product/ Customer Costs</td>
<td>• inadequate</td>
<td>• inaccurate</td>
<td>Data Management</td>
<td>• controlling the numbers</td>
<td>controlling the numbers to create profit</td>
</tr>
<tr>
<td>Operational/ Strategic Control</td>
<td>• inadequate</td>
<td>• hidden costs and profits</td>
<td>Management Dynamic</td>
<td>• commit to learn a better way to see costs</td>
<td>discover the relationship between process and profits</td>
</tr>
<tr>
<td></td>
<td>• financial feedback only</td>
<td>• delayed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• aggregated</td>
<td></td>
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</tbody>
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**Exhibit 2.3.** Organizational Learning Group Matrix

<table>
<thead>
<tr>
<th>Role</th>
<th>Work Focus</th>
<th>Management Responsibility</th>
<th>Productive Accountability</th>
<th>Primary Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>Strategy</td>
<td>Direction</td>
<td>Precision</td>
<td>All Stakeholders</td>
</tr>
<tr>
<td>Manager</td>
<td>Process</td>
<td>Resources</td>
<td>Accuracy</td>
<td>All Employees</td>
</tr>
<tr>
<td>Specialist</td>
<td>Activity</td>
<td>Productivity</td>
<td>Quality</td>
<td>Customers</td>
</tr>
</tbody>
</table>
organizations manage cost within such rigid, conventional control structures, executives must actually use their authority and mandate efforts for better ways to see cost for decision making and value creation. However, once they issue the CMS maturity mandate, they must withdraw from an authoritative posture and support the managers and specialists who possess the systems knowledge and practical product/customer experience required to implement the mandate.

Managers

Managers improve the accuracy of organizational decision making for all employees by creating and maintaining processes that align with leadership strategies and supply all employees with the resources they need for decision making and direct value creation in the form of products and services. Once Stage 1 and 2 executives mandate new ways to see cost, Stage 1 and 2 managers must step forward and claim a leadership and guidance role. Managers from the accounting function play the most important role during this fragile transitional phase between stages. Accounting managers must first explore the available budget and cost information options that can address the executive CMS maturity mandate. After identifying the best option, they then become the teachers of a new cost perspective and they develop lesson plans appropriate to the decision-making needs of the executives, nonfinancial managers, and specialists.

In Stage 1, executives need new ways to see cost as presented through the budget. Consequently, managers need to develop means by which budget can provide executives with ever more current information on actual performance—financial and nonfinancial. Stage 2 executives need new ways to see cost in terms of operational activities as leading indicators of value creation so that they can guide the organization into competitive opportunities and translate their new insights for shareholders and internal employees. To address these needs, financial and nonfinancial managers must continue to build processes that bring more current nonfinancial, operational decision support information to the eyes of the decision maker in ways that link cost information and operational performance. To do so, managers must again take the lead by teaching the executive and specialists to see operations before finance.

During these two phases of organizational maturation, from Stage 1 to Stage 2 and from Stage 2 to Stage 3, managers must learn a very difficult lesson from the specialists: The information that details the performance of the specialist production/sales/service employees will become the most important decision-making information in future, more mature management systems. Consequently, managers and executives must together find a way to bring the specialist’s firsthand information and insights about product and customer performance into the decision-making information infrastructure. To do so, managers and executives must familiarize themselves with the work of the specialists by getting out of the office and talking with these people about what they do. Working with them is even better.
Specialists

Production, sales, and service are the practical, customer-oriented means to profit. Their many activities produce quality goods and services for the customer. Virtually all of the major management advances in the last 30 years of the twentieth century that have allowed more and more organizations to move beyond Stage 2 development focused on different ways to mine the rich decision-support information contained in the performance activities of these employees and their work processes. In one sense, specialist employees play a relatively passive role in organizational learning and development in the first two stages. Stage 1 and 2 systems simply do not value specialist employee information, so the task is simply to bring these people to roles of greater and greater agency by increasing their awareness of the relationships between their costs and their performance. They have become used to a management system based on authority and hierarchy that places them on the bottom level where silence is golden. Executives must permit them to have a voice, and managers must devise a means to collect their insights. Moving out of Stage 1, they must participate in managing a more current, evolving budget. Moving out of Stage 2, they must participate in the characterization of operationally focused cost management systems.

DEVELOPMENT CHECKPOINT

89th Ferengi Rule of Acquisition: Ask not what your profits can do for you, but what you can do for your profits.9

Cost management systems can be powerful instruments of organizational success, but only when deliberately designed and consistently utilized. Here are some key points in accomplishing this.

• An accounting system that meets financial reporting requirements is not necessarily adequate for management decision making.
• Cost accounting/management’s first responsibility is to internal operations, and only secondarily to financial accounting.
• Traditional cost accounting systems do not always make good management systems. When a cost accounting system is constructed with a primary goal of servicing financial accounting systems, management decision-support information suffers.
• A cost management system serves its organization when it is relevant, makes costs visible, is flexible, is supportive of advanced approaches, and has appropriate links to financial accounts.
• Unlike general ledger systems, a CMS is more flexible and must be customized for each organization.
Cost Management: Control and Profitability

- A CMS should focus primarily on internal operations management.
- Finance and operations professionals must be vigilant in maintaining healthy relationships in which the contributions of each are recognized and appreciated.
- The behavioral implications of a CMS design have to be carefully anticipated and managed.
- Strategy, accountability, and performance concerns are central ingredients for a CMS designed to drive performance aligned with strategic intention.
Chapter 3

Cost Types: Early Communication Attempts

How can one be orderly with this?
It’s like counting leaves in a garden,
along with the song-notes of partridges, and crows.
Sometimes organization and computation become absurd.

—Rumi

The word cost is essentially meaningless in conventional accounting unless characterized by an adjective. Beneath the conventional connection points between cost and financial accounting described in Chapter 2 lies a language based on cost types. The traditional lexicon includes familiar adjectives created to modify costs: direct, indirect, variable, and fixed, as well as some less understood terms such as replacement, incremental, and depreciated.

As a descriptive language, cost types have become so entrenched in the language of business that people see and use these labels as tangible truths, when in reality cost types remain simple descriptions based on conformity to consensual convention. A cost type can be defined as a categorical set of characteristics and assumptions used by an accounting system to conceptually structure and communicate the ways that the organization consumes its resources. Because accounting is a language and not a science, operative assumptions are critical to its understanding. People often accept cost accounting assumptions unconsciously or without proof as a basis for a line of reasoning or course of action, either because the premise seems self-evident or because its implications appear to justify further exploration. Anyone who considers a discussion of cost types a ho-hum exercise might scrutinize recent corporate events more closely.

For instance, some investors and the general public habitually assumed that accounting is a precise depiction of financial truth. In this context, accounting has been tried and found grievously wanting as a result of corporate revelations that began to unfold in 2001. Put simply, cost type assumptions were the root cause of the rude public awakening that commenced with the exposure of Enron and others. A series of cost-type assumptions were employed in the service of very “creative” accounting that used marginal logic to invent desired financial statements. Only expert accountants can understand this sort of marginalia on sight. For example, consider stock option expenses and special purpose entities, two complex accounting concepts now familiar to almost everyone who attends to
business news. Highly questionable accounting practices labeled stock option expenditures are a future cost type, that kept large sums off the income statement. Special purpose entities may as well have been called special purpose cost type considering that the reason for these cost holding pens was to keep items off both the income statement and balance sheet.

Another assumption related to understanding accounting systems is the word technical. This term conjures images of computers, electronic drawing boards, engineering feats, and some measure of tangible precision. However, the term is also used to describe accounting systems, particularly their underlying principles and computerized procedures that generate accounting reports that can be nearly inaccessible to managers without financial training. Importantly, the word technical as applied to a Stage 2 cost management system (CMS) translates accurately as a highly arbitrary, primarily descriptive, and financially specialized linguistic construct. At this maturity stage, there may be cost accounting procedures, but cost management is beyond the grasp of this CMS. Even with sophisticated software, the best a Stage 2 system can do is help manage regulatory and reporting interests. Any cost management activities arise as compulsory afterthoughts, and consequently, all cost terms remain descriptive but not systemically functional. In a very real sense, the Stage 2 CMS can hardly be called a management system at all; its technical capacity is rudimentary.

Descriptive cost types evolve to serve a more mature liege with the advent of a Stage 3 CMS. At this maturity level, the conscious design of CMS functionality that makes cost and performance management decision making possible supercedes descriptive efforts. In Stage 3 environments, cost terminology is the lingua franca of the organization, and it becomes a part of a frank, day-to-day dialogue as well as the vocabulary of formal communications about performance conditions. Cost terminology becomes an essential management tool in the Stage 3 organization, not an isolated accounting responsibility with minimal relevance to organizational health and progress.

Senior executives who have identified that their current CMS operates at Stage 1 or 2 (or even early Stage 3) have a developmental management obligation to ascertain if cost terminology and the information that cost terms provide satisfies all levels of decision making. Where the answer is no, executive leadership must relentlessly encourage and participate with the accounting function to discover and enact the necessary language and technical systems to enable the next level of cost management maturity. In particular, the chief executive officer (CEO), chief financial officer (CFO), chief information officer (CIO), and chief operations officer (COO) carry this responsibility. If cost management is to be seen, communicated, and performed differently, it will begin with the operations and accounting managers who introduce new terms and assumptions that enable nonfinancial managers to see costs and resources in new ways in their day-to-day interactions and decisions. The new terms and assumptions that enable the more mature CMS must free managers from hierarchical control authorities so that they may make decisions according to efficiency or strategic imperatives rather than
The Language and Context of Cost Accounting

lagging budgetary or conventional profit imperatives. Concrete actions to begin or enhance this process include:

- Construction of a series of learning experiences wherein operations people teach accountants about critical business processes, and together explore where accountants can be helpful in making resource utilization and performance interactions more visible and clear
- Education for operations personnel in the current accounting system with an exploratory eye toward automation or elimination of accounting activities that are not used operationally or for regulatory or contractual reasons
- Development of a performance measurement and management system suited to organizational maturity. See Chapter 7 for this topic. A cross-functional performance management design effort has a way of bringing out unspoken assumptions about priorities. Such projects have even been used to facilitate harmony and understanding during a merger or acquisition.

These sample activities are based on an existing cost management readiness, repeatedly tested and verified again as organizations seek to become more mature: The evolution of an organizational culture that values and encourages exploration, openness, and trust. If this readiness does not exist, scaled down, “safe” versions of the approaches might open communication lines and foster trust and respect. Executive leaders really earn their pay in such transformative work. The reward for such efforts come in the form of a commonly understood cost and performance vocabulary that results from weeding out accounting terms and practices that add no value, and worse, sometimes cause confusion, error, and worst of all, cost management disillusionment.

THE LANGUAGE AND CONTEXT OF COST ACCOUNTING

Language is a part of our organism and no less complicated than it.

—Ludwig Wittgenstein

Just as a foreign visitor who does not know the language and customs of a country misses a great deal of information about day-to-day activities, managers who cannot confidently use at least rudimentary cost accounting terms will find themselves at a disadvantage in most business environments. Expanding basic fluency is essential to choose and implement appropriate, disciplined activities that lead from stage to stage in CMS development. For example, in Stage 2, conventional accounting vocabulary expresses profit in terms of revenue, cost, and expense. In contrast, the Stage 2 cost vocabulary does very little to help operations improve processes. Discovering the relationships between processes and profit is the prime developmental management work and activity of Stage 2
organizations. Developing the organizational capability to see the drivers of profits within operations processes sets a firm foundation for a Stage 3 CMS structure where resources begin to be monitored for the value they create. Without a common language to explore these advancements, progress is frustrated.

So, in the spirit of the necessity not to skip critical developmental steps, this chapter defines essential cost terminology and practices as used in conventional cost accounting. The discussion again emphasizes interfaces with financial accounting and operations systems. These interfaces are important to all managers because they form the connection points that organizations use to deliver information to the financial statements, which in Stage 2 companies, depict the results of operational and process work.

The principle that developmental steps cannot be skipped is an essential understanding. Violation of the principle carries substantial unfavorable consequences. For example, while advising organizations in Poland in the mid-1990s, just as the country began to emerge from its socialist history, the authors listened to the frustrations of executives and managers. Polish executives and managers were attempting to implement techniques such as performance measurement and activity-based costing (ABC) that were beyond the country’s conventional Stage 1 and 2 practices. Polish executives, eager to use advanced approaches, reported that they found it impossible to simply overlay mature methods on top of existing organizational staff processes. Why? People were eager to look for methods more meaningful than socialist era priorities, such as number of units produced, regardless of the unit quality, timeliness, or match to market demand. At the same time, what employees were generally not ready to do was to skip over learning about Western profit-and-loss financial systems. They considered Western systems as a validated, superior approach to the socialist system, and they wanted to learn rather than merely follow new commands. In short, the executives found that they had to assist their organizations through the learning curve already mastered by Western capitalist practitioners, so Polish employees could see the progressive reasons for adopting something new.

The entire cost accounting lexicon reflects the search for better ways to understand and describe the nature and behavior of cost as it impacts operations, profit, and the marketplace. The vocabulary of cost tells the history of this search, but the human factor in its equation has been diluted over time. This chapter’s discussion presents cost accounting historical terms in a context that seeks to find the raison d’être for their existence (i.e., why they feature so prominently in the language of business). Rather than merely listing terms and their definitions, the exploration logically connects the terms as they relate to the quest to understand and manage cost. In short, revisiting conventional cost accounting theory is necessary to be able to see its significant shortcomings.

Accounting is a guardian discipline—one based in conservatism and risk aversion. Accounting systems are human constructs primarily designed for the control of assets and human spending behaviors, thus governing financial risk. These attributes seldom encourage innovation, compassionate management of human resources, or creative risk-taking.
Professional Terminology

A word is in order about the nature of professional terminology in cost accounting as a “management science” contrasted to the vocabulary of the hard sciences. In the hard sciences like physics and chemistry, academicians and researchers around the world understand the same terms with precisely the same definitions. E = mc² everywhere at all times with no exceptions. This kind of consistency allows hard scientists to reproduce and validate each other’s insights and experiments anywhere, any time.

In behavioral sciences like cost and management accounting, a key term like expenditure means different things to different people at different times. Why? Pick up any peer-reviewed academic accounting journal and try to chart the consistency of the way terms are used by the “authorities.” Despite its artifices, management academia continues to be a rich source of innovative cost accounting theory. Unfortunately, in the publish-or-perish environment of the tenure performance measurement system, hundreds of thousands of academicians spend their entire careers putting a little spin on an old theory. For example, one of the easier ways to get a paper published is to come up with a new cost type. As the language of cost accounting shows all too clearly, behavioral sciences are not subject to the same tests of validity as the hard sciences.

Paradoxically, this is as it should be. Although the focus of the hard sciences ranges from solar systems to nuclear particles, the mechanical laws that govern the physical universe always apply, the same way, everywhere in these entropic systems. Actual behavioral scientists must artificially introduce the same level of rule-based structure and context into their studies because there are no laws or constants in the realm of human behavior. Any nonfinancial manager who is confused by the language of cost accounting should take a deep breath and take comfort. Many cost accountants share the same frustration. Sincere cost accountants do the best that they can as they try to be fair to everyone, everywhere, all the time.

The Context of the Language

Cost management is an advanced management practice when compared to cost accounting; yet the management of costs relies on a fundamental system that accounts for costs. To reiterate, any executive who expects to utilize mature cost and performance management methods to a competitive advantage needs to (1) understand how traditional cost accounting affects reported financial results, and (2) acquire a general familiarity with conventional cost theory and principles. This also establishes a foundation for understanding the evolution of mature cost management methods.

People of all ages learn any language more quickly when they study the new language in context. The context for the study of the cost accounting language as it matures into the cost management language has two primary components: resource optimization and performance. These two elements provide context for the discussion of common cost accounting applications and terminology.
Resource Optimization. When learning any new language, it’s important to avoid getting bogged down in memorizing particular words to the disadvantage of meaning and global understanding. As terminology piles up, keep the essentials in mind: The main purpose of the cost accounting lexicon’s specificity is to support a clearer understanding of the nature and behavior of cost, and thereby facilitate the wise management of valuable assets by optimizing the use of limited resources. Once again, the foregoing sentence will be used as the mission statement for cost management practice in the remainder of this discussion.

The cost accounting drive to support resource optimization stems from the general accounting ethic of safeguarding assets. This is not so different from the physiologic survival and safety drive on the first two levels of Maslow’s hierarchy of human needs. (Refer to Exhibit 1.1, column 3 in Chapter 1 for a brief summary of the Maslow stages of human needs during development). Cost accounting is appropriately particular about its cost classifications and types in the interest of assisting managers in intelligent asset stewardship. Besides cost types, two other major cost accounting definitional classifications include (1) industry sector (e.g., service, government, manufacturing), and (2) operations profiles (e.g., a process profile such as petroleum or a job order profile such as luxury yachts).

Cost as an Indicator of Performance. To realize its mission, every organization must perform well enough to at least break even. History has shown that even Internet enterprise investors did not rely forever on prospective performance. A business idea concocted to generate heady amounts of revenue with little to no expenditures might look good on paper, but it is another thing altogether to actually deliver on such a prospect—especially over the long term. Ultimately, performance depends on resources, whether performance goals are framed in terms of financial capital or human capital.

Some organizations have undeniably grand missions: to heal the sick, to educate the young, to shelter the homeless, to feed the hungry, to raise the quality of life for the world. Hospitals, social services, universities, and some corporations truly work to deliver on the noble intentions expressed within their mission statements. Yet unless their performance garners donations, sales dollars, tuition, grants, volunteer worker time, and other forms of resource inflow, they will not survive. Good ideas and good intentions are not enough. Therefore, executives and managers who heartily believe in their intentions and ideas need to understand the nature, behavior, and structure of cost. The language of cost is simply the best way to begin. All more mature understandings follow its lead.

CONVENTIONAL APPLICATIONS OF COST ACCOUNTING LANGUAGE

Conventional cost accounting touches every functional area within any enterprise, but functional managers are not always aware of how cost accounting practices
track and assess their areas of responsibility. Cost accountants do not necessarily consult functional managers or even executives when preparing cost analyses. Some costing practices are so embedded in the organization or conventional accounting practices that for all practical purposes they have become invisible to everyone. Put another way, some cost practices are so old and so standard to the operation that no one questions the cost analyses or their underlying assumptions. They have become the accounting equivalent of morning toiletries.

This is an essential point in cost and performance management system development. Without broad training and exposure to functional operations, cost accountants become guilty of mindlessly cranking out formulas or crunching the numbers with little or no understanding of how the numbers relate to other managers’ most important decisions and problems.

Likewise, executives and managers all too often accept financial and cost information as immutable; they do not question the reports and analyses issued by the accounting department. This parallels the preoperational way of seeing in Piaget’s cognitive model (Exhibit 1.4) where information is processed by means of images, symbols, and concepts. Within the context of a cost system, the images take the form of the financial statements read as symbolic picture of organizational performance; the symbols take the form of all the statement numbers preceded by dollar signs; the concepts used to make sense of the symbols and images such as Generally Accepted Accounting Principles (GAAP) and cost accounting standards (CAS). Keep in mind that the milestone for the preoperational stages of both individual and organizational development is to achieve the ability to internally represent the external environment. In business terms this means that people accept the financial statements as a portrayal of reality. Indeed, the statements represent some part of operational reality, but as any parent knows, there is a wider world waiting for the five-year-old caught up in learning the ways of manhood on the playground.

Translation of and agreement on cost terminology across functions requires open, active dialogue. Accounting professionals need to seek out experience and information pertaining to operational requirements and contexts. Nonfinancial executives and managers need to learn about their cost accounting system, and constructively question its logic structures for analyses and reporting. The following questions will stimulate the dialogue for representatives of each environment. Here are five questions to ask your accountant about cost types.

1. Do we use cost types in our cost accounting structure? If so, what are they? If not, what is our method of categorizing costs?
2. How helpful do you think our method of categorizing costs is in helping us manage our costs better?
3. Specifically, what is your opinion of fixed and variable cost types and their role in helping us make decisions about costs?
4. How much flexibility is there in the way we classify our costs?
5. When was the last time we reviewed our cost classification design?
Likewise, here are five questions for accountants to ask operations managers about their costs:

1. Do you use the current cost types represented on our financial statements? (Accountants, be prepared for a question to your question: What’s a cost type?)
2. What different kinds of cost do you deal with that are important to your decisions?
3. Do you currently categorize/group and track these different kinds of cost? If so, how?
4. Do you find that as our business changes, you need to shift your focus from one kind of cost to another?
5. If a team were formed to improve our cost classification design, would you be interested in being part of it?

Another inroad to understanding Stage 2 cost accounting is to observe where the framework is actually used. Examples of traditional cost accounting applications include:

- Product/service quotations and pricing
- Make-or-buy supplier decisions (i.e., produce internally or outsource)
- Budget construction and monitoring
- Product cost setting through standard cost systems
- Financial variance analyses: material, labor, overhead
- Product mix decisions
- Job order and process costing
- Cost allocation design
- Capital investment analyses
- Inventory management
- Transfer pricing
- Valuation (e.g., in-process research and development [R&D], impaired asset)
- Leased assets (especially at beginning and end of lease)
- Insurance cost of replacement
- Liquidation and ceasing business

This list does not reflect developments in the field of cost management from the last 10 to 15 years. These are the subjects of upcoming chapters. The list does provide, however, a representative sample of cost accounting concerns for much of the twentieth century.

While reviewing the list of traditional cost accounting business applications, consider where underlying cost structures and assumptions need questioning or
further exploration in your current cost management capabilities. For example, when customers continue to buy from competitors even when pricing is at or below market levels, managers should look to aspects beyond cost and price to ascertain the causes of customer behavior. In this case, the answer may lie in value-added services provided by competitors that remain invisible to the pricing structure. Also, begin to assess the ability of the cost accounting system to deliver on its mission as suggested earlier.

**“The Story” as Told by Cost Accounting**

All dictionaries define the noun *accounting* as a narrative or record of events. In addition to providing more essential cost accounting vocabulary, this section conveys the reason and logic behind the cost accounting language and the unique ways that the language tells the story of business. While strategy tells the story of the business and is accepted as the complete narrative of major business concerns, the traditional accounting version has only learned to chronicle financial outcomes, the *results* of the strategic journey, in dollars and cents. This is a partial tale, at best, told as if there were no characters, plot, or action, but merely a factual epilogue. In short, a CMS residing in Stages 1, 2, or 3 simply has not learned to connect cost accounting with the panoramic strategic tale that calls out for the story of performance from beginning to end.

Cost accounting information does begin to put a timeline to the strategic narrative: past, present, future. Cost type nomenclature introduces the temporal perspective first with the terms *cost, expense,* and *expenditure.* When these terms interface with financial accounting terminology, even the best cost accountants have trouble keeping these three time-based cost perspectives separate. Imagine an articulate manager, who uses each term properly making the statement that follows:

> We are willing to incur this *cost* to improve our production process. After all, the *expense* we have already committed has laid the foundation for the improvements to come. All these *expenditures* should make us competitive in the marketplace.

Parsing the statement based on a time perspective, cost is the outflow of a resource, whether in cash, as a payable, as a rendered service, or as a trade or barter, that is consciously made with expectation of future benefit to the organization. Cost includes goods, property, or services acquired for use in current and/or future operations.

Accountants view *expense* as “expired cost.” In other words, expense is cost viewed from the perspective of past events, and its value has already been used in generating revenues (hopefully). For example, an airline ticket expense will appear on the income statement as a deduction from revenue. In other words, expense is always associated with activities already done or committed beyond reasonable expectation of recovery.
Accounting textbooks generally approach the term expenditure in one of two ways: (1) They carefully avoid it, because it is not part of the official cost accounting lexicon, or (2) they use the term as a convenient synonym for either or both, cost and expense. Regarding time frames, most accounting authors hedge their bets by placing “expenditure” in both the present and the future. For the remainder of this book, since both costs and expenses are expenditures, the word expenditure will be used to identify an organization’s total outflow of assets in all forms.

With these three definitions in hand, nonfinancial managers may be able to correct some accountants! Why all the fuss? Behind the delicate interplay of terms is a very important question: How much spending was and how much spending will be necessary to generate expected revenue? The correct use of these three terms enables accountants to chronologically match expenditures to the revenue they helped generate. This matching principle is one of the foundational concepts of financial accounting to which conventional cost accounting complies. In fact, the matching determines profitability, much to the bewilderment of many people in operations.

Of more consequence is the question of the relationship between cost and performance. How do these three terms with their time perspectives assist in managing performance? How do people travel the distance from cost and expense to satisfying performance? Cost type categorization begins the process.

**Cost Types**

Categorization helps human beings understand how individual components work as part of a whole. In the preoperational stage of individual human development, information is processed using images, symbols, and concepts. These information forms help a person to classify the external environment according to recognizable, common identities. Categories keep order and facilitate comparisons and contrasts. A manager might say, “Aha! I’ve been in this situation before.” Or perhaps, “I see that when I hire workers with a specified skill set, product quality improves.” Categories create spaces for learners to position the unknown while they become familiar with it.

In the context of a Stage 2 CMS, the consistency of categorized line items on financial statements help managers locate numbers of interest and compare them to past achievement levels, and to future expectations. Conventional cost accountants follow the GAAP principle of comparability in order to align with financial reporting, an early developmental milestone. Cost accounting language gives historical and comparability contexts to all financial and cost accounting measurement data. Consequently, cost accounting becomes a form of performance measurement. The trouble is that financial accounting principles of comparability argue against changing cost types even when the change better reflects actual performance.

Cost accountants continue to use cost categories in an attempt to understand
and even to predict in the face of uncertainty. To predict is a strong urge in the human psyche, and foretelling the future has a long-honored history in all civilizations. Be they investment portfolio fund managers or small business cost accountants doing forecasts, organizations value finance professionals who demonstrate talents in prediction. Cost type categories help in prediction efforts.

In the context of the mission of cost management—to support a clearer understanding of the nature and behavior of cost, and thereby facilitate the wise management of valuable assets through optimizing limited resources—accountants understandably want to increase their ability to predict how cost affects business flows and events. However, as accounting procedures separate cost into finer and finer grains, the most important variable in business volatility may become lost. This variable is how people actually spend money. When accountants deal with cost behavior, they actually attend to human spending behaviors as these manifest in any given organizational environment; however, accountants sometimes really do believe that it is the costs that are behaving, or misbehaving, not the humans.

For the record, cost behavior denotes the way in which a cost changes over time in relation to changes in the level of an activity or in relation to the specific application of a resource/cost. Importantly, since cost is an elusive but important measure of organizational performance, the particulars of how a cost changes directly influences performance dynamics. A better way to see costs comes from the recognition that the process of transforming resources into saleable goods and services is the essence of the operations—the arena of those employees whose activities are most intimate with the customer’s direct experience. Discovering the relationships between processes and profits sets the platform for Stage 3 discoveries where financial results begin to be compared with all resources that produced them. However, at Stage 2, the management tendency remains one of attempting to control lagging financial indicators to generate profit.

Fortunately, since accounting systems of all stages help control human spending behaviors, spending patterns usually, and appropriately, change slowly. Consequently, CMS maturation emerges from the early stages with a parallel pace—slow. In an attempt to become more predictive, Stage 2 CMS cost accountants leverage the slow patterns of change and create cost type categories as components of the accounting control system that help them understand and communicate cost behaviors to upper levels of management.

Recalling that a cost type can be defined as a categorical set of characteristics and assumptions by which an accounting system structures and communicates the ways that the organization consumes its resources, how do cost type assumptions impact human spending behaviors? Assumptions are critical to any understanding of the ways cost types impact human spending behavior because most people typically accept cost type assumptions unconsciously or without proof, as a basis for a line of reasoning or course of action. This also applies to individual, personal spending. A younger person is far more likely to spend money out of a checking account than out of a money-type called a retirement account. Categories do shape behavior!
Recall that behavioral scientists must artificially integrate a rule-based structure and context into their studies because there are no laws or constants in the realm of human behavior without enforcement. In contrast, people accept cost assumptions in a highly controlled Stage 1 or 2 context as if the assumptions were a form of fixed, organizational law. This gives cost accountants a certainty about their rule-based structure that follows cost behaviors over time. Quite naturally, but unbeknownst to most nonfinancial executives and managers, different accountants in different organizations use different assumptions to characterize the same cost type. Unfortunately, different accountants and managers within the same organization often do so as well.

Cost categories, types, and assumptions must be deliberately chosen to facilitate a consensual understanding and communication of cost behaviors. These choices should not be left to tradition or chance. The following discussion of specific cost types focuses on the difficulties that conventional cost accountants have in reaching consensus on a common understanding of the characteristics and assumptions of each cost type. Accountants working with a Stage 1 or 2 CMS use almost purely descriptive cost types and do the best they can based on their perspectives of the organization in relation to its environment. However, the shortcomings of these conventional cost types become clear when Stage 1 and 2 organizations begin to become more operationally minded and work to more clearly compare and coordinate what is actually happening inside and outside the organization. Conventional cost types are inflexible, prone to irrelevancy and distortion, subject to wide interpretation, and incompatible with mature operations practices. But the real trouble begins when very bright, forward-thinking people get ahead of the organization’s development curve, and begin to see more functional and facile ways of looking at cost as an indicator of performance. Ambered like bugs in the descriptive cost mindset of their organizational culture, they attempt to translate a more functional view of costs as performance measurements, but frequently end up simply giving old cost types a new name.

**Variably Fixed or Fixedly Variable?** Variable and fixed. No two cost adjectives are more familiar, and none have more battle scars. The debates over their definitions appear in numerous textbooks and cost manuals. Like so many categories of human behavior and consciousness, cost types often occur in pairs that naturally reflect the widest possible range of organizational activities and cost behaviors. Cost types cannot be meaningfully characterized in terms of consensual definitions without some context regarding the way an organization uses the cost types. For example, Kaplan and Cooper define fixed costs as, “Those costs, in total, that are constant within the relevant range as the level of the cost driver varies.” Cost types can only be defined in terms of the assumptions they carry.

In manufacturing, typical fixed cost examples include plant capacity and other previously incurred long-term assets or obligations that cannot easily be changed. As a fundamental working definition, fixed costs do not vary. In practical terms, a fixed cost will not vary within a reasonably expected range of business
volume. In terms of capacity measurements, a cost fixed in respect to volume will vary as the size of the plant changes over time. Assumptions like these give cost type definitions a working context.

The same Cooper/Kaplan discussion defines variable costs as, “Those costs, in total, that vary as a cost driver (activity level) changes.” Articulating assumptions gives this general definition clearer context. For example, when a manufacturing firm’s executives examine their product lines for possible reductions in the number of items offered, they may ask the senior cost accountant staff members to do a profitability analysis on all products in the line. If the executives accept the profitability analysis without questioning its assumptions and calculations, the choices for product deletion could be incorrect.

Operationally, variable costs may change directly or proportionally with sales, production volume, facility utilization, or other measures of activity. Particular business activities drive the use of resources: a computer is built-to-order or a customer calls for service to a product. This kind of lead activity or event is called a cost driver. This term and its meaning will take on increasing importance in future chapters that discuss more mature ways to see and describe cost and its management. All cost types have two common characteristics:

1. Each is a measurement category.
2. Arbitrary but stable assumptions dictate how the measurement data is collected.

The debate over which costs are fixed and which are variable has a long history, and consensus remains elusive. The arguments run the gamut. Some schools teach that there are clear demarcation lines between these cost types. Others believe that some costs are more fixed than others. The more stoic accountant believes that all costs are variable over the long term.

Truth be known, the fixed/variable debate is a waste of time. Only the exact context, growth rate, and operational specifics for any given organization can really determine the nature, behavior, and assumptions of a cost, and thereby, its type. Consequently, it is the business of every executive group to take an active interest in cost type categorization since it directly affects profitability calculations. A profitability analysis can look quite different depending on how an organization classifies its costs across these two cost types.

**The Evolution of Traditional Cost Types.** Because each management team needs to design and communicate its own cost types and categories, a common baseline understanding of traditional terms is helpful. Management teams who take cost types seriously and choose to change them need to be prepared for resistance from the accounting side of the house—and with good reason.

Changes in cost design mean that comparisons between products, services, and time periods lose validity. True enough. That may be one reason that a separate cost accounting system is a necessary phase in the technical five-stage model.
of CMS design maturity. Some pioneers of cost management innovation now barely mention the traditional terms discussed here because one of the goals behind mature cost management systems is to provide nonfinancial decision makers with financial information that they can understand. Cost type categories that originate from the accounting staff often do not do the job. The exploration of activities, capacity issues, and strategic applications of cost management consume nonfinancial management’s interests and energies. In the final analysis, a discussion of the essential concepts governing cost types is important because so many cost systems continue to use these terms. The story of cost types comprises much of the history behind all more mature cost management theory.

General disagreement within the accounting community about cost type definitions, as well as skepticism about the limitations of two categories (variable and fixed), led quite some time ago to additional major classifications of fixed and variable cost types that utilized the prefixes semi and step. In an attempt to characterize different forms of cost behavior variability, some cost accountants wanted to distinguish between costs that varied consistently (variable), inconsistently (semivariable), and incrementally (step-variable). To add to the nonfinancial professional’s frustration, some cost accountants use the prefix semi interchangeably with the prefix step. Some lexicons also apply these prefixes to fixed costs. Costs like electricity and phone lines contain some elements that are fixed and others that are variable. These costs typically follow the cost driver in neither a linear nor a proportional fashion. For instance, machine maintenance intuitively falls in the semivariable category when compared to the acquisition of more floor space for production, which intuitively falls in the semifixed category.

This third category of cost types creates many conceptual accounting fine points. Unfortunately, the debate over all three categories has proved a red herring for many managers. Few have stopped to ask, “Why categorize at all?” The short answer is that conventional financial accounting needs this categorization to maintain its integrity and comparability. The long answer is explored in later chapters of this book. Categories simplify and satisfy the financial side of the house, but more exacting methods (e.g., activity-based costing and resource consumption accounting) operationally translate the categories and create decision-making information for management purposes. Executive teams who wrestle with cost types long enough usually give up and abdicate, leaving the problem of cost type definition to the underground realm of conventional financial accounting.

Along the way, some thoughtful accountants theorized that if cost could be described more exactly, then the nature and behavior of cost would become more transparent. Consequently, a plethora of adjectives emerged over time to modify or add to the fundamental fixed and variable cost types. To get a feel for this adjective-adding approach, simply take the terms fixed cost and variable cost, and attach any of the adjectives discussed next (e.g., direct, indirect) to either term. Then try to identify specific business costs that fit that category. Next, take one of those business costs and map the movement of its flow through a business
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process. It will soon become apparent that without specified, primary organizational context, the terms cause as much confusion as clarity. More adjectives are not the solution.

Using the traditional pairing device, this discussion defines and characterizes the use of the essential conventional cost types beyond fixed and variable.

- **Direct and indirect costs.** Direct and indirect costs define one another. A direct cost is the cost of any good or service that supports and can be attributed to the actual creation of product or service output. Any other costs incurred in the output process are considered to be indirect. In manufacturing, direct costs of product production include labor, material, and overhead costs that vary with the volume produced. Control-oriented cost management approaches use direct cost as the only cost type. In these systems, all costs can be attributed to some output or intermediate service.

- **Discretionary and nondiscretionary.** Discretionary costs are those costs that can be varied at the option of a responsibility center or functional manager. All managers encounter activities where there is no clear relationship between the amount they spend and the benefits they expect to gain. Nondiscretionary cost is a no-choice cost type. Nondiscretionary costs must be spent; the manager has no choice—either in theory or in practice.

- **Budgeted and actual.** These cost types can only be understood in the context of the budget as planning and control system. Budgeted costs are part of a larger blueprint for action. Budgets set fiscal boundaries; actual costs show real spending performance.

- **Controllable and noncontrollable.** Controllable costs have attributes in common with variable and discretionary costs. Controllable costs vary with efficiency, volume, and management decision alternatives. Cost management systems use this cost type designation to measure and control the behavior of particular levels of management authority. Noncontrollable costs cannot be influenced at the local level of authority. Even accountants have trouble distinguishing noncontrollable from nondiscretionary costs.

- **Standard and current-actual.** Standard costs are forecasts of probable actual costs under projected conditions that are fixed and frozen at the beginning of a fiscal year. As information becomes obvious about purchase price increases or decreases during the fiscal year, a cost category within a standard cost system called current-actual costs is updated. In effect, the current-actual cost becomes the operational standard cost, although for comparability purposes, financial statements continue to use the standard costs, fixed at the beginning of the fiscal year.

- **Sunk.** Sunk costs are water under the bridge. They are historical costs that can neither be revised nor recovered. Consequently, they are not relevant to current decisions for increasing or decreasing profit levels except as they are wisely utilized.
Beyond keeping the financial statements honest, most cost types work to achieve two common ends:

1. Assign responsibility to specific managers. For example, controllable/non-controllable and discretionary/nondiscretionary
2. Control costs. Cost types control costs in manufacturing environments by establishing assumptions as to how costs behave as human labor and machines convert raw material to saleable goods. Anyone who has worked in a manufacturing environment knows that cost type categories are of limited use in managing shop operations or making costs “behave.” This insight was validated repeatedly prior to the emergence of more mature costing methodologies. Prior to these approaches, whenever a cost didn’t fall clearly into either labor or material, it got thrown into the black hole of overhead.

One final cost type deserves a brief mention. In a service firm, such as a financial advisory company, costs incurred while entertaining clients and nonbillable time spent with clients can get lost in a cost type called expense accounts and a labor/salary account called general (e.g., general promotion, administration, marketing, etc.). With more mature methods, these expenses could easily be assigned to specific clients.

Cost Types and Human Behavior—An Example. So, how does the use of conventional cost types affect human behavior? This question has several answers; however, the shortcomings of this approach produce risk more often than reward. For example, consider the challenges of a corporate operations controller for a multidivision manufacturing company. Seventy percent of the division controllers reported to this person who was responsible for coordinating their cost accounting and cost quotation systems.

Because the divisions all had differing capacities, but roughly similar process competencies, they often competed for orders generated by the corporate sales staff who handled all the large, national accounts. Production cost was the chief point of analysis when corporate executives decided which division would get the business booked at corporate. Each division was a profit center. Contrary to the company’s early history when disparate locations and poor transportation dictated which plant booked which business, geographic location no longer played a significant part in the decisions of where to produce customer orders. Significantly, the industry as a whole frequently experienced excess capacity.

Part of the corporate controller’s job coming in to the position was to assure that the cost quotes (in essence, “bids” for business) submitted by the divisions were valid and comparable. This proved difficult. Because of their competitive relationship, the controllers rarely spoke, and they never shared cost information. Consequently, each division’s cost accounting design was unique, and each controller was free to classify cost components into whatever types deemed
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appropriate, and therefore, to construct standard costs on these varied assumptions. Across the divisions, cost components varied greatly even in basic material and labor categories.

Any attempt to truly compare two or more cost quotes required the creation of a common cost structure for the competing divisions. This proved useless, however, because when monthly income statements were consolidated, costs were reported using standard costs that often bore little resemblance to the cost quotes the controller had produced. To confound the corporate controller’s job, corporate judged performance by the income statement, by product line and ignored the quotations.

Some of the divisional controllers constructed their standard costs “by the book.” This typically meant that their cost types included the maximum number of cost components in cost of goods sold. Other controllers took liberties with cost type definitions and kept as many cost components as possible out of the standard (e.g., indirect), so as to present a more favorable cost picture. These excluded components usually ended up in the overhead of low-volume, low-profit products, or even below the gross margin line in sales, general and administrative (SG&A) expenses. None of the structures violated financial accounting principles, but they severely stressed good cost accounting practices. In the worst situations, one or two division general managers persuaded their controllers to low-ball the cost quotations, in hopes of getting the corporate business, intending to hit the quotation target, but typically coming in with a cost overrun.

Before voluntarily moving on to a new company, the corporate controller worked for over a year with the division controllers, teaching them the principles of good standard cost practice, and brainstorming with them for ways to influence changes in the order-placement practices. Most importantly, the corporate controller actually convinced them, through quantifiable proofs, that the value of knowing true costs could only benefit everyone.

The danger signals in this story include:

• Multiple divisions competing for the same customer business, with division general managers responsible for their individual profit centers
• A centralized corporate sales force, several of whom came from one of the divisions—this often biased their order-placement decisions.
• Division controllers’ freedom to designate cost types, and standard cost components

And there are two insights relevant to the mature use of cost types:

1. Just because financial accounting principles are not violated, that doesn’t mean the cost system is accurate and reliable for decision making.
2. Sometimes the root cause of accounting problems lies in a nonfinancial function.
When all is said and done, two points limit the need for further discussion.

1. No matter how many adjectives describe cost behavior, a traditional CMS continues to require that each identifiable cost be put in a single cost type category. In reality, a single cost may behave as controllable-variable in one part of the business and uncontrollably fixed in another part of the business. This is especially true in larger organizations with a structure of divisions and business units. In these firms, the so-designated variable costs from a unit high in the organizational hierarchy are frequently passed down to divisions using formula allocations where the costs become decidedly fixed at the receiving units. Once allocated, costs fall into the “out of sight, out of mind” zone for managers who could actually control them. Thus, a slippery slope gets more slippery.

2. All of this cost type terminology developed at a time when cost accounting was still done with pencils (and erasers!) on green ledger sheets. At that time, cost and financial accounting were inseparably tied together. They had to harmonize their categories, types, and definitions if they hoped to guarantee financial integrity while being able to close the books in less than a month. In contrast, the power of today’s automated general ledger systems, databases, and other powerful information technology (IT) applications enable both system harmony and decision-quality information. Therefore, accountants need not fuss so much over cost types. They can utilize a common database that employs a simple cost type design for financial statements, and a more mature version for a CMS. In this way, valuable time is devoted to more complex designs for cost management that supports strategy.

Cost accounting and management practices in the manufacturing sector were the primary source of most conventional cost accounting terminology. Service sector applications sometimes require other cost type characterization. For now, the important point is to have general familiarity with the history of the whole verbal catastrophe and with the vestigial terms still used within organizations operating with less mature accounting systems. Executives in these organizations will need this linguistic familiarity to intelligently simplify and mature their financial systems, to add rich layers of functional, operational information to the existing cost information, and to get the greatest value from accounting staff efforts, while helping everyone to develop greater insights with a better way of seeing costs.

Because Stage 2 CMS cost types do not accurately mirror business realities, organizations committed to CMS development can look forward to Stage 3 environments and beyond. Leave descriptive cost accounting to the academicians and theorists. The developmental move from Stage 2 to 3 can be exciting and relieving. Exciting because insights rapidly emerge as attention to financials is balanced with understanding of activities, processes, customers, and resources; relieving because finally managers have real operational information up front that they can
control, as opposed to the periodic hindsight browbeating over financial statement results, or the uncertainty of how to reproduce good outcomes.

OVERHEAD—COST ACCOUNTING’S PEANUT BUTTER JAR

Peanut butter [is] the pâté of childhood.
—Florence Fabricant

Overhead accounting was designed to take care of “counting leaves in the garden” (i.e., overhead) in the sense of this chapter’s opening epigram. The set of conventional overhead accounts is often referred to as “the peanut butter jar.” This whimsical name arose because overhead contains a wide variety of costs that meld and disappear into a unified, chunky-style (not creamy) cost substance that is subsequently spread over all products and services. Overhead is the ultimate catch-all cost type. When activity-based costing first emerged as an early Stage 3 method, it was largely in response to this chunky homogenization of indirect costs.

Managers frequently forget that overhead is a formal cost type. However, overhead management has been such a significant focus of concern for many managers that it seems more consequential than a humble cost type. Since conventional cost accounting is hard-pressed to track indirect costs to products and services, it is convenient to lump costs that are not labor or material into a few accounts that can be easily allocated by formula. More mature CMS approaches go a long way to solve this obvious shortcoming.

Accounting overhead rates were traditionally based on the direct labor hours used to create a product. This cost driver was the overhead costing method of choice for most manufacturers for much of the twentieth century, derived from late nineteenth- and early twentieth-century factories where low-cost, long-hour immigrant labor was a substantial portion of total cost. Today, this profile no longer holds for typical production facilities where labor, as a percent of total cost, has steadily decreased with technological advances.

Once the lowest percentage of total cost, in the early part of the twentieth century, overhead rapidly grew to become the highest component of total cost in the majority of firms by the end of that century. Overhead caused less trouble and distortion, 100 years ago, when labor costs were far greater than machine costs, and overhead was a much smaller percentage of total expenditures. However, in the 1980s, as automation raced ahead of touch labor, overhead rates soared to 100 to 1,200% of labor cost. Low-labor operations performance held accountable to absorption measures faced difficult tradeoffs. Only firms stuck in Stage 2 need still deal with such trade-offs.

For example, a Stage 2 CMS operations manager measured by absorption must produce the right volume and mix of products to absorb overhead to look good in
the absorption measure, whether or not the volume and mix match customer needs. Missing the absorption target appears as though the manager does not really need all those overhead resources and/or that there was too much capacity. Both or neither may be true—or not—absorption measures do not reveal operational realities.

Most firms have discovered the disadvantages of using absorption measures, but the warning list for symptoms of an “absorption obsession” looks like this in the manufacturing sector:

- Overhead rates steadily increase from year to year.
- Customer on-time delivery is poor, and yet there is too much inventory in products that sell poorly but that have a high absorption rate.
- Financial accounting and business decision-making both utilize the overhead rates.
- Obsolete or spoiled inventory is a chronic problem.
- Investigation of delivery and inventory problems reveals that the build schedule is manipulated to favor high-absorption products.

In the service sector, overhead and pseudo-absorption mechanisms create issues as well. An absorption/overhead problem exists if:

- Hourly rates charged to customers and clients increase faster than the combination of salary/fringe benefit expenses plus general cost-of-living increases on nonsalary items.
- Highly-skilled professionals with high billing rates are doing chargeable work that could be done by lower-level, less expensive employees. In other words, the customer/client is overcharged so that the billing firm can recoup its indirect, nonlabor expenses.
- The firm frequently loses business based on price, not on competency.

### Overhead Absorption and Consumption Ratios

Traditional financial accounting has a vested interest in control, standardized formats, comparability, and ease and speed in month-end closings. Recall that comparability is one of the foundation principles practiced by financial accountants as they prepare financial statements and reports. The comparability principle requires that the examination of data representing results over multiple periods be calculated using predetermined standard costs. All targets of analysis must be prepared under the same logic, formulas, and account groupings so that favorable or unfavorable results can be examined and corrected as appropriate. This is well and good for generalized, historical statements of organization health, but cannot approach the knowledge and insight provided by a flexible, adaptable Stage 3 or 4 CMS.

Resource consumption is hard to control or standardize by its nature, and the variety of business operations—from teaching a university class, to building a
large jetliner—defies a universally applicable comparison model. Indirect materials, support labor, and services are especially difficult to confine to accounting cost type paradigms. However, finance professionals long ago solved the messy business of the overhead peanut butter jar chock-full of hard-to-assign indirect manufacturing costs by using a concept called absorption. Overhead is simply defined as any cost of doing business other than a direct cost (i.e., component material and touch labor) of a product or service output.

Absorption costing allocates all or a proportion of fixed and variable production costs into one of three categories: (1) work-in-process inventory, (2) finished-goods inventory, and (3) cost of goods sold. Think of three spongelike categories that absorb those costs that are difficult to assign. Although service organizations typically do not practice formal absorption accounting, most build cost allocations into their cost/pricing structures that accommodate indirect/nonsalary expenses.

Cost accountants also use an absorption calculation called consumption ratio to approximate the indirect resources being consumed by product/service outputs. The consumption ratio is that proportion of overhead activity consumed by a product or service. Even though products, product lines, and services differ in the consumption of indirect resources, financial accounting sought an efficient way to allocate responsibility for these expenditures through the cost accounting system. The only way to do this was to use a predetermined overhead rate for each product/service, calculated prospectively as part of the budget cycle and standard cost calculations.

In the final third of the last century, accountants sought more accurate cost drivers to calculate overhead rates. Although cost drivers like machine hours, material cost, and units of production provided greater levels of specificity, they did not satisfy managers’ need for accuracy. In fact, managers came to realize that all predetermined rates based on financial concepts are prone to driving counterproductive behavior (cost and human) at one time or another. Because Stage 2 CMS managers are constrained to dollar measures, they must wait until a Stage 3 environment before they can see waste where it lies and get busy cleaning it up.

Absorption costing provides the classic example of costing practices that drive ineffective behavior. Under absorption costing methods, each product/service has a predetermined (i.e., standard) overhead rate that, when combined with direct material and labor costs, equals total product/service cost. Some products/services calculate out to high rates, carrying the assumption that those products/services “absorbed” more overhead cost, while other products/services have low rates, thus carrying the assumption that those products/services used up less overhead cost. A closer approximation to the truth lies beyond—in a Stage 3 CMS able to measure costs in terms of activities and time rather than only as dollars.

Since manufacturing-sector managers have traditionally been judged on their overhead performance and production variances, imagine the potential manipulations these managers are tempted to use to meet performance objectives. For example, a manufacturing manager might schedule the production of favorably rated units in order to appear in a positive light (i.e., spending less on indirect
costs). If this same manager is not accountable for specific inventory mix targets and customer on-time delivery performance measures, the production process risks becoming dysfunctional. Inversely, the same manufacturing professional might be motivated to use high-rate units to show that capacity is fully used. Human behavior depends on the performance measures and incentives in place as well as on human predispositions.

Stage 3 Checkpoints

For those who began reading this book with the belief that their CMS resided comfortably in Stage 3 or better, but who now harbor some doubts, here are some ruthless checkpoints to determine just how far your organization has come in terms of weaning itself from absorption accounting. Ask your accountant these overhead-related questions:

- Which of our expenditures are considered overhead?
- What exactly are our detailed formulas for assigning overhead expenditures?
- How accurate do you think these formulas are in assigning resource charges where the resources are actually used?
- Do managers ever complain about the overhead allocation costs? What is the nature of their complaints?
- How much time does our accounting staff spend on calculating, charging, and analyzing overhead?

If a CMS is truly in Stage 3 or beyond, the accountant will answer something like this: “Yes, we do have overhead formulas for the purpose of financial statements; however, we do not recommend anyone use these for business decision making because they are oversimplified in contrast to how our business really works. Like everything on the financial statements, they are too historical and too highly aggregated to be useful for the kind of business insight you want. The overhead allocations are mostly for the convenience and integrity of financial reporting. Accounting staff spend a short time each year checking out these financial formulas, and then we let them run on automatic. We have other, better methods to help visualize business scenarios. Let me show you.” Count yourself blessed if you get such an answer. Count yourself as triple blessed if you don’t have to ask. Count yourself one of the many if when you ask your accountant breaks out in a cold sweat.

NEW WAYS OF SEEING

Chapter 2 demonstrated new ways of seeing the interactions and interdependencies between financial and managerial accounting systems. Specifically, as
executives recognize how the exclusive focus on budgetary and financial reporting information prevent the introduction of operational information into the decision-making equation, they must mandate changes and support financial managers as they create operationally focused costing systems. This chapter has focused on the language of cost because conventional cost terms impede the process of organizational maturation.

**Executives**

Before executives can intelligently support financial managers working to implement the CMS maturity mandate, the executives must understand conventional cost terms for two reasons. Since cost types are lagging indicators of organizational performance, executives need the conventional cost type background to understand (1) how to fully leverage the new operationally focused CMS, and (2) how the old system creates counterproductive cost gaming strategies within the manager and specialist employee groups. If employees gamed the old system, they will look for ways to game the new.

Executives have two primary roles in this very practical phase of milestone achievement. First and foremost, they must openly support CMS maturity with active, consistent presence and participation. Second, executives must recognize that their most important participatory role is as an authority figure learning more about the old system to gain management insights for the new. Executive participation becomes the model for the learning, maturing organization.

**Managers**

The practical activities of this phase of the CMS maturity initiative are hardest on the financial managers. Their responsibilities include selecting and designing a new CMS while teaching executives, nonfinancial managers, and specialists what each group needs to know about cost types to prepare them for operational information as a new decision-making resource. Simultaneously, they must keep the old system running.

Financial managers will tailor a lesson plan for the information needs of each group whenever possible emphasizing that the entire organization is in transition. The familiar old cost types carry conscious and unconscious spending behavior habits. One of the best ways to create a lesson plan is to make it practical. Financial managers will use their personal observations regarding the ways different organizational groups have used and manipulated cost types to demonstrate the shortcomings of the old CMS and introduce the resource management and decision-making advantages of the new CMS.

Since most Stage 1 and 2 organizations adhere to a hierarchical, mechanical, component-based management philosophy, financial managers should build their lesson plans to capture the features that each learning group actively manages. For example, executives manage costs in terms of divisions, departments, and the
other largest elements of organizational design. Financial managers can teach executives about cost types and cost type behaviors within this frame of reference through practical, historical examples.

Financial managers can teach nonfinancial managers by using the same technique of focusing old and new CMS information in the context of each nonfinancial manager’s chief structural focus (i.e., a functional approach). In building this lesson plan, financial managers should use their comprehensive knowledge about the organization and the spending behaviors of its different functions to highlight counterproductive behaviors with theoretical and actual examples across functions. Cross-functional solution discussions should be held as often as necessary.

Last, but not least, financial managers can begin to create enormous value for the new Stage 3 CMS by building strong, positive relationships with the specialist employees by putting themselves in the specialist employees’ shoes within a Stage 1 or 2 CMS. Stage 1 and 2 organizations see costs unkindly, and the day-to-day needs of the specialist employees and their activities represent most of the organization’s costs. Blame, like water, runs downhill—especially in hierarchies. Financial managers should build a lesson plan that associates cost with the specialist’s major operational activities. Well-trained senior specialist employees can teach less senior employee groups within their own specialty. The investment in building a strong cost knowledge-base within the specialist group will pay off with huge dividends because these operational employees and the information embedded within their activity processes is the core of Stage 3 CMS information and its decision support quality. Executives must recognize and support this investment by acknowledging and supporting the significant burden these efforts place on the financial function during the Stage 3 CMS maturity initiative.

Specialists

Stage 3 CMS maturity initiatives demand a certain “leap of faith” posture on the part of the specialist employees. Cost has always been a four-letter word in the daily lives of these employees. However, if the executive and manager groups create and model the appropriate learning atmosphere, specialist employees must get into the game because the game is rapidly moving its central focus to their turf. One of the best ways that this employee group can serve the interests of the CMS maturity initiative is with its candor. Cost behaviors look entirely different from the bottom of the organization. In fact, while the financial function may know the numbers, specialists know the people and their behaviors. As the financial function teaches the specialist employees about how the numbers are supposed to work, specialist employees should teach all other employee groups about the ways their spending decisions and behaviors impact product/service quality.

Equally as important, a Stage 3 CMS maturity initiative marks the first time that Stage 1 and 2 executives and managers make the commitment to step onto the shop floor. Specialist employees should work to demonstrate how even the most
specialized activity contributes to product/service quality for the customer. Executives and managers should hone their appreciation for specialists’ efforts.

DEVELOPMENT CHECKPOINT

256th Ferengi Rule of Acquisition:
[Conventional] Accountants do not play the game; they only keep the score.7

Conventional accounting terminology is inadequate as a strategic business vocabulary. Conventional concepts hail from an era with high direct labor costs as a portion of total cost (versus current low levels), and with relatively low capital investment costs (versus current high levels in automation and technology) as a portion of total cost. When used alone, conventional systems offer limited insight to underlying cost drivers, report only historically, and do not give due focus to nonfinancial performance aspects.

Mature cost accounting methods use cost terminology and concepts that reflect the actual dynamics of an organization’s activities, as opposed to simply providing inputs to financial accounting. Neither cost types nor absorption costing inform decision making, nor do they support continuous improvement in cost and process structures. Clearly, more mature frameworks are required to accomplish this. Automated financial systems, however, may continue to rely on simpler, aggregated cost accounting input. Key points include:

- Basic cost accounting terms and assumptions need to be understood by all managers and executives so they can adequately assess cost analyses, and as appropriate, change the analytical framework to more accurately reflect operational realities.
- Question the formats and assumptions of cost analyses to assure they reflect the actual particulars of business decisions.
- Never trust a cost accounting system with too many cost types.
- Make sure accountants are spending their time on decision-value analyses of indicated problems and not on debate over cost types and absorption constructs.
Chapter 4

Standards, Budgets, and Forecasts: Learning to Compare and Coordinate

Nobody was ever meant
To remember or invent
What he did with every cent.

—Robert Frost

By the time a normal human being is about five years old, a broad range of emotional states has been experienced many times: contentment, rage, fear, joy, and the many nuances of this basic set. In this preoperational stage of cognitive development, the compare and coordinate dynamic drives information processing and becomes the means for an internal representation of the external world. Extending the developmental parallels between the learning dynamics of human individuals and their organizations, this chapter and the previous two examine the compare and coordinate phase of learning for cost and performance management systems (i.e., a Stage 2 CMS). These three chapters present a core curriculum of the management insights and skills that everyone must master before attempting to move an organization on to Stage 3 technical systems. Looking back from a Stage 3 perspective, attaining competence in comparison and coordination activities is the developmental requirement for proceeding from Stage 2 to Stage 3.

This third chapter in the trio ties the macrocosms of conventional financial and managerial accounting systems to the microcosm of technical detail embedded in the logic and use of cost types. Within a responsibility accounting framework, budgets and standard costs (standard fees in the service sector) are the concrete means by which conventional accounting systems enforce control and direct fiscal behavior.

Budgets remain a key control mechanism in the majority of organizations, and most executives consider doing business without a budget to be heresy. Therefore, business professionals can reasonably expect budgets to play an important role in their work lives, and often in their personal performance evaluations. A budget commits managers to volume and spending levels; if the budget is considered an immutable target, managers go to great lengths to achieve it. Budgets that lose their alignment with actual business conditions can lead to counterproductive behavior. Capital budgets focus on the acquisition of long-term assets that can
affect a manager’s performance for multiple years. Interim forecasts are, in essence, adjusted budgets. Organizations use forecasts in an attempt to correct annual budget assumptions based on intervening events since the budget was put in place.

Responsibility accounting, budgets, forecasts, and standard costs are all tools of fiscal control. They are the pinnacle achievements of a Stage 2 CMS. Unfortunately, fiscal control frequently fails in Stage 2 environments exactly because it is a limited perspective. In other words, responsibility accounting and its associated tools include operations data on a cursory level. An informed human behavior perspective is hardly visible at all. Instead, the Stage 2 CMS often appears as though it implicitly mistrusts those with responsibility and, therefore, attempts to control them. That being said, the conventional methods in this chapter must be well understood before they can be modified or eliminated.

CONVENTIONAL ACCOUNTING PERSPECTIVES OF ORGANIZATION STRUCTURE

From the lowly perspective of a dog’s eyes, everyone looks short.

—Chinese Proverb

Accounting systems focus and assign control responsibilities for some combination of profitability, revenue, investment, or cost activities. In other words, conventional accounting requires identification of individuals to be accountable for segments called responsibility centers. Therefore, organizations that hold the responsibility centers accountable for safeguarding assets and contributing to profitability, by definition, employ an accounting system structure called responsibility accounting. In organizations employing responsibility accounting, those who run the accounting system set standards, measure actual outcomes, and report in terms of responsibility center performance. Responsibility accounting is not the only accounting paradigm for financial organization design, but it is arguably the most common. Responsibility accounting goes by other names such as resource accounting, or profit-center accounting.

Since financial measures remain the predominant coin of accountability for the stewardship of assets, it stands to reason that accounting systems exist to monitor cost management performance. A responsibility paradigm is a system for controlling behavior; this is just another way of saying it is a system of discipline. Responsibility accounting uses the budget as the primary control leverage, supported and informed by financial measures such as net profit, return on investment (ROI), and economic value added (EVA). Budgets and financial measures in turn rely heavily on standard costs.

All these financial components work together to maintain fiscal discipline. At an earlier time, when only high-level managers understood fiscal control,
organizational control exclusively by means these components may have been appropriate. Today, in contrast, more highly educated workforces are quite capable of comprehending how their work impacts financial results because it has become part of their job to do so. Beyond the ability to understand fiscal matters, people also frequently seek a sense of meaning and purpose in what they do, and sometimes look to the organization to fulfill social and community needs. New types of organization design—matrix and virtual—create environments where people are not dependent on higher authority, nor are they expected to run every decision up and down a hierarchical ladder. Although accounting remains a necessary discipline, it is not enough because work has changed to include most people as active decision makers. The current profile of working people makes an organizational development discipline a more meaningful and mature way of managing and influencing behavior.

INFLUENCING HUMAN BEHAVIOR

What gets measured, gets worked on.
Tell me how I'll be measured and I'll tell you how I'll behave.
You get what you measure and reward.

Statements like these reflect part of the truth of human behavior. People in management positions work to influence human performance behaviors by means of individual performance reviews, compensation/incentive plans, reprimands and sanctions, and many less formal practices. All managers want continuous improvement and cost reduction behaviors in their employees, but someone must quantitatively monitor and report actual performance before links to behavior can be hypothesized. Even then, the underlying motivators are usually not understood well enough to influence behavior towards desired ends. Robin Cooper recounts the operations/accounting relationship during the Scientific Management Movement led by Fredrick Taylor.

In Taylor’s time, management accounting was the responsibility of mechanical engineers, not accountants. At the turn of the 20th century, the accountants were responsible for cost keeping and the mechanical engineers for cost finding. In modern parlance, cost keeping is financial accounting that revolves around the reporting of firm profitability; cost finding is managerial accounting that revolves around increasing efficiency and reporting product costs and hence profitability.²

Responsibility accounting traces many of its roots to the tenets of the Scientific Management world within its manufacturing context. The first tenet assumes that employees are uneducated; therefore, control must be centralized so workers need not make any decisions. The uneducated workforce assumption yields tenets two and three: individual performance needs to be modeled on a “best way” to perform each task; and rewards come to those individuals who perform well
Influencing Human Behavior

against the best way. Control was centralized and in the hands of a few. In the context of the time, and considering the knowledge void of development yet to be filled, these tenets appeared valid.

Businesses now frequently operate in a decentralized manner. Highly educated and skilled workers are required to think, and often receive rewards based on group, rather than individual performance. However, the accountability systems of many firms still reflect the almost 100-year-old Scientific Management assumptions and exert control through accounting-based measures developed for a pre-technology manufacturing environment.

These antiquated systems pit managers against one another in competition for resources and performance support. The same systems judge performance almost exclusively in terms of cost, profit, and budget adherence—all results measures with little or no formal accountability for process performance. More recent financial standards, such as ROI and EVA, although more sophisticated, remain fiscal measures. A behavior control paradigm based on results measures leads to an internally oriented, standards-focused management style. The focus can become so tightly inward over time that the internal predictive standard may not be accurate or competitive in terms of the industry standard. The outcome of this paradigm—with which many of today’s organizations still manage their costs—is a rigid hierarchy with a half-blind internal focus and fierce parochial competition for resources.

Responsibility accounting development became more popular as companies grew larger and more geographically dispersed. Corporate executives could not effectively manage beyond a certain scope and geographic range. Consequently, authority was delegated to division and business-unit level managers who typically were (and are) held accountable for cost, profit, and sometimes investments. In theory, responsibility centers like these also have the advantage of business unit autonomy with each division manager “running a separate business.” In theory, this all seems logical; in practice, conflicts easily flare up between corporate and divisions and between divisions as well.

The weakest link in the responsibility center management chain is usually the implication of autonomy, where in practice there are limited degrees of freedom. This comes about because corporate executives have their own expectations and are held accountable for certain performance levels. Naturally, they work to align the divisions under their control to achieve these ends. From that point on it is a short walk to the loss of autonomy for division managers.

The second link to snap in the responsibility chain is resource optimization among business units. Service and support departments—human resources, accounting, information technology (IT)—can easily duplicate functions and waste resources that a centralized service would not. When the accounting system treats divisions, business units, or departments as cost or profit centers, however, they immediately become competitors uninterested in sharing resources. This is especially true in manufacturing companies with multiple divisions with similar capabilities. Because the divisions compete in the same marketplace, they see one another as part of the competition. Geographic dispersion is seldom a market barrier
these days. Under responsibility center structures in which internal divisions or units compete for the same customers, they are loath to share best-practice processes or information with each other. They keep their operations secret from one another even though they all report to one corporate entity. Where divisions do not have similar competencies or production capabilities, and where they do not compete for customers, such problems are less likely to occur.

Imagine the many forms of waste generated in these competitive internal environments when compared to those organizations that focus energies and resources on the external competition and customer/client satisfaction. Cost-savvy executives and managers examine their accounting and performance systems for underlying assumptions and the role they play in influencing cost and employee behavior. For instance, consider a home improvement retailer with 10 distribution centers, each serving an isolated set of retail stores, and each planning separate inventory levels. This organization design developed out of a responsibility center performance system that unwittingly fostered competition between the locations. How much more profitable for the firm if holistic performance measures dominated—ones that, for instance, cultivated fast transfer of inventory between centers to meet demand. But that would minimally require both a Stage 3 CMS and elimination of responsibility center accounting. This is not an easy proposition in many corporations.

At the least, responsibility accounting metrics should be balanced with more strategically aligned accountabilities. Fiscal control and financial performance frameworks should never engender the perils of internal competition. As a first step, executives and managers need a thorough understanding of budgets and standards to appreciate where the conventional accountability processes help and where they do harm.

Keep in mind that in responsibility accounting, control is the purpose of the structure, and accountability is behind all principles. Rigid control structures exist most often in fundamentalist social structures. As human societies mature, rigid controls begin to break down under pressure for freedoms of all kinds: education, health, work, and family choices. The New England Puritan fundamentalism is the North American cultural version of this dynamic. More simply, think of children approaching adolescence. Experienced parents begin to worry about the child who is “too good.” They expect a child at this age to test rules and chafe at constraints—especially the apparently arbitrary ones. So, place responsibility accounting solidly in Stage 2 terrain. Observe it for its service as a natural and necessary developmental step, but seek more mature developmental control disciplines.

### RESPONSIBILITY ACCOUNTING PRINCIPLES

Responsibility accounting (RA) helps organizations learn to compare and coordinate costs with operational information that supports better decision making. The hierarchical organization chart clearly maps lines of authority. Job descriptions in
an RA environment are typically detailed and coordinated with at least annual personnel performance reviews focused on job-related objectives. Workers are organized into groups: business unit, division, department, shift. Work process designs tend to be linear, although operations maturity and innovation frequently precede similar progress in cost and performance systems. RA organization designs do not endure change gracefully, and system flexibility is not a strong point of this structure.

Imagine for a moment that you are just starting out in business. Control and accountability are your prime concerns, and so you decide to use RA. The first thing to recognize is that measures and reports are at the heart of the responsibility management framework. When designing an organization structure under responsibility principles, the first step is to identify the boundaries of the centers and subsequently determine their scope of accountability in terms of cost, profit, and investment. Next, set performance expectations, especially those within the budget process. Responsibility center (RC) managers almost always operate under an incentive system that is designed to motivate performance and that is determined by comparing plan/budget to actual. Key performance measures for incentives are primarily financial. Superiors reward or sanction the RC managers based on performance at the level of the entire center. In summary, the chief attributes of a responsibility accounting system are:

- Hierarchical control
- Performance standards and evaluation, most often in terms of budget-to-actual analyses
- Performance measures that are primarily financial
- Behavior motivation consistent with organization goals, most often limited to profit

This framework creates a stage where managers act out a range of behaviors. More often than not, such systems determine not only executive/manager compensation and but also their career advancement. When the organization sets clear goals and carefully aligns responsibility center objectives with them, the RC manager performance path is more obvious and more easily achieved.

One of the pitfalls of RA organizational design is that even when management establishes initial goal clarity and alignment, leadership does not always allot the time to adjust and realign as business conditions change. An RA structure puts tremendous duties and obligations at the executive level. The plan and budget must be administered from the top, consistently and logically. If center managers suspect favoritism or unfair treatment, behavior subversive to the greater good may ensue. Clearly, executives and managers who seek to participate in accounting system design and management must know their organizational design alternatives, as well as their budget and standard cost options, so thoroughly that they know what they are rejecting and what attributes they can expect.
Sector, Segment, and Production Perspectives

No narrative of the history of responsibility accounting perspectives on organizational structure would be complete without a discussion of sectors, segments, and the two major cost manufacturing cost accumulation methods: job-order costing and process costing. In commerce somewhere along the Silk Route, a traveling merchant wondered, “How much of my wealth do I spend on providing my goods to the City of Byzantium? How much to service the City of Kashgar?” This ancient trader was beginning to think in terms of sectors or segments of business. Perhaps the trader noticed that perfumes sold very well in Byzantium, but not in Kashgar where spices were in high demand. The trader may have then performed a basic analysis of the perfume versus the spice trade that yielded useful insights. Maybe the perfume trade was more profitable than spice. Such geography and product type questions were probably among the first points of profitability analysis.

Since those ancient times, sector and segment analysts have learned to slice and dice markets, customers, and organizations into innumerable categories. Categorization assists in comparison and coordination activities by grouping organizations according to common identities. In cognitive development, these are important skills in the preoperational stage. Assembling information under sector and segment concepts creates meaning and promotes insight.

Technically, a sector refers to a specific area of organizational concern and activity: health care, manufacturing, not-for-profit, education, or service. The Standard Industrial Classification (SIC) coding system standardizes sectors for purposes of trade and commerce by grouping organizations with similar activity profiles.

A segment is some portion of a single organization of sufficient importance to merit performance reporting. A segment analysis dissects units within a single organization for purposes of gaining insight—usually to profitability—based on geography, product line, or, in very large companies, even sectors. In financial accounting, especially for publicly traded companies, segment reporting is considered so important that the Securities and Exchange Commission (SEC) regulates it in the interest of providing investors with reliable information.

In contrast, the cost management focus of segment and sector analysis is typically internally motivated. Different sectors account for cost in entirely different ways. Governments focus on accountability to citizen-taxpayers. Not-for-profits hold themselves accountable to donors, members, and granting agencies. In both government and not-for-profit organizations, the sources and uses of funds are very important, and revenue streams are carefully mapped to related expenditures. After all, donors and citizens want to know how their money is spent. Government and fund accounting are distinct financial paradigms practiced in these sectors.

Job and Process

Similarly, cost accounting practices in the manufacturing sector differ from service sector practices. Merchandisers and retailers follow still other guidelines.
Recall that service sector organizations typically have the majority of their expenditures in people-related categories, whereas manufacturing firms deal with cost of goods sold and SG&A. In fact, the manufacturing sector is supported by two additional types of cost accounting structure: job-order costing and process costing. These two structures also facilitate comparison and coordination of costs and financials information with operational information. Both approaches compare actual performance to budgeted performance. Using the concept of common identities, these methods put boundaries and quantities around items manufactured or volumes processed.

*Job-order costing* is a manufacturing cost accumulation method that gathers costs by specific project or production run, built either to demand or forecast. Expenditures are based on job order with boundaries such as a customer order (e.g., one luxury yacht) or forecast production run (e.g., 50,000 units for holiday production of a popular toy). *Process costing* is an accumulation method that accumulates cost by department or process. Manufacturers use process costing with product units that are not easily distinguishable (e.g., petroleum) and where the product is considered a commodity (e.g., safety pins, rubber bands). Distributors and merchandisers also use distinct accounting and reporting practices. Construction accounting operates under yet another paradigm. In every case, the accounting concepts classify external objects, activities, and events for better understanding and management, not so different from a child’s use of images and symbols to differentiate and represent the external environment internally.

Another key point here is that, in contrast to financial accounting, cost accounting employs a wide variety of paradigms to reflect the expectations and environments of diverse organizations. Behind every type of cost accounting—job order, process, distribution, government, construction and all the rest—lies another layer of terminology specific to that environment. Extending the ongoing comparison between financial and cost accounting systems, managers perform financial analysis comparisons across sectors and segments; cost accounting analyses are more focused within sectors and segments.

**Budgets and Standard Costs**

*A budget takes all the fun out of money.*

—Mason Cooley

Whereas the previous chapters look at cost accounting from the high altitude of developmental stages, this chapter is very much focused on developmental dynamics—how Stage 1 and 2 organizations actually structure, track, and account for cost and performance. Concepts related to conventional budget, standard costing, and forecast methodologies are the ways of seeing for Stage 2 organizations. Although they are valid approaches under specific conditions, they present a
limited worldview compared to more mature stages. As the discussion proceeds notice (1) the characteristics of conventional Stage 2 budgets and standard costing, (2) how in more recent budget models, the developmental dynamic matures and offers additional perspectives, and finally, (3) the enhancements of the more mature budget options compared to Stage 2 conditions that define the conventional budget and financial statements alone. These alternative budget models provide the first glimpse of more mature ways of looking at costs.

The Audit Trail

The armchair quarterback cost system, focused on recording history, has its roots in what accountants call “the audit trail.” This means that every scrap of cost information can be traced to a financial record (called a transaction) and a book of account (usually a general ledger system), all based on a chart of accounts. Every number on any report must have a source document—a record of an actual economic event. Document signatures assure accountability. These proof requirements are vital to financial accounting with its externally focused reports.

Over time, the managerial/cost accounting discipline started to follow the same audit trail path prescribed by financial accounting principles. This choice of disciplines was unfortunate and need not have been so. By shadowing the highly aggregated, transaction-based reporting methods of financial accounting, cost accounting inadvertently hid operational problems in variances (i.e., waste) rather than making these important manageable cost insights visible.

Robert S. Kaplan and Anthony A. Atkinson hypothesize about the early twentieth century linkage between cost and financial accounting in their book Advanced Management Accounting:

The high cost of information collecting, processing, and reporting coupled with the relatively low distortion for companies with homogeneous product lines led companies to attempt to manage their internal operations with the same information used to report to external constituencies. Thus, product costs were computed on the basis of aggregate, average allocations of manufacturing overhead, and control procedures used monthly variances computed from general ledger financial accounts.4

More whimsically perhaps, cost accountants may have followed the example of their financial counterparts for more defensive reasons. Then and now, executives have been known to aggressively challenge accounting reports with statements and questions like, “That number isn’t right!” and “I don’t like the looks of that number!” and “Where did that number come from?” When accounting results do not meet executive expectations, accountants know they must be ready to guide the startled executive through the accounting entries one exasperating transaction at a time.

Likewise, the accountants who designed the first budgets were probably also on the defensive hearing executive statements like, “I never said I wouldn’t spend money to do the job!” and “I did what it took to make the sale!” and “You never
told me there was a limit on spending!" The accountant usually walks the razor's edge when the numbers must be validated.

Budgets are those tools of control that everyone loves to hate, but an effective budgetary system of control has distinct advantages. For example, the intimidating questions change their tone: “Is that expenditure in budget?” and “Will you be able to stay below budget for the year?” At times, even “Can you hurry up and spend these budget dollars so we won’t get cut next year?” And let us not forget the ubiquitous, “Why is so-and-so’s budget so much bigger than my department’s allocation?” At least questions such as these provide a solid foundation for discussion. Still, the repartee is likely to remain heavy on the parochial slant: More for me. Since Stage 2 companies have two primary measures: budget and profit, budget and profit are literally the only visible measures. People naturally know there is more to business than these two measures, but the Stage 2 organization has yet to formalize other valid metrics for decision support.

So on goes the pitched battle for scarce resources, year after year. Although more mature organizations practice a better way, too many firms continue to stage the annual War of the Resources.

Examining the Stage 2 budget dynamic from a more comprehensive developmental perspective, the internal resource battle maneuvers should naturally create self-centered organizational subcultures. Self-centered cultures that indulge in impulsive and emotional behavior within relationships can degenerate to the point that they require Stage 1 hierarchical, authority-based accounting disciplines to manage resource distribution. The repercussions are no different from the busy mother who makes the mistake of bringing a 2-year-old with her into the toy department on a last-minute, winter holiday season errand. Toddler rage can be so intense that if that little body had proportional strength and size, the mother would have to run for her life. Because tempered with some layers of adult maturity and experience, the emotional–behavioral dynamics surrounding resource allocation can become quite sinister in Stage 2 companies.

Control and Profitability—Again

_I am the center of the world, but the control panel seems to be somewhere else._

—Mason Cooley

Because budgets are a fundamental part of accounting systems, they share the two prime concerns of financial management: control and profitability. Budgets are plans primarily concerned with controlling prospective operational results. They exist in the context of the fourth dimension: time. Their adjunct focus on periodic comparisons of actual expenditures to budget predictions keeps responsible managers responsible. By convention, the focus of the budget is strictly financial (i.e., results that can be measured over time in monetary terms).
All these concepts work fairly well in mature economies that remain stable over the long term. However, one might scan the economic timeline for quite a while to find such an environment in recent years. Lag time between budget construction and plan execution exacerbates the difficulty. Managers typically construct conventional budgets six to eighteen months prior to plan execution. Many government and public institutions plan as much as three years in advance, and even then in the context of changing administrations. Competitors, economic conditions, and executive players move and change faster than this. A static budget may easily become outdated in short order, or worse, may constrain management creativity and adaptability when accountabilities for budget targets remain fixed in the wrong time context or under significantly different business conditions.

In summary, conventional budgets have three primary technical limitations, and create two key behavioral dysfunctions. Technically, conventional budgets

1. Are financial only and do not consider related nonfinancial measures that may be the actual drivers of performance
2. Create an excessive lag time between budget construction and plan execution that risks budget irrelevancy
3. Are usually constructed annually, remain until the next budget cycle, and are static and therefore not amenable to adaptation when conditions change

In terms of behavior dysfunctions, conventional budgets

1. Promote internal battles over resources when budgets are a prime measure
2. Direct focus internally at the expense of learning about competitors and allies

Regardless whether a company uses conventional or more advanced budget and standard cost systems, all need to be held to at least the following three attributes of the overall cost management system:

1. Support understanding of the nature and behavior of cost (and the humans doing the spending)
2. Promote, track, and give feedback on value creation and continuous improvement
3. Assist management in wise use of resources

A Brief History of Standard Costing in Managerial Accounting

The concept of cost is ancient, but it was only with the Industrial Revolution that cost accounting began to emerge as a stable, repeatable endeavor. These were times when processes were “hopelessly inefficient,” and there were “no formalized production processes established.” Scientific management changed this
situation, and both product cost determination and cost control techniques were accepted.

These are Robin Cooper’s observations on the Scientific Management movement and its influence on cost management practices. He continues:

Before [Taylor’s] scientific management movement, no effective mechanism existed whereby standard costing could emerge. Standard costing requires repetitive manufacturing processes that can be measured accurately each time they are performed. Repetition is needed for the development of standards to be worthwhile.6

By the mid-1930s, things started to go downhill for managerial/cost accounting, as they did for everyone else with the onset of the Great Depression. In the preface of Relevance Lost: The Rise and Fall of Management Accounting, H. Thomas Johnson and Robert S. Kaplan describe how management accounting started to lose its relevance because “the management accounting systems in Western companies were no longer providing relevant information for decision making and control.”7 Business professionals now widely acknowledge this premise.

The authors argue persuasively that the loss of relevance is a twentieth-century phenomenon. In a cogent summary, they state the following.

Accounting systems for managerial decisions and control can be traced back to the origins of hierarchical enterprises in the early nineteenth century. Unencumbered by any demands for external reporting, management accounting practice developed and flourished in a wide variety of nineteenth- and early twentieth-century corporations. Only in the past sixty to seventy years have external auditing and financial reporting systems come to perform the original function of management accounting systems. The current inadequacy of corporate management accounting systems can therefore be recognized as a relatively recent decline in relevance, not as a lag in adapting older financial accounting systems to modern managerial needs.8

All this begs the question: What specifically are the relevant aspects that were lost? The best thinkers of the late 1990s concluded that management accounting systems needed the following improvements:9

- Alignment of cost information to strategic planning
- More meaningful methods to attach overhead to products, services, and customers
- Timely, decision-quality cost information and feedback (budget/plan and actual)
- Better ways to analyze capital investment options
- More measurement and reporting that makes nonfinancial performance visible and actionable
- Understanding of the real underlying cost drivers
These are some of the most pressing requirements. If present-day business thinkers and managers had universally established methodologies for these improvements in managerial accounting, the information that follows would be little more than an interesting historical anecdote. Instead, because many organizations continue with cost accounting systems based on conventional accounting practices that do not address these recommended attributes, the problem remains quite real. Therefore, managers must thoroughly understand conventional systems so that they can make relevant, timely steps toward the newer, more mature cost management systems without demolishing the legacy system. Consequently, the following section explores another core component of retrospective, conventional cost accounting systems: standard costs.

**STANDARD COSTS**

*Neither I nor anyone else knows what a standard is. We all recognize a dishonorable act, but have no idea what honor is.*

—Anton Pavlovich Chekhov

If ever a method was designed for comparison purposes it is standard costing. If budgets are plans intended to control future operational results, what assumptions drive the predictions, and what information sources provide the inputs on which the budgets are based? Part of the answer is: standard costs. An easier, but often most inappropriate, answer is that budgets are extrapolations based on cost/revenue history that take actual results and add/subtract 5 to 10 percent, based loosely on management guesses regarding prevailing variables, such as inflation and pricing. Although imperfect, a standard cost system is better than this. Therefore, managers in organizations that employ a conventional cost accounting system must thoroughly understand standard cost opportunities and limitations.

Standard costs for material, labor, and overhead of product components (i.e., planned product costs) are established during the traditional budget process and compared to actual expenditures at regular intervals, usually monthly. The “standard” is also the cost used to calculate inventories on the balance sheet and cost of goods sold (COGS) on the income statement. Deviations from standard are captured and reported in variance accounts. (Variances are discussed shortly.)

Referring to the definition of standard costs in this chapter, notice that for standard cost predictions to be relevant, economic conditions and major processes must be stable during the time period that the standards cover. If economic conditions are unstable, or significant operations processes change (e.g., automation of a manual process), then the logical approach seems to be to adjust the standard.

Logical, yes, but financial accounting principles do not make this easy. Recall that financial accounting honors the principle of comparability, and comparability is compromised if a product has one standard in the first quarter and another
standard in the second quarter. Annual budgets lose some degree of their relative comparability, and variance analyses grow increasingly difficult. Accountants who oversee traditional standard cost systems eschew changing standards more than absolutely necessary (i.e., during the annual budget process).

Typically, conventional financial accounting holds standard costs steady for a long period (usually a year), captures actual differences in variance accounts for material, labor, and overhead, and reports the variances long after any manager could use the information to correct current operational performance. In manufacturing, there are two major variances for each COGS component, material, labor, and overhead, totaling six variances in all (see Exhibit 4.1). Manufacturing variances, particularly overhead, are complex calculations that have multiple cross-functional impacts, as shown in Exhibit 4.1. Although generally similar from firm to firm, every organization will customize variance formulas to some degree. The mathematical composition of common variance equations can be found in the management accounting textbooks listed as Suggested Reading at the end of this book.

**Behavioral Implications**

Importantly, although traditional variances meet the needs of financial accounting, they can drive inappropriate behavior in practice. As well-intentioned managers and employees attempt to meet operational goals within a standard cost/variance control system, they frequently thwart the efforts of their cross-functional coworkers. A classic example is the purchasing manager, who is held accountable primarily for the materials purchase price variance (PPV). In all good

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<td>Sales for volume Manufacturing for labor efficiency</td>
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faith, this manager negotiates the very best prices for material components, and thus creates a favorable PPV. However, if the purchasing manager is not also held accountable for material quality and lead times (nonfinancial performance measures), the production lines are more likely to suffer from defective components or from materials shortages. (Again, see Exhibit 4.1 for additional cross-functional impacts.)

In the final analysis, an effective standard cost system must, at minimum:

• Contain enough account detail and stratification to be relevant
• Provide for functional and cross-functional cost responsibility
• Promote understanding of cross-functional impacts
• Use standards as legitimate, achievable management targets
• Collect actual costs to compare to the targets
• Direct management action when unfavorable variances are detected

In the 1970s and 1980s, variances from standard were all the rage in accounting circles. Managers loved to tell variance campfire stories like episodes from *The Perfect Storm* because when the “big one” came in the form of a variance, managers lost their jobs over a labor or material variance that couldn’t be beaten into submission using the pre-Total Quality Management (TQM) and financial methods of the time. One such production manager was being “buried alive” by material usage (i.e., waste) variances. The production manager believed in the skills of his line workers. Suspecting poor-quality material components as the culprit, he gathered data to show that, indeed, more than 90 percent of the root cause of the material usage variance was poor quality material, not incompetent workers. But why?

The answer wasn’t far behind. He had noticed earlier the enormously positive PPV that halfway through the year amounted to over $1 million, an amount equal to the division’s year-to-date profit. The data showed that while the division’s purchasing manager was receiving accolades for his PPV performance, he was also unwittingly supplying the production floor with substandard components. Once this was revealed, everyone worked to assure cross-functional responsibility for variances, while the search began for better performance measures.

Stories like this that spring from conventional cost accounting systems are becoming rare. However, if your organization continues to judge performance based on accounting variances—whether you are a manufacturing or service firm—investigate the following:

• Do accounting reports consistently show one variance that is strongly favorable and another that runs strongly unfavorable? If so, see if there is a relationship between the two.
• If many variances consistently report either very favorably or unfavorably, check the standard costs. They probably need updating.
• Ensure cross-functional accountability for any measure that has multifunction impacts, or points of control.
• Engage accounting staff in productive problem solving.

Budget Reliance on Standard Costs

An organization’s annual budget is a plan that estimates prospective revenue and expenses; that said, budgets fall into several other categories beyond the two main divisions, capital and operating, including:

• Functional budgets (e.g., manufacturing, sales, human resources, research and development)
• Cash budget
• Sales revenue (commonly called the “sales forecast”)
• Production budget (material, labor, overhead)
• Inventory and COGS budgets
• SG&A budget
• Project budget (subordinate to, for example, the research/development budget or the capital budget)

Standard costing practices rely heavily on the sales forecast and on the manufacturing/production budget. Typically, the sales forecast displays predicted sales revenue in terms of the estimated number of unit sales for each product/service, times their respective estimated prices; in short, estimated unit sales \( \times \) price. The manufacturing/production budget also tracks number of units but with minimal emphasis on price. The manufacturing/production budget controls the cost of the materials, labor, and overhead required to produce and deliver the product or service. In similar fashion, the support functions align their budgets to the volume levels predicted by sales through manufacturing. See Exhibit 4.2 for a depiction of their interrelationship and flow.

Interestingly, although managers take great pains to establish standard costs for products, there are no equivalent standard price or standard sales volume concepts on the revenue side of the income statement. The different ways that the budget treats revenues and cost have some logical accounting practice consequences. First, when sales volume or price deviate from the budgeted amount, a budget revenue variance is recorded, plus or minus, in a simple, clean transaction. In a conventional accounting context, the consequences in the manufacturing sector are considerably more complicated. Based on sales predictions made many months in advance of actual production, management hires laborers, purchases machines, contracts for materials, and configures facilities. When competitive and economic conditions change, a company using conventional budgets and standard costs can be caught flat-footed, with either too many or too few resources.
Adjusting conventional budgets when margin and volume assumptions change is a nightmare of inflexible financial constructs. Consider, for example, an engineering firm that typically sets the budgets for all departments and functions using a simple inflation formula against predicted business volume. Current and future business realities play a minimal part in budget construction. The accounting staff may decide to use this simple method because executives decline to be involved in budget preparation; therefore, no better assumptions are available. However, the executives actually hold all departments and functions accountable for budget targets, and include this aspect in individual manager performance reviews. When actual business conditions fail to reasonably match the inflation-based budget, one of two scenarios is likely. In a healthy culture of trust and teamwork, people spend valuable time on valueless analysis of budget variances. This is a best-case scenario. In unhealthy cultures, denial behaviors appear first, followed by turf and resource wars, which in turn lead to deepened mistrust and ill feeling and usually the departure of good people.

**GUIDING PERFORMANCE**

Budgets aligned with targeted priorities that enable strategic achievement and adaptation to changing conditions more effectively guide human behavior and
decision making. Unfortunately, this is not the profile of the common Stage 2 CMS. Budget design must map a clear course because all organizational systems interact with the budget. Some have no other interaction except through the budget. An intuitive example is the relationship the budget creates between the sales staff commission structure and production incentive plans. The design of such systems requires close scrutiny for the effects that standard cost structures and incentives may have on employee selling and spending behaviors.

The inherently financial focus of standard costing and budget systems is their biggest potential drawback to effective management practices. Financial information is a collection of important result measurements. Even nonfinancial budget elements such as number of units and labor hours are measured primarily to arrive at a financial result. If a budget is all about results, where is the information about the causes? Who is responsible for focusing on the processes that lead to the results? Erasers and delete keys change results; only managers armed with nonfinancial, operations-supportive information change causes.

This is where the need for nonfinancial measurement and leading (or process) performance monitoring becomes more evident. Some interesting questions arise in the context of managing beyond the information contained within the conventional budget and standard costs. What decisions and activities cause the financial results that lag behind the standard costs? How can a budget be used wisely in the allocation of resources? Rather than constraining appropriate adaptation with rigid annual targets, how can a budget be flexible enough to guide the firm when conditions change rapidly?

A great deal of thought and effort has gone into answering these questions. A firm does not have to change all of its systems in order to have a better budgetary control system. The next segment discusses a few of the alternatives that have evolved in recent years.

**Alternative Budget Systems**

Budgets can be one of the most visible, effective control mechanisms within organizations. However, some cost management pioneers have begun to ask the following questions:

- What value do we really get out of these systems?
- Should we eliminate them in favor of more effective methods?
- How can we assure fiscal responsibility and control, if we do away with or significantly modify these systems?

By the early 1990s, most mature organizations knew that budgets based on retrospective extrapolations did not provide effective control. Progressive businesspeople dug deeper to discover and map relationships between costs and the forces that actually drive cost (i.e., cost drivers). As software applications gained strength
and reliability, simulation techniques with carefully designed assumptions helped to create more accurate budgeting frameworks. The remainder of this section discusses six of these alternative budget frameworks in the approximate chronological order that they were developed over the last 30 to 40 years. The first three budget models were developed earliest and may be familiar. The fourth, fifth, and sixth budget models are more recent. Important budget developments are:

1. Responsibility-based budget (RBB)
2. Continuous and flexible budget
3. Zero-based budgeting (ZBB)
4. Activity-based budget (ABB)
5. Human capital budget (HCB)
6. Innovation-based budget (IBB)

**Budgeting Mistakes: The Flaccid Budget.** Before exploring alternative budget designs, the three most common budgeting mistakes require examination. Any budget model becomes an increasingly impotent control system to the degree that it incorporates the mistakes of the Flaccid Budget.

The first mistake is failure to align resource allocation—functional and project budgets—to strategic objectives. Unfortunately, strategic planning and budgeting remain two separate processes for many Stage 1 and 2 companies. The separation is illogical since budgets have the capacity to depict strategies in quantitative terms and translate strategy into actionable operations goals. Budget methodologies aside, budgets exist to assign funds, people, and time to strategic priorities. If this definition of the purpose of budgets sounds surprising, recall in any past experience when: (1) strategic objectives were not achieved due to lack of resources, and (2) objectives were not met in projects and initiatives that management approved without adding staff, funding, or equipment. When goals or projects fail, look to the budget structure and the ways it assigns performance accountabilities as probable cause.

A second, more fundamental problem sometimes lurks as the root cause of the Flaccid Budget: Failure to create an actionable strategic plan or other guiding discipline. Most organizations take time to develop mission, vision, and strategies. A smaller percentage takes the time to develop time-sensitive, concrete business plans that set functional and business unit performance expectations. Even fewer regularly monitor these plans and take corrective action as necessary. Finally, an even smaller number of organizations measure performance progress toward actual strategic achievement. Executives and managers in these more common organizations abdicate and rely on the budget to enforce their performance expectations.

One final flaw that can reduce budgeting relevance and lead to the Flaccid Budget centers on parochial claims to resources. The budget process will be undermined if it takes place in an atmosphere of scarcity—a competition for
internal resources and justification of current staff and funding. Executives must set the tone and firmly discourage such territorial behavior.

**Responsibility-Based Budget (RBB).** Responsibility-based budgets operate within a responsibility accounting mindset. The structure of RBB mirrors the firm’s chart of accounts, and therefore focuses on departments, functions, and expenditure categories. RBBs hold managers, departments, and business units accountable for fiscal prudence. While this accountability is desirable, it can be myopic and unbalanced, with all attention on financial metrics such as “meeting standards” and “coming in on or under budget.” Responsibility accounting rarely focuses on the interdependencies and synergies between divisions, departments, and functions. Therefore, these segments typically create budgets in isolation, which are aggregated and linked only at the corporate level. At the end of the budget cycle, corporate superiors compare the centers’ actual results and performance to the budget. RC managers’ compensation and prospects of continued employment are often based in part on these performance evaluations.

**Continuous and Flexible Budget.** Organizations commonly construct conventional budgets with a single volume-level prediction. Consequently, the budget loses relevance when sales/service demand significantly increases or decreases. Two alternative budget frameworks address these limitations: continuous and flexible.

Conventional budgeting typically occurs in the last three to four months of the fiscal year, creating obvious information lag issues. A continuous, or rolling, budget refreshes data periodically, either continuously (i.e., monthly) or when volume rises or falls significantly. Continuous budgets drop the oldest month and add one future month every accounting cycle (also one month). Time intervals become the basis for a process of continuous budget review and update.

Organizations use a flexible annual budget to accommodate a range of potential volume fluctuations within the budget time period, usually one year. The focus of the flexible budget centers primarily on the variable costs related to volume, expressed customarily as sales units in a manufacturing firm, billable hours in a service firm, or number of procedures in a medical setting. Using any of these examples, picture an organization that averages $50 million in annual business. A flexible budget sets volume increments, for example, at $5 million intervals between $40 million and $60 million (i.e., $40–45–50–55–60 million). Costs conventionally categorized as fixed may not vary across this relevant range; however, variable costs (e.g., material, labor) certainly will.

Both continuous and flexible budgets more closely mirror actual operations. They allow management to plan for a range of scenarios (flexible) or to adjust plan as changes occur (continuous). In addition, they eliminate the need for interim forecasts, and provide an improved control mechanism to track accountabilities under varying conditions. To the point, they provide two important characteristics of a CMS: flexibility and improved visibility. Specific advantages of these budget
models over conventional one-time budgeting include:

- Supports feedback frequency and more timely decision making
- Eliminates the need for interim forecasts
- Reduce conventional volume variances that consume significant management analysis time
- Takes the first steps to align with operations realities

**Zero-Based Budgeting (ZBB)**. Zero-based budgeting discourages budget shortcuts. Budget construction consumes a great deal of management time. So does running a business. Managers caught between daily urgencies and budget planning may be tempted to take budget construction shortcuts, especially in organizations where the budget is notoriously irrelevant—in other words, not used to actually manage.

Conventional budget reviews can too easily focus inordinate attention on comparative changes from current-year budgets to next-year budgets. For example, an executive reviewing a manager’s incrementally higher budget may ask in-depth questions about an additional proposed project expenditure without questioning the baseline dollars carried forward from the manager’s prior budget containing many expenditure line items. Thoughtless budgetary carryforward was a driving force in ZBB development. A second incentive was better control over discretionary and indirect expenses. In contrast to the budget model alternatives discussed so far, a ZBB process insists that managers assemble convincing rationale for every budget line item, every year. In other words, the budget process starts from zero, and preceding budgets are considered informative but not necessarily relevant.

In practice, a blind eye to former budgets is impractical and impossible. However, the ZBB technique called decision packages significantly improves the chance of starting fresh. Decision packages are a ranked series of legitimate and fundable potential activities, usually for a responsibility center. Managers rank opportunities on a cost/benefit basis with high-benefit items on top. ZBB decision packages flexibly display component activities over a range of effort levels, and each package usually employs a minimum threshold for continuing each activity’s funding. When done properly, the ZBB process allocates resources to the final list of approved decision packages as opposed to resource allocation to chart accounts’ expenditure categories.

ZBB enjoyed a surge of popularity in the 1970s. Unfortunately, ZBB created an information structure too complicated for the existing information technology. Within ten years, ZBB washed out as a “hot” management topic. Without a supportive technology, many executives discovered that the cost of the time to construct and maintain a ZBB simply outweighed the added control benefit. Now with adequate technology applications, one targeted use for ZBB may be this: to
configure those portions of a budget most difficult to control (e.g., indirect costs, discretionary expenses), while the rest of the budget stays under another model.

**Activity-Based Budget (ABB).** ZBB may have been more widely embraced if it had followed ABB instead of preceding it. Still, ZBB implementations paved the way for ABB, the next major development in budgeting. Activity-based budgeting grew out of the activity-based costing and activity-based management (ABC/M) explosion that began in the late 1980s. Academic and practitioner authors write more articles and books discussing ABC/M and related techniques than any other single accounting subject. ABC/M receives this attention because it is the first comprehensive accounting alternative to chart of accounts/general ledger systems as a way of viewing and controlling an organization’s resource allocation to its activities. ABC/M is a major step forward in CMS relevance, cost visibility, and support for mature operations methods. Implementations begin to show up as stand-alone systems in Stage 3. Skeptical readers working in Stage 1 and 2 organizations might remember Galileo who empirically validated the Copernican perspective that the Earth revolves around our sun displacing the Christian notions that the Earth was the center of the universe.

Resource allocation is the primary function of all budget systems. ABB targets allocations differently than other budget models. In conventional budgeting, the funding allocation targets are chart of accounts/general ledger items. As its name implies, ABB uses activities as resource allocation targets.

An activity perspective significantly alters the treatment of resources; especially those conventionally classified as overhead. For example, the activity called machine maintenance in conventional accounting is typically an invisible part of manufacturing overhead, even though the expenditure may cover multiple production functions. In contrast, an activity-based approach assigns maintenance costs directly to the functions that actually use them. In a bank setting, the private banking staff is conventionally part of overhead; in the activity view, expenditures associated with this staff are isolated and assigned to the customers that utilize the staff as a resource.

One of the most important implications of the activity-based focus is that cost types, especially fixed and variable, sink into irrelevancy. According to some experts, conceptually ABB is ABC backward. ABB flow starts with the products and services a company wishes to market (see Exhibit 4.3). ABB then extrapolates the activities and activity drivers needed to produce these products and services. Finally, ABB defines the resources and resource drivers required to carry out the specified activities.

The more detailed sequence of steps involved in configuring an ABB system begins with a sales forecast, just as in conventional budgeting. Next, instead of moving straight to resources, an ABB calls for a second forecast: the activities required to realize the sales forecast. The third step calculates resource requirements to fuel the activities. Finally, a reality check reconciles resource supplies to forecast resource demand, including decisions on the capacity levels that the...
organization is willing to fund in terms of employment base, floor space, and equipment.

ABB is among the most mature, decision-supportive budgeting systems available—but it’s not for beginners, and implementations are hard to find. As Peter B.B. Turney, Senior Research Officer in the Interactive Information Group of the National Research Council and an ABC pioneer, writes, ABB “is technically difficult to implement, requires that organizations be well along the activity-based learning curve, and requires advanced systems and tools. It also involves new thinking about the meaning of fixed cost, variable cost, and the role of capacity.”

**Human Capital Budget (HCB).** Human resources are the perennial thorn in the side of dollar-focused budgets. Budgets easily quantify salaries and wages or the approximate number of person-hours needed to meet a specified demand level in production or service. Budgets struggle to quantify the cost of hiring and training a new person, the cost of loosing a top sales manager, and the prospective lost revenue from future innovations when a premiere scientist takes a job with the competition. External to the organization, it is challenging to calculate—using conventional methods—the value of contributions made by consultants and contractors, beyond the fees they charge, or the cost caused by a supplier who consistently delivers materials late.

Financial accounting has half-heartedly wrestled with human-value issues for over 50 years, but balance sheets and income statements rarely reflect the value of humans as resources. The rise of the knowledge-worker and increased awareness of the value of intellectual capital disturb conventional financial statement assumptions. At this time, a standardized way of valuing human capital has not
emerged, but it is being sought in earnest. Perhaps, like cost management, each organization will create customized human capital reports. The CMS relevance is at issue. As Stage 4 systems begin to reveal the intricacies of the nature and behavior of cost, progressive professionals already see the human dimension as the next management horizon. In an increasingly service-based economy, performance relevance grounds more and more in the limitless diversity of human behavior.

Skills-Based Human Capital Budgeting is one of many emerging paradigms in this new territory. This approach shares two things in common with most other models for human capital budgeting:

1. A strategic focus, with finance as an aligned secondary focus
2. A concern for capturing value not recorded on conventional financial statements

In an attempt to bridge from financial capital information to human capital understanding, this particular model of human resource budgeting borrows many terms that originate in finance and translates them into the human dimension. Concepts include human capital skills measurement, human capital inventory, and human capital capacity. Authors McKenzie and Melling emphasize that the "key issue in human capital planning budgeting is ensuring that the right people with the right skills are in the right jobs at the right time. This includes understanding the fungible nature of human skill and mobility, as well as the ability to measure and cost human capital capacity." Though in their infancy, human capital budgeting and other recent budget methods cast the accounting function into a whole new realm of value creation. To make satisfactory use of a human capital model, an organization must be at least at a Stage 3 maturity level.

Innovation-Based Budget (IBB). Another example of budget system evolution is the IBB. Notice that every model that has developed since the conventional budget uses the word “based” to show how it conceptually differs from predecessor forms. A message lurks here. In choosing a base, budget designers declare what is most critical to their management perspective—activities, human capital, and innovation. Motorola and 3M, both known for cultures based on innovation, have experimented in IBB. The IBB model recategorizes costs to meet the innovation focus. As a control system designed to influence behavior, an IBB design structure motivates employees to produce a continuous stream of new ideas. The most important cost categories in this paradigm are strategic, elective, and obligatory—a new set of cost types.

Innovation consumes resources—large quantities of resources—resources that may actually lose money if the big idea flops. In contrast, experimentation and daring to fail brilliantly are the sustaining cultural values behind the kind of continued success innovation-culture organizations enjoy. IBB encourages risk-taking within a controlled framework. Within the IBB cost framework, strategic costs are devoted to (1) invention of new products, services, and methods; (2) expansion of markets;
and (3) retention of customers, employees, and other key stakeholders. Obligatory costs are related to regulatory agencies and other cost-of-doing-business expenses. Elective costs are internally generated from organization structure, rules and control mechanisms, and do not necessarily create value. Examples include customer churn, employee turnover, and obsolescence.\textsuperscript{16}

**Beyond Budgeting**

Regardless of budget type, human behavior considerations are critical to a budget’s effectiveness.\textsuperscript{17} The following attributes determine the ultimate effectiveness of any budget:

- Traces accountabilities for cost, profit, and investment decisions to the decision maker(s)
- Adapts to changing conditions
- Creates incentives to align behavior with broader organizational goals
- Provides regular—not just annual—performance feedback
- Cultivates participation in realistic target setting

Control and accountability are essential elements of profitability, and designing a budget framework to manifest these qualities is as much art as science. Some experts suggest more radical changes. In 1998, frustration with budget model limitations led to CAM-I’s (Consortium for Advanced Manufacturing-International) formation of the Beyond Budgeting Round Table. In a similar spirit, researcher/authors such as Jeremy Hope and Robin Fraser suggest a paradigm that “effectively empowers front-line managers to make fast decisions based on current information” built on “information-age best practices...devolution of authority...[and] performance management...that leading companies are now using to respond much faster to customer demands,” Hope and Fraser cite companies using such a model including Volvo Cars and IKEA.\textsuperscript{18}

On deeper examination, the universality of the frustration-with-budget phenomenon suggests that the problem with budgets is not so much with the models as with (1) a lack of practical connection to strategic planning and (2) hierarchical organization structure that slows and muddies decision making. These disconnect and hierarchy concerns come full circle to the three dimensions of the Flaccid Budget discussed earlier in this chapter:

1. Failure to align resource allocation (i.e., functional and project budgets) to strategic objectives
2. Failure to create an actionable strategic plan or other guiding vision
3. Parochial claims to resources
Budget frustration arises not from the budget framework itself but from the failure to allocate resources according to strategic priorities. Any budget model must therefore be strategically aligned with the broader goals of the organization, not with parochial interests. Any budget model will disappoint employees at all levels if it does not support organizational priorities by assuring appropriate resources for key objectives. Dimensions 2 and 3 are logical consequences of dimension number 1. People serve two masters in organizations with disconnected strategy and resource allocation—budget goals and strategic goals. Consequently, both sets of goals become flaccid.

FORECASTS

Predictions of the future are never anything but projections of present automatic processes and procedures, that is, of occurrences that are likely to come to pass if men do not act and if nothing unexpected happens; every action, for better or worse, and every accident necessarily destroys the whole pattern in whose frame the prediction moves and where it finds its evidence.

—Hannah Arendt

As factory automation and robotics began to take hold in the 1980s, managers hoped that such computerized manufacturing would lead to a time when:

- Production processes could be accurately identified and continuously controlled.
- Sales demand expressed in forecasts could be precisely met.
- The variance between sales units and production units would drop to near zero.

This has not occurred in any sector. In fact, destabilizing markets with diminishing entry barriers make sales demand forecasts less reliable than ever.

As integral components in conventional accounting systems, forecasts essentially create short-term adjustments to annual budgets. In fact, organizations that control primarily through budgets and forecasts often create monthly income statements (and less frequently, monthly balance sheets) with the following column headings:

<table>
<thead>
<tr>
<th>Current Month</th>
<th>Year-to-Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>Budget</td>
</tr>
</tbody>
</table>

Each of the significant income statement line items is reported in these six categories. Naturally, a great deal of management time is wasted explaining the
variances between the actual, budget, and forecast results. Since actual and budget data are historical, and forecast estimates attempt to improve on history, the waste of human resource time is great indeed. Stage 2 environments generally do not make this waste visible because people are trapped in delayed, feedback-only financial reporting. While they often sense there is a better way, and even make ad hoc efforts to see things differently, the formal reporting and accountabilities remain in financial statements.

Planning prudence demands that an organization seek some way to look down the road and estimate the:

- Kind and number of units of product/service that will be sold
- Costs associated with these sales
- Material, labor, and support components of the cost of sales

How far into the future does an organization need these answers? Twenty years ago, when supply chains moved slowly and lead times for materials were long, materials forecasts were more important. Since then, Total Quality, just-in-time, materials management, and the newer supply-chain management techniques have greatly compressed lead times.

Despite these changes, some companies continue to rely on legacy information systems such as material requirements planning (MRP). In a dismal, closed-loop process, MRPs rely on the best guesses from the sales staff, so that the accountants can create forecasts and provide sales estimates for future periods, so that the executives can analyze the forecast variances at the end of the month—over and over again. A desire for certainty, or at least information, about future results from an historical, results-based information system is a quest doomed to failure. Such searches steal time from current operations, the only place the future results can actually be managed.

Most of the advanced CMS models discussed later in this book completely omit forecasting discussions. Interestingly, although forecasts are all about sales and production—a major domain of cost management—the responsibility for forecasts has slipped over to financial accounting. Why is this so?

First, finance-driven organizations continue to hold executives and managers accountable for financial results; therefore, all employees become keenly interested in seeing “what my performance measures will be at the end of the month.” Second and more importantly, the shareholder concern for future returns and attendant demands for predictions of those returns have kept forecasting alive and well—well, mostly. The Wall Street Journal reports earnings forecasts and adjustments to previously issued forecasts as part of its daily bread and butter. This whole market information complex is intended as part of fair and full disclosure to protect shareholder interests. However, many people have now come to understand that such forecasting falls prey to the gaming between large investors, analysts, and public companies. At any rate, these two traditional drivers keep forecasting alive and squarely in the financial realm.
In August 2001, *CFO* magazine reported that “Yogi Berra got it wrong. For most companies, the future is what it used to be: a perpetually blurry hodge-podge of vague expectations, missed opportunities, and unpleasant surprises. Forecasting remains a blind alley.” The article describes software vendors who continue to try to invent the better-forecasting mousetrap. Some of the latest applications adjust for overly optimistic sales manager estimates, tap into stand-alone customer information databases, and generally attempt to tie together disparate points of data to better inform the forecast.

Just as in budgeting, there are many ways to construct a forecast; and just as in budgeting, forecasting produces as much frustration as help. Forecast expert, J. Scott Armstrong of the Wharton School of Business states, “There are 139 principles of forecasting... Businesses ignore most of them... and little of what we’ve learned has been built into software.” The bottom line: Satisfaction with the art of forecasting remains elusive, and production based on financial forecasts alone is very risky business.

Perhaps the most important thing an executive can do regarding both budgets and forecasts is to challenge “the way we’ve always done it.” Before spending more time on lengthy budget processes or retrospective forecast analyses, ask those three familiar questions. How can the budget, standards, and forecast systems:

- Support understanding of the nature and behavior of cost?
- Promote, track, and give feedback on value creation?
- Assist management in wise use of resources?

To graphically illustrate the ineffective behaviors possible when a company becomes income statement–obsessed, listen to a true story from the *Fortune 500* ranks.

Once upon a time, a controller, worked within a national, brand name company that was obsessed with its monthly income statement. Income statement measurements framed virtually all performance management, compensation, and promotion activity. This firm was not just financially driven; it was financially myopic. The income statement obsession was particularly demanding of accounting staff resources.

Not satisfied with the formal forecasts that were updated monthly, nor with waiting for month-end actual results, the CEO required a “flash” income statement ten days before month-end. This became known simply as “The Flash,” although it was actually a second monthly forecast. Executives at divisions across the country spent significant time constructing and reviewing The Flash before submitting their data to headquarters. The idea behind The Flash was to spot trouble before the month became history, and to rectify emerging problems. Over time, the month-end continued to bring unwelcome surprises. The executive team response was to try income statement fortune telling earlier in the month. Consequently, accountants were required to produce a “Pre-Flash” income statement at mid-month. Inevitably, this led to a “Pre-Flash flash” only one week into a new
month. Eventually, three accountants at each division were occupied full-time on financial statement production, forecasts, and flashes. The actual results remained unpredictable.

When the attention of an organization’s executives and managers remains glued to the monthly income statement results, specific obstacles to the natural process of CMS maturation arise:

- Operations and processes can’t be managed from the income statement; it is too highly aggregated.
- The month-end results are the after-the-fact report card so don’t forget to do the homework.
- Forecast or flash versions of the income statement provide no decision-support value.
- Accounting professionals do more valuable work when they aren’t kept busy refining their crystal ball predictions.
- When an organization’s forecasts are consistently far from the mark, so are the processes that deliver the actual results.
- Compensation and incentive plans can cause forecast distortion; for example, if variable compensation is paid on sales revenue above forecast, salespeople are implicitly invited to low-ball their forecasts. If top executives receive bonuses on bottom-line profit, they can be tempted to compromise long-term viability for short-term personal interests.

Whatever the budget and forecast frameworks in place, be sure they are creating value and not eroding valuable management time.

**CAPITAL INVESTMENT**

Capital comes in many forms: cash, equipment, infrastructure, and people. With the exception of cash, capital investment decisions are almost always about long-term assets, be they machines, buildings, or, in newer paradigms, people. The antithesis of conventional cost, capital investment represents cost hopefulness. This management activity is an elusive aspect of the compare and coordinate developmental dynamic of mature Stage 3 organizations. Because a Stage 2 CMS cannot address human capital, this section of this chapter is consequently limited to a discussion of financial capital. Later chapters that detail more mature stages of CMS development add new perspectives to conventional capital budgeting shortcomings.

Recall that a long-term asset is one that has greater than one year useful service. A cost accounting expert will analyze and put into quantitative form the opportunities for long-term investment. *Capital budgeting* is the process of making long-term investment decisions. Managers use capital budgeting as a budgetary extension-plan for acquiring assets expected to serve the organization for
longer than one year, usually, for a minimum of three. The choice of time frames arises from financial accounting capitalization and expense principles, and from tax regulations. These capital budget outlays should maturely invest in the future, establishing a foundation of resources that employees require to execute strategic objectives. Therefore, large projects and major management initiatives are often viewed as capital investments.

Due to the limited horizons of financially based decision options, the time limit estimates often have little to do with an asset’s actual time-in-service or immediate operational realities. Capital investment items that fall into the balance sheet categories of property, plant, and equipment are subject to depreciation based on financial and tax concerns, limiting visibility of their true value as future organizational resources. Consequently, conventional financial reporting can easily minimize and distort the cost transparency of such investments.

By definition, capital investment commits substantial resources—monetary, time, and human. Here, too, shortsighted, financial accounting customs determine the dollar threshold levels that define a capital investment. Capital investment decisions inherently involve risk because organizations have limited resources. The decision dynamic is simply one of choices between apparently good alternatives. Alternatives not chosen are opportunities not exercised; this in itself has become a cost type: opportunity cost. Opportunity cost analyses are slippery slopes because the analysis contains potential investments that are foregone in favor of other options. The return on investment and benefits of foregone opportunities cannot actually be calculated because the investment in the opportunity is not made.

When executives make capital investment decisions among competing alternatives, they have at least two Stage 2 objectives in mind:

1. The investment will earn back its initial cost (capital outlay) over time—the shorter the time period, the better.
2. Over time, the same investment will produce an ROI; in other words, cash in the door above the original cost of the capital item.

Conventionally, the investment decision analysis is entirely financial in the sense that it seeks to maximize shareholder wealth. This perspective sets short-term benefit against future operational well-being. Consider the developmental management responsibilities and probable trade-offs in a Stage 1 or 2 level of maturity.

**Analysis Methods**

The following elements are the components of a capital investment analysis.

- Estimated cash flows of all types: purchase price, revenue generated by the investment, repairs and maintenance, sale price at the end of the asset’s usefulness, or cost of disposing
• Estimated useful life in operational terms
• Time value of money (interest rates)
• Usually, criteria for accepting or rejecting an alternative; for example, a threshold ROI

The time value of money, commonly referred to as discounted cash flow, expresses future cash flows in present value terms. Accountants in the majority of firms use more than one method in their investment analyses; however, the discounted cash flow techniques are favored in conventional circles because monetary flows across time are made comparable. Net present value method is commonly defined as an investment’s present value cash inflows netted against its present value outflows. This calculation is compared against a present return-on-investment profit. The choice of a discount (interest) rate(s) is a key part of this method, especially during volatile economic times.

Cost accounting professionals employ three other conventional approaches to analyze these capital investments.

1. **Payback period.** From the time the investment is made, the amount of time required for the organization to recover its original investment (e.g., purchase price) in terms of cash flows generated. The time value of money is not considered in this method.

2. **Accounting rate of return.** This is a percentage calculation based on income, not cash flows. The annual average of the sum of all income over the life of the investment is the numerator. The original cost of the investment is the denominator. The time value of money is usually not considered in this method.

3. **Internal rate of return.** A more complex calculation, this method seeks the interest rate that will result in the investment’s net present value equaling zero. This interest rate is compared to the organization’s preestablished required rate of return, which serves as a selection threshold.

**Capital Observations**

Managing the maturity of capital investment processes can take on a larger-than-life presence, becoming extremely complex and time consuming in Stage 1 and 2 organizations. A pause for thought is in order. The assumption underlying many capital investment processes is false: If we follow the capital process carefully, we will make the correct decisions. Decision theory would have a field day with that statement. Human logic being human, the more invested people are in a particular decision, the more they are apt to rationalize their choice. Investment is emotional, psychological, and political, as well as monetary.

For example, one classic decision theory concept, the sunk cost trap, hypothesizes that the greater the investment of time and money, the harder it is to let go, even if the investment is no longer valid—a painful reality for stockholders in
economic downturns. The root of the problem is neither the decision itself, nor even holding on to a bad decision. The core dynamic is the underlying expectations that drive the choice to hold on to a bad decision, full of hopes and fears. A better logic says that the decision was not bad when it was made. Conditions changed. The wisdom and courage to see things just as they are is an acquired vision that matures and consolidates with experience. Behavior stemming from this level of development relies on present facts, not future assumptions, or avoidance of responsibility for the past.

The conventional Stage 1 and 2 methods of capital investment analysis, by necessity, make many counterproductive assumptions; cash flows and interest rates are two of the most volatile sources of assumption error, and generate enough uncertainty on their own, just from a calculation standpoint. A subtler and seldom-named factor poses even greater risks: internal competition for resources. In a financially driven company, where everyone’s performance measures are primarily financial, resource competition is inevitable. The cure is a familiar one: strategic alignment of capital investments. This assumes, of course, a viable strategy.

Executives and managers must recognize the impact of financial accounting assumptions and practices on capital investment decisions. Accounting principles require a focus on a discrete period of time, usually one year, with interim monthly and/or quarterly reporting. Assets that are in service for more than one year pose a challenging situation for financial accounting with its reporting period of one fiscal year. Financial accounting uses capitalization and depreciation frameworks to apportion capital investment expenses over multiple years. Put simply, this financial accounting practice means that the cost of the original investment is recognized on the balance sheet at the time the asset is put into service. Then, over a set number of years, the value of the investment is depreciated (i.e., a portion of the cost is recognized as an expense for each year the asset is in service). Again, this frequently does not reflect operational realities, and thus, distorts cost analyses.

These are matters that should concern cost and financial accountants. Importantly, significant financial influences characterize capital budgeting practices, but accountants take a fair amount of latitude in applying the financial principles. This is true right down to basic distinctions, such as whether a purchase is viewed as a capital asset (expense recognized over multiple years) or as a current expense (recognized on the income statement in one accounting period). Such latitude has come under public scrutiny, and investors at large have realized just how much latitude is possible while remaining within the parameters of accounting principles.

It should be noted that mature cost management system frameworks are much less concerned with the many permutations of conventional capital investment analysis, viewing them as based on unreliable assumptions.

More recently, capital investment analysis methods have developed outside financial accounting principles (a good thing) and include:

- Regression analysis
- Decision trees to manage investment risk
• Post-investment analysis, with comparison to original projections
• Capital asset pricing models, that calculate the cost of capital (e.g., interest rates), considering industry sectors, and other risk elements

No matter the method, no matter the tool, large investment decisions remain among the most important, and most difficult, decisions executives make.

NEW WAYS OF SEEING

Chapter 2 discussed new ways of seeing cost across the primary financial and managerial accounting systems, and Chapter 3 examined new ways of seeing cost types as performance indicators. This chapter has explored the ways that the budget and other essential conventional cost management system components put cost types into action. Stage 1 organizations committed to CMS maturity initiatives look to the budget to provide new structural insights for cost type management that make budgets and budgetary information more current and actionable throughout the year. Stage 2 organizations engage their own CMS maturity initiatives by looking for ways to understand standard costs, budgets, and forecasts in terms of operational activities and information.

Budgets and income statements are the most visible, effective control mechanisms within Stage 1 and 2 organizations. Budgetary and profit control must make room for newer, more flexible means of disciplining spending behaviors. Since budgetary systems create value only as they allocate appropriate resources, executives, managers, and specialists must work to see how (1) operational activities create value for the organization, (2) how operational activities must be supported, and (3) how to allocate operational resource needs responsively throughout the budget cycle. These actions naturally strengthen profits. Slowly but surely, the CMS and budget designs will serve the needs of operations and people will learn how to support value creation proactively. Again, executive, manager, and specialist groups each have different responsibilities for budget, standard costing, capital budgeting, and forecasting maturity initiatives.

Executives

Stage 1 and 2 executives commonly abdicate their positions of leadership authority and rely on the budget to enforce their performance expectations. Executives must rely on certain principles when they seek to encourage budget maturity:

• Openly support the CMS maturity initiative with active, consistent presence and participation.
• Recognize the importance of an executive participatory role as an authority figure learning more about the old system to gain management insights for the new.
New Ways of Seeing

After creating the maturity mandate, executives learn from the financial managers and model learning behaviors for the rest of the employees. The organization remains in the grips of a hierarchical, financial way of seeing, and executives must recognize that the budget has been the historical lever of control. One of the best ways to learn and model new behavior is to ask questions openly. In this case, executives ask financial and nonfinancial managers and specialists to characterize (not justify!) operational resource needs as they apply to specific critical processes and process activities. After all, operational information will soon become the coin of the decision-making realm in the more mature Stage 3 CMS.

Executives will want to do their own personal homework regarding better ways to budget that align with their vision for the organization in Stage 3. In contrast to the situation with the arcane cost types as the language of conventional accounting, executives need to intelligently push back and challenge the recommendations made by financial managers looking for more mature ways to technically budget resource allocation.

Importantly, executives must begin to work as a group and create a new strategy for distributing discipline and authority throughout the organization. As decision-support information becomes ever more current with the emergence of Stage 3 systems, value creation opportunities can be captured only as employees at all levels are given access to information and permitted to make cost and performance management decisions as events change. Executive authority feels radically different in Stage 3 organizations.

Managers

Financial managers continue to bear the heavy mantle of expertise in budget, standard cost, capital budgeting, and forecasting maturity initiatives. Financial managers are in the best position to know and understand the alternatives to conventional systems, but they do not possess direct knowledge of the executive vision for the organization. Consequently, as financial managers assume the roles of researchers and teachers in this phase of the organizational maturity initiative, they must listen more carefully to the management responsibilities and productive accountabilities of the executives, nonfinancial managers, and specialists (see Exhibit 4.4).

Responsible for the organization’s overall direction, executives balance the needs and interests of all organizational stakeholders. Internally, Stage 1 and 2 managers have traditionally competed with one another for resource allocations. The new Stage 3 CMS will make resource allocations based on prioritized operational processes and activities. Financial and nonfinancial managers must work to support shifts in executive insight by seeing functional interdependencies rather than artificial, parochial domains.

Specialist employees are responsible for productivity and accountable by product/service. They naturally want to make their products/services better for the customer. It is their work. Specialist employees need ways to see how their
requests for more resources impact the organization as a whole. Stage 1 and 2 budget systems say yes or no. Stage 3 budget systems bring the specialist employee up to the bargaining table by using a service level agreement approach: If you really think you need this to maintain or improve product/service quality, this is what it’s going to cost you. Cost management takes on an entirely new meaning for this employee group, and the cost of quality becomes part of their daily vocabulary as they come to actually participate in budget activities, and cost management moves ever more surely to performance management.

**Specialists**

Remembering that Stage 1 and 2 specialist employees have experienced a day-to-day history of falling beneath budget imperatives, it is virtually inconceivable that this employee group would willingly embrace participatory maturity initiatives on first blush. They no more believe in the sword-in-the-stone legend than other employee groups during this phase of mandated maturity initiatives. Only the modeling of learning behaviors by former hierarchical superiors will change their willingness and readiness to embrace new forms of budget maturity—over time.

That said, as with the indoctrination into the machinations of cost types described in Chapter 3, eventually, specialist employees must make that leap of faith. Learning about cost types is one thing; embracing a new version of control (a new budget structure) is quite another. It’s almost like being asked to be the food-tester for the royalty. The paradigm shift from organizational hierarchy has not been operationally established, and resistance can be expected—but not tolerated for long.

When meeting resistance to budget maturity initiatives, executives and managers must focus their attention on the most senior specialist representatives from all essential production/service processes and activities. Senior specialists are the only valid voice of change for the people who work with them. These people represent the most common source of maturity initiative failure as organizational leadership seeks to move out of Stages 1 and 2. The informal authority of senior specialists can outweigh any executive mandate in terms of making or breaking an initiative.

Please note, incentives will not erase the history of specialists’ experiences as subjects of an arbitrary Stage 1 or 2 budget. Unless specialist employees at all
levels of maturity see that they will have a voice in the new Stage 3 CMS, they will
tank the most expensive maturity implementation effort to the bottom of the
proverbial ocean.

This is as it should be. Change efforts fail because senior management does
not really become more mature; senior management expects all other people and
organizational systems to mature instead. Give the specialist employees a partici-
pative voice that carries some decision-making weight. Ask them; don’t tell them.
Otherwise, save your money because your plans will fail. Stage 3 organizations
thrive on the cost and performance information contained within the realm of the
specialist employees. These employees must not be asked to step into the game
unless they have been acknowledged as essential information resources. Incentive
discussions can begin only after executives and managers grant them appropriate
status on the cost and performance management team.

DEVELOPMENTAL CHECKPOINT

126th Ferengi Rule of Acquisition: Always count it.24

Organizations need more than a conventional accounting system as the sole para-
digm and information resource supporting strategic planning, management deci-
sion making, and performance evaluation. Conventional systems hail from an era
when direct labor costs were a significant portion of total cost (versus current low
levels) and that had relatively low capital investment costs (versus current high
levels in automation and technology). When used as the only control paradigm
and decision-support information system, conventional approaches offer limited
insight to underlying cost drivers. They overreport on historical information and
underreport nonfinancial performance aspects.

Cost management systems and structures need to be designed to reflect the
actual dynamics of organizational activities rather than simply providing inputs to
financial accounting reports. Cost types, budgets, and all other cost management
tools must inform decision making and support continuous improvement in cost
and process structures.

Cost accountants and cost managers must balance financial considerations
with a more encompassing focus—value management. Value management starts
with customers and clients, and value-conscious cost managers create customer
and client information profiles. As organizations work to engage and retain cus-
tomers/clients, cost management systems move away from transaction analysis
and offer executive-level insights that suggest timely course corrections. Instead
of just “keeping the books,” cost accounting and management systems in mature
organizations help chart clear strategic journeys.

Building on the discussion of conventional cost accounting contained in
Chapters 2, 3, and 4, remaining chapters set down new layers of analysis and
insight beginning with those most closely rooted in conventional accounting, and
progressing in ever-widening circles of interdisciplinary thought and practice maturity. The following emphasized summary points are the foundation for that transition.

• Basic cost accounting terms and assumptions need to be understood by all managers and executives in organizations that use conventional cost accounting systems, so that they can adequately assess cost analyses and change the analytical framework to more accurately reflect operational realities.
• Executives need to question the formats and assumptions of all cost analysis methods to assure they reflect the actual particulars of business decisions.
• Never trust a cost accounting system with too many cost types.
• Make sure accountants are spending their time on decision-value analyses of indicated problems, and not on aggregated historical variances.

And some new summary points introduced by this chapter:

• Promote a budget process that cultivates the conscious support of strategy and a clear understanding of the resource requirements for executing strategic objectives.
• When using standard cost systems make them earn their keep by providing decision-quality information.
• Invest management time in controllable operations rather than financial forecasting.
• Make capital investment decisions using more than a financial model.
• Balance lagging financial objectives (results) with analysis of leading indicators (process).
Chapter 5

Operational Resource Accounting: Learning New Rules and Roles

When you come to a fork in the road, take it.
—Yogi Berra

Curiosity is one of the hallmarks of the human species. Curiosity often leads to new ways of seeing for certain individuals, and such individual perceptions can lead to behavior changes for everyone. The ability to adapt is a second essential hallmark of humanity. A third attribute is our need to participate. We are curious, adaptive, and participative by nature. Curiosity leads to exploration. Exploration leads to discovery and new perceptions. Once a fundamentally new way of seeing arises, the one with the new insight stands at a fork in the road. One path follows the well-worn route of previous ways of seeing; the other path integrates prior learning experiences and pursues the new. With the decision to set foot upon the newer and newer paths of organizational maturity, individual participation becomes increasingly important.

This dynamic sequence has profound implications for organizations intent on building new ways of seeing and working. People plod a familiar route, sometimes in safety, sometimes in comfort, sometimes in boredom. In contrast, an unfamiliar path heightens day-to-day awareness. In more concrete terms, employees embedded within a stable routine have fewer questions, but when a new landscape opens up, participation—positive or negative—becomes the day-to-day norm. When people help build the new ways (i.e., participate in them), they experience ownership and develop a deeper concern for making new changes successful.

Preceding chapters address the required foundation of (1) the fundamentals of human cognitive development, and (2) the essentials of CMS Stage 2 characteristics. This chapter is a fork in the road and the beginning of CMS Stage 3 territory. Stage 3 is also a bridge between preoperational and concrete operational behaviors (see Exhibit 5.1). At first, the ground rules remain in the preoperational dimension; however, in a consistent developmental fashion, the necessary learning and milestone achievements for the unfolding of the concrete operational capacities are visible from the platform of Stage 2. Rules and roles take a particularly important position at this juncture.
As vision expands to include a broader, more complete way of seeing, people experience initial glimmerings of a new awareness and an excited curiosity that supports further exploration. They develop a certainty that richer insights lie ahead. Most of us have had these experiences in or out of the work context. Like individuals, as organizations mature they become able to see more of their own capacities related to an ever-enlarging environment. This is the ground of awareness that precedes decision and action, and it is crucial to maturation.

Specifically, in the context of cost and performance, the developmental crossroads characterized in this chapter and the chapters to come is a parting of the ways: from the foundational cost concepts and toward a more comprehensive ground of performance. Because nothing is lost as systems mature, cost concerns remain, but they are integrated with more complete ways of seeing the organization and competent ways of managing performance. As depicted in Exhibit 5.2, the maturity characteristics of performance management mark the juncture from less mature cost focuses. Following the cost-only fork in the road means increasing attention to financial capital (budgets, hard assets, and financial measures), at the expense of increasingly valuable competitive resources—human capital and operational performance information. The more executives focus on management by the numbers, the less attention they have to offer people. People become a means to financial ends. Naturally, people sense how they are valued by the organization, and the best, most marketable employees migrate with their superior skills to more mature organizations that can see and acknowledge their value most fully. The direction of the flow of human talent is away from less mature organizations (Stages 1 and 2), and toward the more mature (Stage 3 and beyond).

THREE COST MANAGEMENT INFORMATION DIMENSIONS

The financial cost perspective is a necessary first step, but its information perspective is limited, like a pilot with only one eye. Binocular vision supports human depth perception. The one-eyed pilot must depend on the instruments to know when to set down the plane because a single eye cannot provide enough information to judge depth.
Stage 3 cost management uses a second information perspective, *operations and process*, with the expanded decision support dimensions that the operational perspective adds to the historical-cost-alone perspective. The operations/process dimension increases management flexibility and choice in terms of how resources may be used. As organizations mature to Stage 4, they develop a third cost management decision support dimension: *tactics and strategy*, adding perspective on the future by means of the clear direction and purpose strategy brings to operations and cost management considerations.

In the Stage 2 financial perspective, cost can be reported but not managed. With a Stage 3 operations/process perspective, resources/costs become manageable, not just reportable. Finally, the Stage 4 strategy and tactics perspective makes resource utilization reportable, manageable, and purposeful. This combination provides a more comprehensive set of perspectives.

At this point, the discussion explicitly waves a fond farewell to the study and scrutiny of Stages 1 and 2. Their position in early organizational development is clear, and their limitations have been enumerated. Their control and comparison/coordination milestones provide the platform for Stage 3 developmental dynamics. At this fork in the developmental road, the discussion must also acknowledge the entropic trajectory depicted in Exhibit 5.2 and, instead, continue the developmental journey with organizational leaders who are ready to see costs in different and more comprehensive ways.

The stirrings of Stage 3 present a watershed organizational time period. Once again, the responsibility of leadership is to explore the gray zone between stages—the zone where learning creates new insights and new ways to see the relationship between cost and performance. Leadership must encourage learning in these uncomfortable gray zones between milestone achievements because as an organization reaches maturity in one stage, it stands at the crossroads of the next. One way is comfortable and familiar; the other is unknown territory. Recalling that a milestone is a lagging indicator of competencies already achieved, the Stage 3

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**Exhibit 5.2.** Characterizing the Cost Path to Performance

![Diagram of Three Cost Management Information Dimensions](image)

Stage 3 cost management uses a second information perspective, *operations and process*, with the expanded decision support dimensions that the operational perspective adds to the historical-cost-alone perspective. The operations/process dimension increases management flexibility and choice in terms of how resources may be used. As organizations mature to Stage 4, they develop a third cost management decision support dimension: *tactics and strategy*, adding perspective on the future by means of the clear direction and purpose strategy brings to operations and cost management considerations.

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milestone on the horizon carries a specific set of Stage 2 organizational competencies. Competencies developmentally integrated in Stage 2 include:

- **Control.** In the limited sense of the ability to produce reliable, periodic financial statements (i.e., to regularly produce financial performance measurements)
- **Cost.** The use of conventional cost accounting to produce cost reports, where cost is a measure of organizational performance
- **Compare.** The ability to differentiate between and discern meaning in financial information across time periods
- **Coordinate.** Rudimentary lessons from managing profit by the numbers
- **Presence of the desire to see more clearly the relationship between business processes and profit.** This last point is key and the bridge to Stage 3. Again, it is development between the lines.

The last item means that organizational leadership is ready to include and move beyond financial performance measures as the dominant source for decision making. Executive teams that continue to lead and direct only from financial measures need not apply for Stage 3. Let’s be clear: This does not mean that leadership knows how to manage with financial and nonfinancial measures, but that they are completely ready to do so. In most cases, it means retaining the full set of financial performance measures while experimenting with nonfinancial measures that are suspected to be leading indicators of performance. This does not mean window-dressing balanced scorecards that look good on Web sites, but have minimal impact on internal behavior. More importantly, it does not mean having two sets of measures while holding people accountable only for the financial set. In this context, what do the developmentally integrated Stage 2 competencies equip an organization to engage next?

- Begin to formally measure performance in nonfinancial terms. Often, this means making a sweep of the organization to find out who is already doing this, and then formally experimenting with what intuition says may be worthwhile performance measures. Educated guesses and informed hypotheses are welcome, as long as they lead to learning and insight.
- Learn about process and resource management, keeping in mind that internal pioneers in operational management may make good teachers.
- Experiment with ways to tie financial numbers to processes and resources.
- Explore how processes and resources generate various kinds of value such as customer retention, market and brand position, and of course, shareholder value.
- Investigate the balance between competitive, winner-take-all business thinking and alternative perspectives such as strategic alliances and supplier value chain management.
- Read a lot. Compare notes with trusted colleagues.
OPERATIONAL RESOURCE ACCOUNTING PRINCIPLES

The chapter title—Operational Resource Accounting—may sound familiar and foreign simultaneously. While operational resource accounting is not part of the standard business lexicon, the layer of operational information and perspectives introduced in this chapter is a prerequisite for integrating the process, tactical, and strategic information perspectives addressed in the chapters that follow. This chapter is a bridge between conventional and evolved practices.

The operational-resource perspective gives people the insights they need to step across the gap between Stages 2 and 3. Specifically, the operational-resource perspective is a more comprehensive way to see and manage cost—as resources. Resources create value for all organizational constituents and they fuel operations. Operations enable and execute strategy. When employed through strategically planned operations, resource value grows beyond the sum of its many parts. Strategy is accomplished by operations. Only operational processes create strategic success or failure (refer to Exhibit 5.3).

From this chapter forward, the term resource will be used interchangeably with cost, but the value-conscious connotations of the former will be emphasized.

Exhibit 5.3. Learning to See Cost Differently—Developing Operational Insight

<table>
<thead>
<tr>
<th>System Milestone</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>Finance</td>
<td>Operations</td>
<td></td>
</tr>
</tbody>
</table>

Development Dynamic
- control
- compare and coordinate

Data Sources
- general ledger
- regulatory mandates

Data Management
- controlling the numbers

Management Dynamic
- commit to learn a better way to see costs
- discovering the relationship between process and profits
- learn to track value from the resources that create it
as the discussion expands to include more mature cost management methodologies. Cost has developed negative connotations due to the legacies of conventional systems still struggling without operational and strategic guidance. In the static, conventional systems, costs are bad; costs are a necessary evil. In the world of the purely financial mindset, revenue without cost is the ideal. Sound naïve? Consider the recent dot-com saga. Wasn’t “revenue without cost” the theme? A healthier, more realistic perspective sees expenditures as resources to fuel revenue. Thus the word resource on its own can clear a cost-muddled head and provide a fresh perspective. Just feel the difference between “operational resource accounting” and “financial cost accounting.” Sometimes a rose by another name does smell sweeter.

Operational resource accounting provides a conceptual bridge to more mature cost management practices, as it extends the perspectives of financial cost management information with two fundamental principles:

1. **Resources** fuel profit imperative activities; therefore, the primary responsibility of the cost accounting function is to make resource utilization information visible to cross-functional managers within an organizational context and purpose.

2. Guided by strategy and organizational design, operations, and activities **execute the processes** that generate profit and market success.

The information generated with an operational resource accounting perspective:

- Places operational processes in the context of a cross-functional model of wealth creation.
- Uses operational processes as the primary management focus rather than financial results.

Accounting for resources is not just about cost. Resource accounting creates decision-support information for activity visibility, process timing, and continuous feedback for diverse management interests—strategic, operational, fiduciary. Some obvious examples of situations in which the operational/process perspective is required for good cost management include product customization that requires high inventory levels and the demands of seasonal production requirements on capacity.

Applying operational resource principles in day-to-day practice begins with a new perspective on the usual suspects of Stage 2 control: *inventory, capacity, expense items, employee headcount control, pricing, product/service development and abandonment,* and *project and initiative evaluation.* These are the main topics of this chapter. They are also the primary conventional cost management points of analysis. Operational resource accounting, however, takes an expanded perspective on each.
The maturity with which executives and managers see costs/resources and operational information determines how gracefully the organization moves from Stage 2 to Stage 3, or if it moves at all. Take inventory, for example. People in Stage 2 organizations spend a lot of their time analyzing the dollar value in inventory. In Stage 3, efforts are shifted to managing inventory content to meet nonfinancial measures: customer delivery, just-in-time processes, and so on. The operational resource perspective radically changes the work related to inventory, from simply counting it, to shaping its level and components.

Headcount control is another good example. A Stage 2 organization sees personnel headcount as a cost to be reduced by decreasing the number of bodies employed and by keeping wages low. At Stage 3, the headcount measure becomes less important as attention shifts to the productivity of people. Pricing provides a third vivid contrast. At Stage 2, pricing is some version of a cost-plus calculation. Stage 3 organizations place the operations processes affecting cost, and thus pricing in a continuous improvement framework. Likewise, product/service development and abandonment, matures from conventional product/service analysis to front-end design, and component/process cost management. In short, components of doing business emerge from historical financial statements to the light of managing activities and changing processes today.

In spite of the impressive array of technology and management tools currently available to executives, most organizations continue to report failures in large, expensive change initiatives, mergers and acquisitions, and strategic execution. Cost management systems are neither the culprit nor the cure. However, a myopic focus on financial/cost measures, without attention to what drives these measures, is a root cause of failure to execute stated objectives. Functional protectionism and internal competition for resources are more explicit causes of failure, although these behaviors are often masked in cost-based control systems that force functions to meet misaligned performance standards in isolation. Operational resource accounting provides a more integrated, cross-functional perspective on organizational resources that corrects these common experiences.

The operational-process perspective is a way of seeing an organization as an interdependent unit, without artificial functional boundaries, but with functional expertise contributions. This perspective encourages optimization of limited organizational resources and targets them toward applications for the common good. By viewing familiar business activities through the more panoramic operational/process lens, a critical foundation is laid for the more mature performance management methods described in upcoming chapters.

OPERATIONS AND FINANCE: A BRIEF HISTORY OF A LONG RELATIONSHIP

Finance and operations were not always strangers; nor were they always at odds with each other. In *Relevance Lost: The Rise and Fall of Management Accounting*,...
H. Thomas Johnson and Robert S. Kaplan argue that the “fall of management accounting” is a twentieth-century phenomenon:

After 1925 a subtle change occurred in the information used by managers to direct the affairs of complex hierarchies. Until the 1920s, managers invariably relied on information about the underlying processes, transactions, and events that produce financial numbers. By the 1960s and 1970s, however, managers commonly relied on the financial numbers alone.²

Johnson and Kaplan go on to explore probable causes for this shift to a financial view of the business. Their exploration includes the high cost of information gathering prior to the computer age, the influence of academic financial theory, the emergence of audit practices, and the 1913 United States Constitutional Amendment that established federal income tax.³ The shift of primary focus away from operations toward financial management models left a serious operations information gap for more than 50 years. Operational information became even more inadequate as multinational organizations became more complex and as economic markets became more volatile and increasingly disconnected from businesses themselves.

Today, one of the most dangerous factors of all is that many executives believe that they are making decisions with advanced information and accounting models, when in fact, they are not. The growing popularity of enterprise resource planning (ERP) systems contributes to this belief. Too frequently, ERP installations merely automate conventional paradigms. Recently, Kaplan stated, “I suspect that many more companies believe that they are in Stage 4 than are actually in Stage 4. A good number of those may actually still be in Stage 2, running essentially volume-based costing systems on advanced enterprise software.”⁴

While most business publishers suggest that many organizations are actively experimenting with new, mature cost accounting systems, the majority of organizations continue to make decisions based on management information from 1970s-style systems. Read the following excerpt from *Relevance Lost* and decide from personal experience how much of the description pertains to the current management landscape, keeping in mind that this passage was written nearly 15 years ago.

Typical 1980s cost accounting systems are helpful neither for product costing nor for operational cost control; they do not provide information useful for cost management. The rationalization for their production and existence seems only for the periodic, usually monthly, financial reports prepared for senior management. . . . the preparation of periodic profit and loss statements for senior management has its roots in the decentralization movement earlier in the twentieth century. The periodic return on investment (ROI) measure was developed and used by innovative organizations such as the Du Pont Corporation and General Motors. In order to produce a monthly profit and loss (P&L) statement and ROI measure, the accounting group needed to be able to close the books each month to estimate and record all accruals and to make a
reasonable allocation of the period’s production expenses between inventory and cost of goods sold. There is no doubt that ROI control and the profit center form of organization were not only greatly useful but likely necessary for the growth and prosperity of large, hierarchical organizations during the past sixty years. Nevertheless, despite the successes, problems associated with short-term performance measures such as ROI have become painfully evident in recent years.5

All this begs the question, “If financial models are not the best source of good management information, what is?” The answer: A holistic blend of financial, operational, strategic, and developmental perspectives that encourages functional integration, clarity of organizational purpose, and predictable strategic execution. Taking the fundamental topics of this chapter, Exhibit 5.4 illustrates how an operational-resource accounting perspective helps financially obsessed organizations begin to see the mature, holistic perspective.

Resource inputs are the primary platform of the overall business process. Strategy and operations provide a context for resource transformation; the specific goal-oriented direction, and the means of strategic execution. Performance management provides feedback mechanisms that monitor progress toward strategic objectives and suggests course adjustments. Some of the basic elements of each information perspective that focus management activity and decision making appear at each level of the exhibit. Adding an operational/process information perspective to the financial database for better decision making is the first step on the road to greater maturity for conventional cost accounting systems.

The critical management insight from the operations/process information perspective is seeing the advantages of integration and managing functions for the
production of good of all stakeholders. The logic of this perspective can be extrapolated to the detail of all organization functions.

So, what if an executive group wishes to test whether or not they are managing with integrated insight and with the goal of creating well-being for all constituents? Using Exhibit 5.4, Stage 2 executives and managers in transition can reflect on seven important operational-resource attributes as they pertain to the interplay between the current control culture and its cost accounting mindset in their own organizations:

1. First and foremost, the organization is viewed as an integrated network of relationships with performance linkages between organization, process, and activity structures.
2. Major management decisions are made with the good of all major functions considered.
3. Decisions are made in a “wise use of resources” mindset, as opposed to a “cost cutting” perspective.
4. Executives are willing to forgo short-term personal gain when to do so has a good chance of creating long life and health for investors, executives, employees, and customers.
5. Cash and liquidity are tangible. Management determines organizational health with measures in these areas in addition to the traditional earnings reports and ROI measures.
6. Organizational culture encourages cooperation vs. competition, and seeks alliances and win–win situations as opposed to a sports/war profile.
7. Multidivisional structures contain more key nonfinancial performance indicators than financial measures.

ACCOUNTING FOR RESOURCES IS CUSTOMIZED AND ITERATIVE

Managers creating or using an operational/process information perspective as the basis for cost management decision making quickly learn that their cost accounting information systems must be adaptable to changing conditions. They acknowledge impermanence as a part of doing business and understand that information management is an iterative process. Resource management is customized to some degree in every organization. When a firm takes the first steps in its evolution from traditional cost accounting to more mature systems, several fundamental components need immediate, serious attention. These include inventory valuation emphasis, consistency of formulas and calculations, expense item management, and for manufacturing firms, a migration from a variance focus to more controllable, real-time measures. Traditional concepts such as inventory and expense items may sound immutable. They are not. Fortunately, a variety of readily available, mature resource management methods and tactics simultaneously
provide decision-quality information and the required financial data. To meet changing conditions, a healthy organization may redesign its resource management approaches many times during its lifetime.

Companies that monitor their resource management systems to assure that they keep pace with evolutions in operations constantly cycle through the following exploratory questions:

- What advanced resource management approaches are available, and which ones apply to the most pressing needs within our organization?
- What are our current information system capabilities, and what would it take to migrate to preferred resource management methods?
- Considering our most important needs and available resources, how shall we redesign our resource management system?

The ability to focus attention on resources (not just cost) is the critical distinction between conventional cost accounting and mature cost/resource management information. Conventional theory is driven by accounting measures that depict the effects of production volume. More mature systems relentlessly pursue the elements that truly drive cost (i.e., cost drivers) as well as the causes of complex cost structures.

Organizations that have broadened the scope of their decision-support information beyond the financial perspective have learned that managing strategic course corrections depends upon reliable, current measurements and indicators. Organizations that manage by financial information alone make decisions with a significant time lag. They focus too heavily on lagging indicators and lose the chance to react before problems make their way to the bottom line.

Exhibit 5.5 demonstrates the information flow dynamics of an operations/resource-focused organization with a balanced set of leading and lagging indicators in their performance measurement set. Leading indicators measure the success of operations, processes, and activities as they occur. What can we do to improve the bottom line today? The organization that balances leading and lagging indicators has many choices and can correlate different choices with different financial outcomes. In this example, the company can experiment with the cost of more service agents, managers, customer interface process reengineering, or the kind of music the customer listens to while on hold. Balanced measurement sets help identify those elements that truly utilize resources and drive cost.

No matter how resources are viewed, a resource management system must not lose the essential capabilities of a more conventional system, usually found in Stage 2 cost management systems:

- Products and product lines cost determination
- Cost planning and development for purposes of quotation, pricing, and business opportunity analysis
Cost reduction activities (i.e., control and eliminate cost of scrap, waste, rework)
Transfer pricing (i.e., intracompany)
Production (and capacity) cost reporting and management
Control of inventories from component procurement through sales
Accurate entries to the books of account using consistent principles

**CONTROL AND PROFIT**

Control and profit remain central priorities in systems that emphasize operations and resources as essential perspectives of cost management practice. Healthy development assures that nothing is wasted, nothing is abandoned entirely and therefore, control skills and profit generation competence remain. In addition, the more mature discipline of operational resource accounting, with its wider view, begins to emphasize the management of people’s spending behaviors, rather than conceptualized behaviors of cost. Cost and resource structures help to organize competencies and capacities to yield maximum profit. However, while structures require oversight and control, human beings behave differently and adapt based on their perceptions of their scope of authority. They spend time and energy differently depending on how they are held accountable. No matter how small or large the sphere of influence, local turf becomes part of one’s identity. Inevitably,
the need to control overshadows the desire to address more holistic goals in less mature cultures.

Changing perceptions of control is one of the chief areas of work for leadership navigating the developmental dynamics between Stages 2 and 3. Attempts to control, even in good faith, lead to organizational infrastructures that are better at tight surveillance than they are at generating profit. Those who are invested in the control structure believe at some level that the organization is better off under their control—that it will yield more profit than if they give up their control. In the absence of a commonly accepted control structure, or if the formal control structure is not clear, employees create local informal control frameworks.

What is the optimal degree of organization control structure to yield the most profit? There is no single answer; however, an examination of core operations through the lens of operational resource accounting will point any organization in the right direction when it attempts to answer this question.

Financially, nothing changes unless routine processes change, thereby altering underlying cost structures. Processes do not change unless there is a driving reason for doing so. This means that organizations maturing beyond the financial control systems of conventional cost accounting systems must begin to work with organizational design and strategy at the front end to produce gradual and steady changes in cost structure as the result of improved processes and clear strategic intentions.

Unfortunately, executives faithful to conventional methods may continue to go for the cost throat first. So, to make the distinction between the conventional control perspective and the discipline of operational resource accounting absolutely clear, each of the remaining topics in this chapter contrasts the conventional view with the operations-resource information perspective. Appendix C, “Analysis with a Purpose,” presents an additional guiding framework for investigating and structuring cost and performance inquiries.

INVENTORY

To experience the contrast between conventional and operational resource perspectives on inventory, study Exhibit 5.6, where resources, listed in the far-left column, are contrasted in terms of conventional and more mature management methods. For example, for many years now progressive manufacturers with highly repetitive production processes have developed just-in-time (JIT) methods to streamline the flow of production and minimize waste. JIT manufacturers define waste as any activity that adds cost without adding value. Therefore, they design process methodologies to minimize the costs of moving and storing inventory before, during, and after production.

Exhibit 5.6 contrasts more mature operational resource management perspectives at the same stages in the manufacturing process. For example, kanban methods create more efficient production flow by organizing subassembly components efficiently through the chain of work cells during production.
### Exhibit 5.6. Manufacturing Inventory Management: Conventional Steps and Advanced Alternatives

<table>
<thead>
<tr>
<th><strong>Inventory Resources</strong></th>
<th><strong>Operations Functions</strong></th>
<th><strong>Accounting Function</strong></th>
<th><strong>Resource Remedies</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material/Components</td>
<td>Receiving function processes new material items</td>
<td>Record Inventory Asset and A/P Liability</td>
<td>Kanban, JIT: materials received directly to production</td>
</tr>
<tr>
<td>Receiving dock labor</td>
<td>Inspection for fitness/rejects</td>
<td>Record returns to supplier</td>
<td>Quality at the Source, supplier certification limits rejects</td>
</tr>
<tr>
<td>Quality assurance labor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouse/stockroom space</td>
<td>Material recorded and stored</td>
<td>Record Inventory Adjustments</td>
<td></td>
</tr>
<tr>
<td>Materials management labor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production planning labor</td>
<td>Job process orders released Components kitted and issued to production</td>
<td>Record Work in Process (WIP) Inventory — material</td>
<td>Eliminated by Kanban, JIT, and Backflush Accounting</td>
</tr>
<tr>
<td>Materials management labor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production labor</td>
<td>Production routing Fabrication Machining Component assembly</td>
<td>Record WIP Inventory — labor and overhead</td>
<td>Replaced by Lean/Agile, Cellular methods and Cycle Time Management</td>
</tr>
<tr>
<td>Manufacturing supplies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production labor</td>
<td>Final assembly</td>
<td>Record WIP Inventory — labor and overhead</td>
<td>Eliminated by Backflush Accounting Quality-at-the-Source</td>
</tr>
<tr>
<td>Labor-support materials</td>
<td></td>
<td>Record scrap</td>
<td></td>
</tr>
<tr>
<td>Quality assurance labor</td>
<td>Inspection for fitness/rejects</td>
<td>Record waste, rework labor, and material</td>
<td>Quality methods</td>
</tr>
<tr>
<td>Test labor</td>
<td>Examine product against fitness specifications</td>
<td>Record rejects, rework, scrap</td>
<td></td>
</tr>
<tr>
<td>Test equipment and materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials management labor</td>
<td>Store product Finished Goods</td>
<td>Record Finished Goods Inventory</td>
<td>Eliminated by Backflush Accounting</td>
</tr>
<tr>
<td>Shipping labor and materials</td>
<td>Ship custom orders</td>
<td>Record Revenue, COGS</td>
<td></td>
</tr>
<tr>
<td>Transportation costs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Accounting and materials management labor**
- **Periodic inventory counts**
- **Record adjustments, Obsolete Excess Inventory**
- **Value-added Inventory Management**
Inventory

Note that the more mature method frequently presents the option of reducing or eliminating the activity and associated costs in question. In contrast, numerous complex, often redundant, activities characterize the conventional, financially based system that attempts to compensate for control ineffectiveness by increasing the number of activities and control-oriented tasks. In a detailed account of the many agencies responsible for the Enron bankruptcy, Jim Brimson’s summary of conventional accounting professional tendencies hits the nail right on the head:

How did this situation evolve? Where were the guardians of the accounting profession? The AICPA and the FASB were playing Trivial Pursuit. They spent time on the finer points of specific issues that are of minimal importance to a limited number of organizations. Such efforts misdirect management attention. Organizations have to expend vast resources to navigate complex GAAP regulations. This effort wastes an organization’s valuable accounting time and resources that should be spent helping the organization create value through operational excellence.6

As described in the operations-resource information perspective, more mature methods strive to eliminate nonvalue-adding activities, where value-added is defined as “something the customer will pay for.”

Conventional Accounting Inventory Perspectives

From a conventional accounting information perspective, inventory is an asset on the balance sheet—a class or group of materials not yet expensed or capitalized. Similarly, the interactive nature of processes affecting inventory also makes it notoriously difficult to manage in a traditional framework. Since no single owner is responsible for inventory control, blame and abdication of responsibility are endemic to the traditional inventory management environment.

Manufacturers cannot afford to ignore inventory because it is usually one of their largest assets, and capacity to generate it one of their biggest concerns. Service organizations also carry a substantial part of their wealth in their inventory of human skills; however, these human assets are not reported on conventional statements.

In the first part of the twentieth century, inventory valuations first emerged from the external audits of financial statements. Today, inventory valuation continues to make up a healthy portion of many management accounting classroom textbooks, and inventory control still consumes significant internal and external employee hours in conventionally managed organizations. On top of this, many managers working within the constraints of conventional systems and, lacking better alternatives, continue to rely on inventory valuations calculated using standard costs.

As estimates, standard costs are useful conventions for budgets and financial statements, but they are almost never accurate representations of current product cost. Therefore, using standard cost information for real-time pricing, process management, and other cost-dependent decisions involves risk. The
way a company is organized and managed, and the efficiency of its inventory management processes determine the value of the inventory asset. So it is the value of inventory, not its valuation, that should capture the most vigilance. The difference between valuing inventory and the value of inventory is similar to the miser who counts the hidden cash in his mattress, as opposed to the investor who puts money to work. The miser is not up to the developmental challenge of using money as a means, not an end.

A common inventory management mistake falls into the “software as solution” category. Only the truly naïve think that controlling inventory through sophisticated software applications (i.e., ERP) will eliminate inventory problems. Material requirements planning (MRP) preceded ERP. MRP systems attempt to determine optimum inventory quantities and then back into component orders from suppliers based on expected delivery lead times. The main trouble with both systems is that they typically rely on volatile sales forecasts.

Operational Resource Accounting Inventory Perspectives

In the 1980s, the financial pain of ever-increasing inventory levels lead to insights concerning the dysfunctional behavior driven by absorption accounting with limited (i.e., direct labor) allocation drivers. As managers migrated toward better understanding of operations, inventory reduction presented some low-hanging fruit. Improvements in inventory management were some of the earliest victories for organizations beginning to enter Stage 3, where interestingly, the inventory perspective reflects the operations-oriented management thought of one hundred years ago, prior to the rise of external audits. As Johnson and Kaplan report, managers originally “developed cost accounts for two purposes: (1) to evaluate internal opportunities for gain from their resources and, (2) to control the internal processes and activities that generated those higher returns.”

This sounds remarkably similar to the operational resource accounting point of view—optimize operational resource utilization to maximize profit. The financial and audit approaches to managing inventories by the numbers cannot meet this goal. On the other hand, operationally focused inventory managers can use the balance sheet to their advantage if they learn to see it in terms of the resources that it represents. Both inventory and cash accounts reside in the Current Assets section of the balance sheet. An operationally focused inventory manager with a cross-functional resource perspective thinks of inventory as cash, for cash is what it takes to translate resources into inventory, and cash is what inventory is expected to generate when it is sold. This encourages proactive inventory management as opposed to passive valuation and reporting.

More to the point, if conventional accounting cannot adequately manage inventory, what can? Some alternative ideas about inventory management arose during the operationally oriented Quality Movement of the 1980s and 1990s. Courageous manufacturers even dared to experiment with zero inventory. Less aggressive approaches include JIT and kanban. These techniques attempt to
reduce inventory levels by positioning component materials at the point of use and placing inventory decisions in the hands of those making the product.

The point is that operationally focused inventory management cannot be performed by the accounting function alone. The web of cross-functional inventory-related impacts is complex and, therefore, needs to be treated in a holistic fashion. Part of the responsibility of leadership in Stage 3 is to demystify the mechanics of inventory and to help everyone in the organization to see inventory as the working asset it is.

**CAPACITY MANAGEMENT**

Capacity is another key point of perspective shift. Capacity is determined for the organization as a whole with many assets working in an integrated fashion. Because capacity is irrelevant to the transaction-accumulation focus of financial reporting conventional accounting lacks the perspective required to manage capacity. To be blunt, it is not possible to manage capacity because the conventional methods do not measure capacity.

Conventional Accounting Capacity Perspectives

In contrast to inventory, capacity is easier to observe in a service organization than in a manufacturing firm. A service company has $x$ human beings, multiplied by $y$ working hours, supported by $z$ equipment and other resources (e.g., computers, service vehicles). In a manufacturing company, capacity relies on multiple functions and resources operating interdependently: floor space, machine efficiency, raw material availability, and human effectiveness, to name a few. In both sectors, capacity determines an organization’s ability to meet its customers/clients’ demands. Sports equipment manufacturers commonly experience seasonal changes in capacity requirements, as do tax preparation services. No company has complete control over the timing and level of demand for its products/services. Thus, capacity oversight is often viewed as an ad hoc management activity, commonly called “fire fighting.”

Traditional accounting indirectly records the results of capacity utilization in variances such as volume and efficiency. In late Stage 2 companies, these variances can provide preliminary insights that create the commitment to see capacity differently. Stage 2 accounting simply has little to say about this critical operational element.

Operational Resource Accounting Capacity Perspectives

From an operations resource accounting viewpoint, it is important to know if valuable resources are being utilized to generate profit, whether they are sitting idle, and of course, whether resources in use could be applied elsewhere to make
greater profit—all concerns congruent with the profit imperative. More mature cost management approaches such as activity-based and resource-based accounting provide methods to calculate unused capacity and report it in hard numbers. More mature methods are inherently operational because they work across the interconnected functions and processes that comprise available capacity.

The essence of capacity management from the operational resource accounting perspective is *quality availability*. Availability is the ready-to-serve state of people, materials, machine time, and logistics/distribution channels. If any of these are subquality—untrained people, machines that eat parts, a hung-over consultant—the resource availability may cost more than it earns. Capacity management requires balancing the cost to supply, material and human resources, the quantity work those resources can perform, and the rapid connection to delivery channels.

A more accurate *cost to produce* underlies the entire capacity management effort. When accounting systems fail to differentiate idle resources from those that consistently perform, profits decline while the reasons for unused capacity remain hidden. Once again, activity-based and resource-based accounting techniques can disclose a more accurate set of relationships between available resources and units or work produced.

It is unrealistic to believe that an organization can continuously hold the exact amount of resources it needs to meet changes in demand levels. Inevitably, resources (including people) become temporarily idle or scarce under unforeseen conditions. This ties into the earlier discussion of fixed and variable costs that depend on an operational context for their meaning. In other words, when capacity cannot be used for an unforeseeable period, management must translate this excess/idle capacity into either increased sales from new markets, or reduced spending in some combination of product discontinuation, process outsourcing, equipment or plant sales, and employee termination.

CJ McNair, practitioner and academic expert in the cost management field, has an approach to capacity management that might be paraphrased as "find it—measure it—fix it." She discusses this tactic in "The Hidden Costs of Capacity." First, she characterizes capacity issues in terms of waste. Next, she identifies types of "hidden waste" including waste produced by management, technical sources, accounting requirements, and infrastructure. From a process improvement perspective, the consequent capacity management focus becomes idle capacity and the creation of ways to improve processes to eliminate or utilize the unused resources. Operationally oriented resource managers are more and more often "abandoning engineered standards" (i.e., traditional standard costing methods) and developing process measurements around a continuous improvement model that encourages sustainable change. It is worth noting that Dr. McNair’s rationale for abandoning engineered standards is because they actually "build in acceptable levels of waste."

Perhaps the most difficult characteristic of capacity management is that it requires a patient, long-term perspective. Making capacity management decisions
based only on this month’s earnings and this quarter’s shareholder meeting does little to encourage the long view. However, managing capacity as a long-term operational resource creates sustainable value generation and profit.

EXPENSE ITEM MANAGEMENT

Expense item reporting, tracking, and containment consumes resources. The question at hand is “What value is created in these activities?” Examples of the more common categories of expense are listed in Exhibit 5.7. Many companies go to a great deal of trouble to enforce expense controls and verify expense validity. Tax laws require a certain level of vigilance here, but an intelligent balance must be sought between expense item accountability and wasted resources.

Conventional Accounting Expense Item Perspectives

Conventional accounting systems conduct a number of analyses on expense items primarily directed at compliance and accountability. Consequently, the conventional analyses on such accounts as travel, entertainment, and supplies produce information that can be used by managers to promote compliance and enforce behaviors. An infamous enforcement example that most business people encounter some time in their careers is the “travel & expense (T&E) report from hell.” Designers of these exacting and time-consuming forms apparently assume that employees are prone to cheating on their reports. In fact, the more complex (and annoying) the T&E form, the more it invites disdain and even defiance.

In terms of conventional accounting systems and their tight focus on the generation of financial reports, expense items are to the income statement Sales, General and Administrative (SG&A) section what COGS is to the statement’s Gross

Exhibit 5.7. Common Expense Categories

<table>
<thead>
<tr>
<th>Function/Department</th>
<th>Types (nonemployee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling</td>
<td><strong>Travel:</strong> meals, lodging, transportation</td>
</tr>
<tr>
<td>Research (Product, Market)</td>
<td><strong>Rentals/Leases:</strong> copiers, computers, projectors</td>
</tr>
<tr>
<td>Human Resources</td>
<td><strong>Supplies:</strong> paper, forms, promotional pieces</td>
</tr>
<tr>
<td>Customer Service</td>
<td><strong>Phone Lines:</strong> long distance</td>
</tr>
<tr>
<td>Marketing</td>
<td><strong>Advertising space and time</strong></td>
</tr>
<tr>
<td>Finance &amp; Accounting</td>
<td><strong>Professional services, legal, tax, contractors</strong></td>
</tr>
<tr>
<td>Information Technology Services</td>
<td><strong>Training:</strong> instructors, materials, participant time</td>
</tr>
</tbody>
</table>
Margin section. Although most sales, general management, and administrative functions carry heavy people-related expenditures, the focus of conventional accounting system analyses continues to be the relationship between expenses and profit. Analyses targets typically examine things like copying costs, computer equipment, T&E, and customer service expenditures.

Functional areas such as advertising and information technology (IT) are often subjected to greater scrutiny than, say, accounting and human resources (HR). Intuitively, everyone knows that accountants must be on staff to do the taxes and deal with banks and that HR departments are necessary to keep employers from running afoul of labor laws. Regulatory functions are infrequently scrutinized, and rarely subjected to return on investment (ROI). However, the search is active and ongoing for performance metrics related to advertising dollars and IT investments. These areas are treated more like capital investments than expense categories.

Information technology investments are an analytical thorn in the side for financial professionals working in conventional accounting systems. “We know we need the stuff, but we can’t say exactly what it’s doing for us,” is a common lament. The wave of ERP implementations in the last decade has made this problem especially urgent. Conventional financial analysis tools are simply incapable of depicting complex assessments like IT system value, the impact of advertising on sales volume, or influence of brand on stock price. These examinations require far more sophisticated approaches such as multiple regression analyses and other advanced statistical methods set in operational or strategic contexts. Clearly, conventional analytic tools designed to monitor pencils and paper clips cannot capture the value of large integrated investments.

Research and development (R&D) is sometimes classed as an expense item. R&D has had more analysis success within conventional models for two reasons. First, R&D work is done in a project framework, not unlike a job order in manufacturing—a familiar territory for cost accountants. Second, the long-lived federal R&D tax credit has encouraged the development of more accurate accounting methods.

Concerning the project framework, the responsibility center within a chart of accounts structure in traditional accounting readily lends itself to R&D projects. The project has a definite target—product introduction. The identification of revenue increases from sales of new product, netted against its production costs is easily captured by conventional analysis. However, conventional methods fall short for R&D analysis in capturing costs of new product cannibalism of existing products and in presenting the total cost of new product introduction across all organizational functions.

Expense items are the favorite targets during Stages 1 and 2 cost-cutting efforts. Cut advertising by 30 percent. Easy. Delay those three R&D projects we haven’t started. Easy. Nobody travels until further notice. Easy. Now predict the impact of lost sales, outdated products, missed customer contacts, and their subsequent effect on profitability. Cost cutting is easy. Managing resources takes skill and the maturity of a broader perspective.
Operational Resource Accounting Expense Item Perspectives

Operational resource accounting systems see every resource (i.e., cost, expense, revenue, assets) at work within the context of a value-generation process. Intra-functional processes take a back seat to cross-functional operations that together execute strategy and generate value. Departments, teams, and individuals work to create the big picture. Consequently, the specimen slide of microscopic expense item control transforms to the telescopic panorama of resources working together to create value and wealth.

Recall that, by definition, an expense is an expired cost. This means that the resource value is history; it can be reported, but it cannot be changed. Operational resource managers spend little time on such analyses. What’s the point?

The success or failure of most business initiatives depends on many variables, not just a single technology investment or an advertising campaign. For example, a complex mix of variables affects lagging indicators such as brand equity and average share price. Consider a typical mix of variables that directly or indirectly impact average share price: advertising, profit, brand equity, pricing, promotions, and earnings. Care to make a predictive model out of these? Advertising agencies are usually more than willing to help prove their case. Executives spending resources on advertising need to spend some serious time into justifying advertising expenditures. What value do they really create? Business professionals who continue to believe that advertising cannot be linked to financial results need to bone up on recent work on models that do indeed make such relationships visible. It is expected that within a few years these hard-to-get-at connections will become not only visible, but predictable.¹²

As an inherently operational function, information technology serves as a model for operational resource expense item valuation and management. Operationally oriented IT teams pay close attention to company strategy, making sure that applications development has a clear strategic purpose. They also develop performance metrics that clearly communicate IT contributions and adherence to service-level agreements. A few IT functions have actually managed to transform themselves into revenue centers by providing valued services to external customers.

As the information age and knowledge management blossom into business realities, many companies find that internal service requests far exceed the IT projects budget. Information technology potential must be managed strategically and cross-functionally to capture the fundamental operational value of IT investments. Executives can no longer afford to allow IT managers to sort out priorities in isolation. A cross-functional executive team considers the good of the whole enterprise in making decisions about limited IT resources.¹³

Finally, getting back down to the compliance side of expense item management, how do operational resource accounting systems work with those T&E reports? Automation has helped, and several software companies have stepped up to the plate. A few companies have stopped T&E reporting altogether, except for
retaining the required receipts for the IRS. Expense items are not tracked to enforce compliance. People are trusted. Expense items become part of an interrelated set of operational performance measures. In these companies, managers and executives are given a T&E budget that must not be exceeded but that can be used at the professional’s discretion. “Oh, you didn’t make your sales quota, but you’ve maxed your expense account? Hmmm . . . we need to talk.”

All of these operational resource accounting examples have some common advantages over the less mature conventional methods. They:

- View expense items as part of a cross-functional process leading to profitability.
- Seek to identify and understand multiple influential variables, as opposed to containing cost categories in isolation.
- Connect expense items to expected value creation (i.e., profit).
- Promote understanding of and alignment with customer/client needs.
- Reduce compliance work, including authorizations and audits.
- Automate transactions (e.g., a flight charged on a credit card is automatically posted to an “airfare expense account”).
- Manage by exception, requiring management action only when dollar limits are exceeded or policy is breached.
- First and foremost, honor the strategic and process goals of the activity.

HEADCOUNT CONTROL OR PEOPLE?

The operational-resource information framework differs most markedly from conventional systems in its perspective on the value of human beings. For who or what, if not human beings, is the ultimate overseer of wealth creation—not just executives, but every employee. But most of today’s top managers were trained in a competitive paradigm where financial capital serves as the key resource and foundation for making decisions. Two problems with this view became obvious in the 1990s. First, the value of knowledge and intellectual capital clearly proved that certain resources could be virtually infinite. Second, crafting and implementing a strategic market position or developing an excellent core competency takes time, and the pace of change in the last two decades argues against taking too much time. Critical factors shift in the time it takes to put a strategy or competence in place.

What’s an executive to do? Some pioneering leaders are turning to their most flexible, adaptable, trainable, and unlimited resource—the energy and creativity of people who drive the process excellence and create the market image. Viewing people as the chief resource is a long, long way from the conventional financial view of human resources. Technology, especially wireless communications, has devalued bricks and mortar and enhanced the value of people. Simply put, people matter now more than ever. Stage 2 executives, however, are babes in the woods
when it comes to understanding what workers want, how to recruit the best talent, and how to retain unique human resources.

**Conventional Accounting Employee Headcount Control Perspectives**

Conventional cost accounting breaks employees into roughly three categories—(1) direct labor, (2) manufacturing support labor, and (3) staff (i.e., SG&A)—because these categories fit nicely into income statement categories and standard cost structures. At the dawn of modern cost accounting, labor, as a component of total manufacturing cost was high. Therefore, cost accountants naturally viewed labor as the chief driver of cost. The monetary value of direct materials was easy enough to determine. So, labor hours/dollars drove the remaining cost component, overhead.

This works well as long as labor is a significant component of total cost. Conditions have changed since the days of conventional accounting focus on headcount. As previously noted, throughout the twentieth century, direct labor steadily became a less significant cost component until at the turn of the twenty-first century it accounted for less than 10 percent of total cost for the majority of manufacturers, and as low as 1 to 2 percent of the total costs for some highly automated plants. It has also been noted that in contrast to plummeting labor costs, two other resource costs soared in the last part of the twentieth century: (1) depreciation from high capital investment (i.e., machines, automation) and (2) IT knowledge management costs.

For the expanding service sector, the story was just the opposite. In contrast to manufacturing, however, the service sector can more easily assign overhead costs to customers and products through service hour billings. In some services such as consulting, general overhead (i.e., not directly assignable to clients) is much less significant than in manufacturing. The cogent point is that the relationship between the cost of people and the value they create takes on a number of configurations. More and more, employees shift from being workers with knowledge to being knowledge workers. Increasingly, the organization’s capital resides in people’s heads. How does conventional accounting manage and control this new capital? It doesn’t. There is no place for the value of human resources on the conventional balance sheet and no line item for gain or loss from talent expense on the income statement.

This is one of the most important weaknesses of conventional accounting in a diverse economy. Conventional accounting views people from one of the same perspectives it uses to report the management of material components—replaceable, interchangeable parts—commodities for purchase and use—a cost of doing business—and the most annoying perspective of all, as burden. The last is a term applied to support labor whose cost is included in overhead. The answers to the following queries indicate how people as resources are viewed. Try these six questions with the organization’s most senior accountants.
1. What is our cost of labor as a percentage of total cost?
2. Is any of our overhead allocated using direct labor hours/dollars?
3. What are the root causes of our employee turnover?
4. How much time does accounting staff spend analyzing labor variances?
5. How much time does it take, and what does it cost us to train a (1) line worker, (2) supervisor, and (3) IT professional?
6. What does it cost us when an employee walks out the door?

Related recommendations include:

- Look for more mature alternatives if questions 1 and 2 reveal that percentage of labor is less than 12 percent and drives a significant part of overhead.
- If answers are hard to come by for questions like 3, 5, and 6, human resource perspectives have yet to develop to a level of maturity that supports Stage 3 insights.

**Operational Resource Accounting Employee Headcount Control Perspectives**

Organizations that use operational resource accounting principles accept the simple relationship between people and operational processes: People run the processes that create value and profit. People cannot be appropriated as can financial and market capital. Employees need to be viewed as living, breathing value creators, who choose to exchange their time and energy for the value an organization can provide them, extrinsically and intrinsically. Machines, suppliers, materials, services, marketing, and advertising can all be easily interchanged. In contrast, once a human being matures into a strategic resource, that person cannot easily be copied. An employee who has developed an enjoyable life in the organization is hard to buy. Even if the employee can be “bought” by a competitor, the intellectual capital is difficult to translate into another company culture; thus, while gifted employees have become more expensive, they are worth the investment because their intellectual capital is not as transferable as financial capital.

Simply put, operational resource accounting methods value human beings as the single most important resource and understand that they are the chief competitive advantage. If this is not convincing enough, consider that skilled workers are predicted to be in shorter and shorter supply over coming decades.

How do organizations that use operational resource accounting information manage “headcount control”? Better than most conventional managers realize. Investors and market analysts are turning more and more to nonfinancial, operational information and measures. This includes the value of people. One proprietary human resource model even calculates the value of professionals not yet hired. Book values for companies such as Microsoft are a fraction of their market values because investors look beyond physical assets to intangible assets.
Intangible asset measurement has been on the rise for over a decade. All trends toward organizational maturity point away from the conventional model in which humans are left unaccounted, and toward a model that measures and manages the value of people. Operations depend on people as resources. Organizations using operational resource accounting methods for headcount control do not count people; they measure and manage how their people count in value creation.

Traditional, hierarchical organizations often lack the communication channels across employee groups to make improvements. Executives and managers make all the decisions and figure out all the solutions to problems. Line employees who transform raw materials into finished products are not encouraged to share improvement ideas. When they suggest a better way, supervisors are often too busy to test the idea, and so keep following standard processes. Yet, insights lie in the hands and minds of line workers—solutions to defect, rework, and cost management problems. The line worker makes or breaks value as much as any employee.

Four operational resource principles that help align every employee’s energy and intelligence include:

1. Clearly communicate what is important to the company as a whole. Everyone knows that making money is essential, but knowing how each job contributes to that end requires specific, repetitive communication.
2. Line workers in manufacturing convert valuable raw material resources into saleable products that are the chief means of revenue generation. To produce this revenue, they need to know why doing a good job is important. In addition, they can often help make job performance more efficient and effective.
3. In a service organization, the “line” worker is much closer to the customer. Knowing how and why to do a good job is immediately visible in the reactions of customers and clients.
4. Strategic execution occurs only in operations processes and activities; therefore, this is where value creation needs to be understood most thoroughly.

People know whether their employers consider them valuable. Even though organizational mission statements and strategic objectives may contain high-sounding phrases about the importance of employees, very few firms make good on stated intentions. In such environments, public statements about the importance of people can backfire. If a mission statement speaks about quality products and quality standards fall short, the units of product won’t complain about a faulty mission statement. Conversely, if the value of human beings is preached but not practiced, people observe the omission and ridicule executive hypocrisy.

Within the software industry where grueling hours are the norm, SAS Institute makes good on its commitment to employees and is guided by four principles:

1. Treat everyone equally and fairly.
2. Trust people to do a good job.
3. Think long term.
4. Practice bottom-up decision making.

Laudable principles are good only if lived day to day. Some of the uncommon ways SAS stays true to its commitments are:\textsuperscript{14}

- A 35-hour work week—it’s company policy
- Free on-site medical facility for employees and their families
- On-site day care
- Gymnasium
- Subsidized restaurants and cafes
- A culture that recognizes the unique contributions each employee brings to the SAS Institute community

Increasing attention to the human element is an organizational development litmus test. Maturation involves an expanding focus of awareness that gradually encompasses more and more interests outside the self. A Stage 2 executive or manager often sees this aspect of organizational maturation as simply getting soft. On the contrary, firms in Stage 3 and beyond acquire deeper and deeper wisdom concerning the connection of human beings to value creation. More mature organizations make an art and a science of managing people, while their developmentally arrested, Stage 2 counterparts continue to focus on financial and physical capital.

**PRICING**

*Pricing* is another term that carries many connotations. At its most basic, pricing means the amount of currency charged for a product or service. A price may also be prospective as in a price quotation. More commonly, price is concurrent with product/service order (e.g., deposit, prepay), or post-delivery (e.g., invoice, fee statement). A price can be related to an external customer (a sale) or an internal customer (*transfer pricing* for intracompany sales).

**Conventional Accounting Pricing Perspectives**

Traditionally, all manufacturing pricing relies on standard costs, and in service firms, on standard billing rates. Conventional pricing in both these sectors is based on a cost-plus approach, where the plus refers to the profit margin the firm predicts it can add to cost based on the market’s sensitivity to prices.

For much of the twentieth century, this cost-plus pricing model prevailed. Prior to the last quarter of the twentieth century, a combination of factors made it possible
for suppliers to use their standard costs (assumed to be very close to actual) as the basis for price calculation. The factors included slow inflation rates, relatively low market competition, unavailability of relevant data (e.g., competitor prices, internal activity costs), and lack of alternative pricing approaches.

Break-even and other cost–volume–profit (CVP) analyses are two additional conventional models sometimes used in pricing. They also typically rely on standard costs. All these pricing calculation methods have rapidly fallen from favor in the last 10 to 15 years due to the rate of change in business conditions, data availability, and price volatility.

Intracompany transfer pricing also relies on standard costs in a conventional cost system. Transfer pricing practices exist along a continuum. At one end, the seller calculates the transfer price, including costs of direct material and labor, plus predetermined overhead. Then, if the seller is a profit center, it adds a margin of profit. Often, the corporate entity sets a standard rate for this marginal profit. At the other end of the method continuum, the transfer price transaction is calculated using only the variable costs related to the specific number of product units, and excludes overhead. This method is typically used when the seller is a cost center. Although theoretically transfer prices are supposed to mimic market prices, they rarely do. In practice, these prices mirror the realities of intracompany politics.

When product/service requests are new to the organization, conventional companies seeking a better pricing model may base all prices on a current-actual or forecast cost. Many accounting systems, especially those based on an MRP, employ three cost fields—standard, current, actual—to provide richer information for developing price quotations. In this paradigm, every new customer request for a quotation can mean long, intensive analysis based on ever-shifting data. Often the effort culminates in a best guess and usually does not capture organization-wide costs (e.g., customer service, field service response, relationship efforts). Organizations that use these conventional systems frequently employ full-time staff members whose sole responsibility is quotation and pricing.

Operational Resource Accounting Pricing Perspectives

Managers in an organization that uses operational resource accounting methodologies see pricing as a natural outcome of process efficiency and healthy partnerships with customers and clients. They recognize the customer as a critical and active partner in cost/price decisions. They may not always have integrated information systems, or sophisticated models, but what they lack in technical maturity, they make up for in relationship maturity. They are not stalled in a competitive paradigm; rather they experiment with new rules and roles in value and supplier chain partnerships. The organizations that use operational resource accounting methods want their customers and clients to know about internal, relevant costs—costs often driven by customers/clients themselves. These firms share cost information with customers as a way to determine the customers’ true needs, examine
what fulfilling those needs will cost, and then with the customer determine priority services/charges. In this kind of relationship, pricing decisions are impaired when either party works with incomplete or secretive cost information.

This open-book style of customer relations is foreign to the competitive worldview of many executives in less mature, conventionally managed firms. First things first: The managers of any organization must be able to see cost differently, and understand its cost structure before they can contemplate moving to more open, mature approaches to accounting; conventional accounting systems fail to show them what they need to see. Activity-based and resource-based systems are particularly helpful in this regard, and are often used to analyze customer cost and profitability. \(^{15}\) Target costing is another mature method that supports strategic pricing.

Customers rarely turn down free services, but quickly prioritize their needs when services carry a charge. For example, a brand-name sporting goods manufacturer greatly valued its largest customer—an other brand-name company, but underneath the millions in revenue from this customer, the accounting system booked as general overhead and SG&A many of the activity costs that clearly belonged to the large customer, thereby burdening all the manufacturer’s products instead of only the ones actually causing the costs. These activities included extra services required by the customer. For example, although the customer placed large orders, the orders contained hundreds of different drop-ship instructions that resulted in increased packaging, freight, and logistics expenditures for the manufacturer. An activity-based costing (ABC) analysis focused on customer profitability revealed that this largest customer was also the most unprofitable!

Transfer pricing can also be readily adapted to the operational-resource information perspective. If internal managers in diverse organization units see a clear, consistent, and understandable flow of economic/cost information, they can much more easily find win–win solutions in this difficult, conflict-laden practice. Price structures of all types are facilitated by the information made available by the operational perspective.

PRODUCT/SERVICE DEVELOPMENT AND ABANDONMENT

Product/service development and abandonment (i.e., termination, discontinuance) are really two ends of the same process called life cycle management. Fifteen years ago, when product/service life cycles were still relatively long, and maturity rates slow, the long time intervals and the paucity of available methods made life cycle management a theoretical pipe dream. Since then, drastically shortened development timelines and the increasing rates of innovation have converged to make life cycle management a business necessity.

No other time in the life cycle of a product/service has more potential for cost
Product/Service Development and Abandonment

management than the design phase. Design engineers can do many things to control costs, which include limiting the number of new components, and conversely, incorporating components that the firm already uses. Service providers can design highly efficient processes. In addition, providers of components, supplies, and services can be leveraged during the start-up phase.

Innovation is an increasingly common dimension of performance measurement for leading-edge organizations. This includes not only new products and services, but also improvements to existing offerings. Along with measurements of innovation, the most successful organizations proactively design cost management practices that help guide management decisions throughout product/service life cycles.

Conventional Accounting Product/Service Development and Abandonment Perspectives

Development is usually a long, slow process in traditionally managed organizations. Make no mistake: An organization that continues to use conventional cost systems for decision making also manages conventionally in other important areas. In other words, if an organization’s executives are satisfied with cost management information generated by a financial-only reporting system, they by default manage with limited information at the operational level. In addition, traditional cost management cultures do not typically foster risk-taking, nor do they consistently practice rewarding creativity. Even though their executives may expect these qualities, they do not consciously cultivate them.

As a result, organizational control systems subject new initiatives to lengthy and rigid review and approval procedures in most conventional cost accounting atmospheres. For reasons all too familiar, the odds are against the fresh idea seeing the light of day. First, the new idea is conceived in a relatively sterile, risk-averse environment. Second, The Boss must acknowledge parenthood of the new concept. Then procedure happens. Studies and competitive analyses may follow. Reviews and approvals take their pace. Product managers compete for development resources in a scarcity mindset, ever narrowing the chances that the new idea might be embraced long enough to “grow up.” If the idea navigates this far, some brave somebody has to find a budget and assign human resources. Frequently, by the time all this has happened, the idea has already withered or become an orphan, and a nimbler competitor has not only begun production, but also entered the marketplace.

Conventional companies use these process hierarchies because new product launches are at best, educated guesses. Highly aggregated financial reporting and standard cost structures cannot begin to inform new endeavors. With limited support information, management becomes culturally conditioned to be uncomfortable with risk. Risk is part of every new product/service launch; however, conventional accounting systems magnify risk because they attempt to make
decisions using conservative, financial approaches (i.e., payback rates, ROI hurdle rates, and discounted cash flow methods).

Similarly, at the slightest suggestion that a product/service needs to be abandoned because its life cycle has ended, the lack of appropriate information throws the decision into political territory. Sales personnel argue for a full product line. Production staff members negotiate for a more reasonable product mix. Conventional cost accountants become frustrated because they cannot provide meaningful information on product and customer profitability. In making abandonment decisions, executives must rely on experience and intuition rather than clear performance data.

Finally, when it comes to in-process research and development (IPR&D), there is an important caution, especially for public companies. The SEC casts a suspicious eye on earnings management through IPR&D accounts, especially on IPR&D obtained through mergers and acquisitions because they have a particularly high potential for distorting earnings. The flap is all about valuation methods and the explicit value of the R&D expenditures. This is a very good example of the inseparable nature of costs, resources and value.

**Operational Resource Accounting Product/Service Development and Abandonment Perspectives**

Flexible. Agile. Lean. Innovative. These are words frequently used to describe organizations that have learned to add a new layer of operational resource information to the financial substrate. Organizations that emphasize the importance of operational information are **lean** (i.e., fit), but they waste time prodigiously on creative endeavors. They are **agile**, but in contrast to their financially limited traditional counterparts, they live by rigorous development procedures that can be executed rapidly to match market speed. They manage **innovation** with equally ruthless withdrawal from markets when advantage wanes. At their best, they are extravagantly experimental with rules and roles, preferring the notion of learning through trying as opposed to risk aversion and punishment.

Organizations that add operational metrics information to complement the financials are **flexible**, but they carefully shepherd human resource skills, regularly upgrade skill profiles, and deliberately manage recruiting and retention. In short, these operationally focused organizations take the time to learn how to measure and manage flexibility, agility, fitness, and innovation for human and financial capital.

In the spirit of operational resource accounting, cultures of operational flexibility, agility, fitness, and innovation manage **current** product/service design activities as if those operations depend directly on past performance, and they build their business vitality on the expectation of a steady stream of ongoing **future** product/service offerings. Organizations that measure and report operational information look at the entire life cycle of a product or service as a manageable process. At the end of that natural life cycle, operational resource accounting methods for measuring and gathering financial and operational
information, such as activity-based and resource-based analyses, clearly point out when it is “time to get out of the pool.”

PROJECT AND INITIATIVE EVALUATION

New product and service development is but one important area for innovation management. Healthy organizations continually renew their own internal processes and the people who drive them. Strategic planning, total quality efforts, performance measurement initiatives, and many more techniques are all aimed at innovation. Like products and services, projects and initiatives also have a life cycle that is a continuous process from emergence, through concept development, prototype launch, implementation, maintenance, and renewal or abandonment.

Change efforts that impact a whole organization generate more uncertainty than any other activity. The efforts are usually engaged because something seems wrong or needs improvement, and someone has an idea how it might be fixed, but no one really knows if the energy and resources devoted to the change initiative will pay off (think Six Sigma, Customer Relationship Management, Balanced Scorecard). Even so, executives continue to authorize significant, costly organizational change projects based on imperfect information.

Conventional Accounting Project and Initiative Evaluation Perspectives

The conventional mindset just wishes everything would settle down. A thoughtful strategic plan is crafted, and then the business condition assumptions that formed the basis of its logic change overnight. Dealing with a range of uncertainties is a reasonably simple definition for management practice. As a system of management, conventional accounting was built a long time ago for stable, slow-changing organizations and a limited business information environment.

Here is the scenario for traditional firms: they take on projects and initiatives with high hopes and low budgets and virtually no decision-support information. People are frequently asked to take on the extra work of the change initiative or project in addition to their full-time-plus regular jobs. Busy executives raise their hands, bless the project, and then disappear. They reappear for monthly or quarterly reviews, and usually hear that the project has come up against obstacles. Lack of top management commitment and failure to assign appropriate project resources are both near the top of the list of reasons for all types of project dissatisfaction and abandonment.

Conventional accounting systems support change initiative decision making and management from a purely financial, “I told you so,” information perspective. In monitoring change, financial numbers are the first to abdicate. Whereas conventional cost accounting assigns and tracks R&D project expenditures by an account number, improvement projects frequently receive no charge numbers, and
expenditures are not tracked. Naturally, without operationally oriented performance measurements, initiative objectives, milestones, and achievements remain hazy. Frequently, the majority expects the project to fail, but change initiatives have to die due to natural causes.

The conventional cost accounting view of change management can be summed up in 10 simple words: The best way to manage risk is to avoid it. The conventional approach tries to leave little to chance but is continually surprised. Formulas drive results. Accountants report variances. Deviations from performance standards remain mysteries.

Operational Resource Accounting Project and Initiative Evaluation Perspectives

There is always work to be done. With the benefit of a complementary layer of operational metrics information, managers recognize that like life, the process of doing business is dynamic, not static. When work is performed without expectation of permanent solutions, and so-called creative failure is celebrated for its lessons, activities regularly adjust from day to day, and continuous change becomes part of daily work life, not a periodic spectacle. Specifically, when included in the decision-support database with the financials, operational information explores the very nature and actual behavior of resources/cost; and through the exploration, managers build professional experience and useful knowledge incrementally.

Since operational information enhances the understanding of costs in terms of resource value, executives know that major change initiatives cannot be accomplished with existing staff and resources in current configurations. Operationally informed executives do their homework, commit resources with confidence, and more often than not, lead initiatives themselves. Committed resources mean peoples’ time (additional staff or release time of existing staff), space (project headquarters), and appropriate equipment. It does not always mean lavish budgets; it does mean reasonable budgets with periodic accountability. Along with financial accountability, executives put in place operational project milestone reporting and, later, expectation for improvements to financial and nonfinancial metrics. Tracking numbers and performance measures (i.e., expectations for milestones, deliverables, budget adherence) are designed as part of the initiative.

Some operational information-gathering methodologies include using a performance scorecard for project and major initiative management. The scorecards include leading and lagging indicators with the financial measures that answer the concerns of conventional systems.

As a method designed to integrate financial and operational information, ABC/M models can be used to simulate product, service, and project opportunities, and thereby help predict potential profits. Perhaps most important, because the organizations that manage by operational and resource information are by definition culturally more holistic and cross-functional, executives keep an eye on
New Ways of Seeing

(and a hand in) the multiple projects around the organizations. By doing so, they avert duplication of effort, cross-pollinate insights between projects, and oversee project management as an unified activity across all initiatives.

NEW WAYS OF SEEING

This chapter has presented a substantially new way to see more meaning in cost. To be sure, organizations at this phase of development do not possess fully developed operational-resource perspectives, but their employees begin to have glimpses of what may be, and they come to believe that there is more to discover. Paradoxically, while this chapter has discussed operational-resource perspectives in terms of some of the more mundane cost management focuses—inventory, capacity, expense items, employee headcount control, pricing, product/service development and abandonment, and project and initiative evaluation—these same conventional cost management practices give transitional Stage 2 executives the context they need to see costs as resources and recognize operations as their most important focus. All rich information paradigms unfold in new stages built on the structures of the older stages. Basic arithmetic provides the platform for the development of geometry; geometry provides the platform for trigonometry; trigonometry for algebra; algebra for calculus. As new ways of seeing unfold into new forms of mathematics, practitioners develop new applications for each platform.

This kind of work is the domain of the visionary, not the process or technical specialist. This is the work of the executive, and the “New Ways of Seeing” in this chapter examine only executive responsibilities for creating new ways to see cost management as operational resource management (see Exhibit 5.8).

Executives must patiently follow their early, developing insights regarding the richness of operational resource information for decision support and lead the way for the rest of the organization’s employees by first manifesting their new cost/resource insights into mundane cost management activities like those discussed in this chapter. Unlike the authoritative mandate required to begin an organization-wide cost management development initiative, executives begin to practically give the organization a new cost and performance management direction with modeled mandates.

Inventory management is a visible way to begin. Executives can lead the process of transition from an absorption and numbers-focused costing system to an operationally focused, cross-functional resource perspective that manifests the

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relationship between the cash that creates the resources that become the inventory that becomes the cash again after the inventory is sold. Executives model an organizational mandate of proactive inventory management to guide other employee groups away from less mature passive valuation and reporting.

Capacity is another seemingly mundane but essential focus for executives to set new directions for organizational cost management. Executives who see capacity management in terms of waste management learn new ways to see capacity over the long term. Since the executive group’s primary relationships include the interests of the shareholders, executives model new capacity cost management mandates by demanding information that supports capacity management decisions based on more than this month’s earnings and this quarter’s shareholder meeting. Operational resource information supports long-term capacity management decisions because it reveals the interdependencies between floor space, machine efficiency, raw material availability, and human effectiveness, and quality availability. When executives demand and use this information to make long-term capacity management decisions, they model the direction of cost/resource management for the rest of the employees.

Expense item management in the operational resource accounting environment establishes maturity beyond the cost management system. Conventional accounting systems conduct a number of analyses on expense items as blunt control instruments primarily directed at compliance and accountability. These controls presume employee misbehavior, and executives often function in the role of enforcer. Operational resource accounting systems see every resource as a means of creating value. When executives manage expense items as part of an interrelated set of operational performance measures, they model a new direction for expense item management system based on employee performance that presumes mature, trustworthy employees. The organization learns to see people as well as numbers.

Headcount management carries similar organizational maturity implications; the relationship between the cost of people and the value they create takes on a number of configurations. Conventional systems see people as costs, not resources. Executives in conventional systems manage employee numbers in the same way they manage material components, commodities for purchase and use, and as an overhead burden. Executives committed to organizational maturity initiatives can model new ways to see headcount in terms of people as strategic resources who choose to exchange their time and energies to meet value-creation expectations for the organization. Conventional expense item management treats employees like children; conventional headcount management treats people as interchangeable parts. Executives who make decisions based on operational resource accounting information model ways for the rest of the organization to treat employees like trusted adults who commit to join and maintain a strategic partnership of value creation for all organizational stakeholders. Where would you rather work? Executive behaviors model direction-setting mandates for organizational behavior that guide transitional Stage 2 organizations into more mature Stage 3 cost and performance management practices.
This chapter creates a bridge between conventional and more operationally mature perspectives by covering some important essentials of how different information perspectives determine management work life. The most important takeaway is not a technique or a method, but a point of view: accounting for and managing the resources that fuel operations. This perspective recognizes cost as the raw stuff of value, the resources on which value is built and revenue generated. Costs—resources—value: These three cannot be separated.

Operational resource management is the successful stewardship of valuable financial and human resources resulting in benefits to an organization’s important constituents. Put another way, reconsider the CMS mission discussed in Chapters 2 through 4 through the lens of the operational perspective: The purpose of a cost management system is to support understanding of the nature and behavior of cost, and thereby promote the wise management of valuable assets through optimizing limited resources.

The operational-resource mindset discussed in this chapter requires major rethinking of traditional cost accounting practices and Generally Accepted Accounting Principles (GAAP) as the primary management information guideposts. For example, GAAP requires a consistent, fair and reasonable allocation of overheads to products/services. This nicely spreads the peanut butter of overhead expenditures, but does not reflect real use of resources and the value creation they are used for.

Dr. CJ McNair elegantly articulates the more advanced cost–value relationship and its management challenges.

• “Cost and value are complementary, not competing, terms—both must be understood if an organization is to intelligently choose its customers and markets. The implications for the profession are significant. Finance professionals must become bilingual, they must bridge the gap between costs and value as well as between the language of the market and the language of business.”

• “Clearly, not every dollar of cost is equal. Some costs lead directly to customer value creation and profits; others do not. Knowing which costs, activities, and efforts yield the optimal return to the firm and its stakeholders is the new objective—the raison d’être of twenty-first-century cost management.”

• “For almost a full century, cost has served as a primary measure of operational efficiency; and cost management experts emphasized productivity, not value creation. In the ongoing search for cost reductions and operational improvements, attention was always turned inward—to the plant floor, not the trading floor.”

• “Cost will no longer be a measure of efficiency but rather of strategic effectiveness: How much value did a dollar of cost create? Where can resources be
In short, operational-resource cost management is value management because value management occurs only within operational processes. Within these operational processes, only robust, deliberately designed business methods enable value. The path to value is the process road through the organization; the financial results simply reflect value created through process execution. In the simplest terms, profit is the accumulated outcome of the activities and processes performed by a firm’s people. This iterative process is captured in the ways that the CMS provides people with more mature ways to see costs as the resources that create value. A mature CMS gives people at least nine practical ways to see cost/resource application in day-to-day activities.

1. Costs–resources–value are inseparable within operations and activities.
2. The primary purpose of inventory is to generate value, not to be valued.
3. Capacity can’t be managed if it can’t be seen.
4. Expense items are only worth the value they produce.
5. People are the most important process, product, and purpose.
6. Pricing is a partnership, not a competition.
7. Products/services have natural life cycles, just like people.
8. Internal projects and initiatives are all about renewal of people and processes.
9. An operational-resource perspective is created with the operational information unique to each organization, not copied from others.
Chapter 6

Processes, Activities, and Resources: Shaping Organizational Identity

For discipline is the channel in which our acts run strong and deep; where there is no direction, the deeds of men run shallow and wander and are wasted.

—Ursula K. Le Guin

Every organization has financial information, ranging from the simplicity of a check register to a glossy annual report. The financial information format is designed to be commonly recognizable and comparable between companies. While ubiquitous, financial statements do not distinguish an organization’s basic competitive advantages. Long before preparation of financials, other aspects distinguish winners from losers, and growth from decline. Resources, activities, and processes comprise the essential platform for product and service differentiation that may lead to organizational distinction. Excellent processes based on appropriate resources executed through the activities of knowledgeable people shape the identity of a firm. “When it absolutely, positively has to be there overnight” (Federal Express) and “Just do it” (Nike) exemplify processes and resources artfully crafted into instantly recognized identities—identities that all employees can embrace and translate according to their own responsibilities. Just as individuals become famous for abilities that tower above average performance (Wayne Gretzky and hockey, the Dalai Lama and compassionate leadership), so do organizations rise to prominence for their unusually excellent service and products (Rolex for its watches, Harvard for its MBA).

High achievement is correlated with the ability to learn and adapt, as well as with an environment of participation. Within the ABC/M portion of this chapter, the participation imperative is introduced. This Stage 3 imperative is the corollary to the profit imperative of Stage 2. Performance, by nature, occurs within partnered elements: learning and application. An acorn can mature into nothing but an oak. In contrast, an organization has many choices and a range of possibilities. Therefore, the first task of a Stage 3 organization is to answer the question: What do we want to be?—the preoperational stage question the self asks as it turns outward to engage society and culture. Less mature Stage 1 and 2 organizations
habitually ask a different question: _How much money do we want to make?_ Based on this conventional question, the accounting discipline is a useful framework. Based on the Stage 3 identity question, the disciplines of development and maturity guide people in the organization to a precise and accurate answer.

Posing and answering the identity question can be as simple as “To Protect and Serve,” or as complex as a detailed strategic plan for becoming the next automobile brand of choice. The first identity question leads inexorably to the next: _What do we have to do to become what we want to be?_ The clearly articulated response to these deceptively unassuming questions generates two essential focuses of organizational development and management: coordinated learning and structural design. _Coordinated learning_ implies constructing repositories of information so that they are accessible, understandable, and amendable to immediate application. Information repositories come in many forms. It may be a customer relationship management (CRM) system, a human being in a formal mentor role, or the informal learning possible in a research laboratory set up to foster exploration and innovation. A company that emphasizes coordinated learning consciously and deliberately manages the appropriate availability of people and other resources.

_Organizational design_ guides employees to appropriate information learning resources—repositories, people, and experiences. _Structural design_ addresses the physical network of resources and information within which coordinated learning occurs: building and office layout, personnel interconnections (e.g., hierarchies, matrices, self-managing work cells), and information system connectivity. All these components working together determine the excellence or poverty of organizational management for Stage 3 and beyond. Stage 2 companies address neither coordinated learning nor structural design. Stage 3 organizations begin to develop coordinated learning and more learning-efficient structural design by seeing beyond cost structures to resources, processes, and activities.

**RESOURCES, PROCESSES, AND ACTIVITIES**

Once people become aware that the organization is made up of potent processes, and adaptable activities, fueled by elemental resources, they begin to see the need for current daily information that helps them to compare alternative resource usage, and thereby coordinate human efforts within ever-more efficient processes. When this developmental insight on the real sources of financial value takes hold, an organization steps forever beyond the boundaries of a Stage 2 cost management system (CMS). However, financial metrics do not disappear. Following the developmental principle that competencies and skills are not lost, but integrated, measures such as return on investment (ROI), earnings per share (EPS), and profit remain intact, but they lose their status as organizational imperatives.

An early attempt to understand resource/process/activity interaction included mapping existing internal processes. Process mapping is a valid starting place, but
insights from this effort take considerable time, keep focus on the as-is situation, and do not necessarily lead to acceptable solutions. Meanwhile, the profit imperative relentlessly pressures executives to seek rapid, effective solutions.

Another early Stage 3 temptation is to fall back on simple comparison, a pre-operational skill, in the form of benchmarking and best practices. Also time consuming, these two tactics contain a long-term fatal flaw. Although a short burst of benchmarking may provide valuable learning and insights, a benchmark, by definition, establishes a static performance standard—someone else’s accomplishment. Best practices also can provide learning experiences; however, the flaw here is that what works in one organization often fails altogether in another.

Executives and managers transitioning to Stage 3 must learn two new concurrent skills: (1) strategically aligned tactic selection and implementation, and (2) organization identity building. The second skill is popularly known as establishing brand, market position, public image, and so on. The first, method selection, is tricky business when balancing practicality with the less tangible elements of identity formation. Therefore, this and the next two chapters characterize management selection sense in the context of building organization identity to enable more rapid recognition of the best-fit approaches for dealing with current and anticipated conditions. Organizational discipline, as in a system to control conduct and behavior, must encourage both strategically aligned tactic selection and implementation and the exploration of building a new, more strategically consistent organizational identity.

Management methods seem endless. Business professionals can select from an array of approaches for understanding and improving the processes that produce profit. Most often, the chief exigencies are (1) funding and resources and (2) certainty about the effectiveness of the method. Projects frequently fail, and investments in improvement initiatives carry measurable risk. Moreover, the process-oriented methodologies are only one category of business tools among several options that managers can choose as their organizations mature beyond conventional, results-based management. Chapters 6 and 7 discuss specific tactics, a set of popular management tools targeted for specialized situations. Chapter 8 addresses the broader scope of the strategic systems designed to coordinate management tactics. Taken as a unit, Chapters 6, 7, and 8 provide a walking tour of available initiatives that enhance cost management decision making, as well as insights for choosing them.

CONTINUOUS IMPROVEMENT AND WASTE ELIMINATION

The particulars of a decision determine the various kind and level of information required: detailed and aggregate, historical and predictive, strategic and process, global and local. The concept of continuous improvement and its corollary, waste elimination, rose to prominence with the Total Quality Management (TQM)
movement in the 1980s. Waste, as seen through the lens of continuous improvement within processes, is frequently defined as activities the customer is not willing to pay for.

This combination of waste and quality was the chief driver of the return to operation and resource management. Once an organization sets foot on the path of continuous process improvement, life will never be the same. A continuous improvement and waste elimination mindset immediately begins dismantling conventional hierarchies because, to be effective, this work must be done cross-functionally. This is a critical point. Regardless of rank or title, Stage 3 organizations value the person with the better idea. The homogeneous principles of Scientific Management no longer apply. Quality Circles represent an early manifestation of this shift. The first glimmers of mature organizational partnerships flash briefly across an unsustainable hierarchy.

In the early days of quality and waste resource operations management, the excitement of the paradigm shift sustained its momentum through the inevitable false starts and unsatisfactory initiative results. When viewed from a developmental perspective, setbacks encourage learning and refine the search for more appropriate approaches. Eventually, with persistence and enough time in the marketplace, the informed management of a healthy firm develops a knack for learning from its missteps. They also gain experience in risk mitigation.

Sometime during the 1980s, most North American organizations identified three key drivers of financial results: customers, quality, and internal operations. This identification fueled the rise of operations-based methods, notably, TQM, the Theory of Constraints (TOC), and activity-based costing and management (ABC/M). All these grew out of the desire to better understand the nature and behavior of costs, resources, activities, and processes. More recently, models such as resource consumption accounting (RCA) have attempted to fill in some of the gaps left by its forerunners.

Interestingly, operations and accounting professionals have been equally active in this maturation. TQM and TOC are theoretically grounded in operations management. In contrast, ABC/M and RCA spring from financial management roots. As methods evolved to improve quality and to better serve customers, cost management techniques developed in parallel by providing better visibility into the nature and behavior of cost. This enabled wiser management of limited, valuable resources, and promoted improvement in cost structure.

Make no mistake, the methods developed during this era were, and remain, hearty developmental advances, with one eye toward aggregate financial success, and the other on the multitude of supportive operational victories. ABC, for example sought to explicitly represent cost in terms of its operational meaning. The management world as a whole was learning to see in new ways during this era of true milestone achievement. In Chapters 7 and 8, it becomes evident that these milestones actually set the stage for the same sort of developmental insights in Stage 4 strategy-based systems.
Continuous Improvement and Waste Elimination

Unfortunately, some accounting professionals remain reluctant to move their systems beyond Stage 2. Such accountants continue to rely on conventional approaches, and do not acknowledge that organizational conditions and life cycles have moved steadily away from consistency and stability toward a mindset of adaption and continuous improvement. Among those accountants who have taken the continuous improvement paradigm to heart, there remain many who are so busy capturing process costs in great detail that they never stop to question the value of the processes themselves or the valueless activities contained within them. In other words, a strong tendency remains to describe what is in the same old ways rather than to imagine what could be. This is the most real and present danger for development out of the Stage 2 CMS. If the accountant can’t see another way, executive pressures under the profit imperative prevent leadership from seeing any other way than management by results, because results are the only thing that count before Stage 3.

Four Continuous Improvement Dilemmas

The alignment of continuous improvement with cost management system design carries four inherent dilemmas for process managers. First, processes exist in the here and now, in constant motion. Managing process with conventional cost accounting systems is like trying to hit an agile target with a blunt, heavy weapon. Good managers are expected to hit the target of customer-valued activities and simultaneously improve internal business methods, while financial performance measures continue to predominate. This is the frustrating situation encountered by Stage 2 executives and managers who say they can see beyond the financial statements, but who continue to keep everyone accountable to a Stage 2 CMS.

As with most complex situations, the answer is not choosing between customers/processes and financial results; the answer lies in creating customer value while continually improving the processes that drive the customer’s value proposition that in turn create desired financial results. This inclusive mentality is another hallmark of early Stage 3 companies. Cognitive science has established that lower levels of maturity are associated with either/or mindsets whereas higher maturity is associated with the ability to embrace simultaneity and combinations. Perspective broadens and a greater range of adaptation becomes possible.

From a conventional cost accounting perspective, the blended, inclusive perspective is untenable because it is beyond the static scope of the balance sheet and income statement. Therefore, progressive financial professionals who maintain financial statement integrity and use mature cost management approaches devise ways of harmonizing their activities with financial information and with the continuous improvement mindset. Just as an infant does not decide to stop crawling and start walking in one swift change, the improvement-minded accountant stumbles a few times before hitting a steady stride. For example, early Stage 3 financial professionals often make their first ABC attempts much too detailed, and
become overly concerned about exact reconciliation to the general ledger. Despite missteps in the experiment of learning new ways of seeing, these same early trials lead to lasting, actionable, and more mature cost and performance management insights.

The second inherent conventional cost management dilemma in relation to process management alignment involves existing process structure—or lack of structure—entangled in the day-to-day work common to many organizations that manage processes as an afterthought. The pull of the status quo, resistance to change, and the inertia of existing accounting systems can hinder significant process redesigns. Companies that pay little attention to refining their processes find that their process map looks like a plate of spaghetti. Such organizations committed to Stage 3 CMS development initiatives are often better off starting fresh with a clean sheet of paper and a complete process redesign. If barriers to process improvement persist, cost structure improvement opportunities are lost as well.

A third process improvement dilemma is project sprawl, more diplomatically termed project proliferation by Michael Hammer. Pressured to find rapid solutions but uncertain of what solutions will actually work, top executives often try a scattergun of many improvement methods with the hope that something is bound to stick. Commonly known as the “spray and pray” approach, ambitious, well-intentioned middle managers and supervisors add to project sprawl as they inaugurate a variety of initiatives at the local level. Developmentally, multiple, uncoordinated change initiatives are serious distractions from focused growth.

The fourth dilemma centers on resources: most process improvement methods do not include explicit resource analysis, and most cost/resource systems usually track almost nothing about process management. An obvious interconnection is overlooked: Processes are not possible without resources, and resources sit idle with no processes to channel them. Process management is resource management.

Processes, Not Transactions

The methods surveyed in this chapter were each designed with the explicit intent of improving on conventional system capabilities. They accomplish this by managing processes and/or making process cost structures more visible. One of the distinguishing management milestones of the 1980s was the insight that more mature organizational architectures are structured in terms of processes, not in terms of financial transactions. Financial transactions merely document the flow of resources through activities and processes without changing them. The discovery of process management facilitated strategy formulation and the identification of non–value-added activities and their costs within processes. Executives seeking an alternative to continual price escalation based on a so-called “cost-plus” mentality, turn their attention to operational processes and cost structure improvements.

As process orientation and continuous improvement methods mature, insights about the resources and resource accounting that fuel processes unfold as well.
Time, human effort, money, equipment, facilities, brand presence, information technology, and a host of other resources emerge from the cloak of financial transactions to manifest their inherent potential. Ultimately, a Stage 3 CMS charts the interdependent paths of resources, costs, activities, and processes.

TOTAL QUALITY MANAGEMENT

Imagine a business world without TQM. The tenets of this rich and varied approach are so integral to business as usual that it is virtually an entry-level requirement for doing business. Although TQM was not designed to be a cost management system, it has had undeniable impacts on the understanding and practical management of cost. In some of its earlier versions TQM did not explicitly include cost considerations. The earliest TQM mantra was, “Do the right things for quality improvement and the money will follow.”

Naturally, this incomplete view did not last very long, and in short order the profit imperative motivated executives to establish concrete links between qualitative performance efforts and bottom-line results. In the late 1980s and the first half of the 1990s, statistical research from companies practicing TQM for over five years showed the clear relationship between TQM and financial results. However, the lag time between TQM-related process improvement causes and significant financial effects is measured in years, not months or quarters. Quality control and TQM methods were each first implemented in the manufacturing sector; service sector quality efforts came later. TQM has been a significant influence on redefining the way people see both quality and cost.

Although quality is not easy to define, buyers have demanded it since ancient times. In the twentieth century, the term took on expanded and specific meaning. In the first third of the 1900s, Scientific Management principles promoted standardization that laid the foundations for modern TQM. Standardization was enhanced in the quality control era with its control charts and statistical process control (SPC). In the second half of the twentieth century, management science leaders such as Walter A. Shewhart, W. Edwards Deming, Joseph M. Juran, and Philip B. Crosby played major roles in raising quality awareness. The now famous “Plan–Do–Check–Act” cycle (PDCA), originally attributed to Walter Shewhart, but renamed the “Deming Cycle” by the Japanese, developed during this time. Learning under the gentle tutelage of Deming and Juran, post–World War II Japanese manufacturers lit the spark that ignited the 1980s TQM explosion in North America.

TQM: Performance and Development Impacts

An important quality management insight, the Pareto principle, states that 80 percent of all problems are generated by 20 percent of all causes; thus, management must discover and attend to the 20-percent causes. The rationale is that the
20-percent causes create 80 percent of the waste, with obvious cost management implications. Quality efforts relentlessly probe processes for these 20-percent causes, understanding that a process is a series of defined, reproducible steps within which resources are transformed to achieve a particular result that is valued by those the process is designed to serve. SPC tracks and helps remedy the chief causes of production waste and error. SPC views process outcome variation within predefined tolerance levels, working from the core assumption that variation exists in processes and activities that are designed for repetition. Some important TQM tenets that bear directly on cost management include:

- **Higher quality at lower costs.** This is the heart of TQM. The remaining four principles expand on this central tenet.
- **Fitness for use.** This means a finished product/service meets requirements for intended use, thereby reducing after-sales costs: warranty fulfillment, field repairs, and product returns.
- **Design.** This refers to the engineered construction protocols and procedures for creating a product/service that facilitate efficiency and effectiveness. Research has clearly shown that approximately 80 percent of product cost is determined during the design phase.
- **Conformance to intended-use requirements.** Conformance depends on how well quality design and efficient production yield a product/service that is fit for use. A more aggressive definition understands conformance as a deficiency-free product or service. Conformance cost impacts include reduced scrap and waste.
- **Customer satisfaction.** This refers to meeting or exceeding customer expectations.

Six additional TQM principles have become standard management practice in many businesses. The first four are attributed to Joseph Juran, and the last two to Philip Crosby.

1. Training in quality principles throughout the organization
2. Applying project management to continuous improvement methods
3. Top executive commitment and involvement in all TQM activities
4. Focusing attention on quality management with the Pareto principle
5. Do it right the first time
6. Zero defects

TQM provided the impetus for *customer-focused* approaches of many kinds, including the customer relationship management (CRM) and Partner Relationship Management (PRM) methods currently in vogue. Waste elimination in its many guises grew out of the TQM focus on continuous improvement. Thus, even though
Total Quality Management

TQM is not designed to be a cost management system, its implementation impacts most aspects of revenue (customer), and cost (COGS, operating expenses).

TQM and operations maintain a directly interdependent relationship. As a quality management precursor to TQM, quality control methods include test protocols, inspection for errors (i.e., quality inspection), rejection of failed units, and a great deal of rework, scrap, and wasted resources. The costly and inefficient control/inspection era of quality management stands in sharp contrast to more mature performance results and cost savings of the TQM “do it right the first time” and “zero defects” methods. TQM identifies and tracks product/service/process defects and variation within predetermined ranges called tolerance thresholds.

The ongoing development of fresh new TQM practices continues to be supported by quality achievement recognition in the form of prizes, such as the Baldrige National Quality Award and in certifications, such as the ISO 9000 series. In addition, several organizations actively support TQM, including the Conference Board, American Society for Quality, and American Supplier Institute. These efforts to refine and enhance a variety of quality management practices have particularly helped businesses identify high-performing suppliers. For many corporate customers, supplier quality certification is a prerequisite for doing business.

TQM Performance Advantages and Shortcomings

TQM identifies resources that slip through the cracks of process as waste expenditures—a never-ending cost management improvement opportunity. As a mature management methodology proven in research and practice, managers easily become complacent or bored with continuous TQM. Since everyone practices TQM, ongoing efforts do not appear to deliver any exciting competitive advantages. TQM may have evolved into a market-entry business practice, but how many times can a tainted bottle of over-the-counter medicine go to market? In addition, TQM continues to evolve, reinvent itself, and expand its applications to less tangible areas like information quality, the interface between human beings and technology, and even the quality of life. For example, the city of Jacksonville, Florida, manages its operational processes with quality-of-life measurements.

TQM and Conventional Cost Accounting. A conventional accounting system is hard-pressed to justify TQM and improvement activities. Generally Accepted Accounting Principles (GAAP) are not designed to guide product and service quality management, and general ledger systems do not make it easy to track costs of quality. Obstacles to success arise from the very inception of TQM within a conventionally managed cost accounting system. The cost–benefit analysis of TQM proposals must be timely, and proposal costs must be correlated with benefits over several accounting periods. With TQM’s cost–benefit lag time, it has a hard row to hoe within a Stage 2 system that cannot track operational resource information as
it relates to cost and financial outcomes. Feedback reports on active TQM initiatives must reach managers while adjustments can still be made. Stage 2 accounting systems usually fall far short of these capabilities. Conventional systems have a well-earned reputation among TQM practitioners: These systems deliver reports too late and fail to capture the appropriate operational relationships.

Even with the inherent incompatibility of conventional systems with TQM requirements, financial professionals attempted to adjust accounting systems to integrate TQM premises as they emerged as management standards during the 1980s. Cost of quality (COQ) methods were the first of these attempts to align a results-based cost system with TQM practices. COQ modestly supports waste reduction related to poor quality, and reports on the resources expended on TQM efforts.

Executives intuitively understand the direct relationship between quality failures and bottom-line impact. However, failures in processes can remain hidden within conventional financial reporting. Finding the specific locations of process failures and then designing process remedies requires operations information and insight. Some of the initial COQ attempts to trace the improvement path included data in four COQ categories:

1. Prevention
2. Appraisal (later termed detection)
3. Internal failure
4. External failure

Different COQ practices vary in their specific application, but all COQ approaches strive to calculate the resources to achieve performance improvement through these four TQM focuses and compare the expenditures to benefits that result from TQM efforts—that is, TQM expenditures versus TQM savings. At heart, this classic cost–benefit analysis seriously challenges conventional accounting systems not designed with TQM in mind. When examining some of the specific items that must be tracked under the first three COQ categories, it is easy to see why conventional accounting struggles. For example, consider how the following basic TQM-related costs would fit into a conventional Stage 1 or 2 CMS: supplier certification, TQM planning and training, and product engineering design changes.

**TQM and More Mature Methodologies.** In the early days of TQM, there was so much opportunity to reduce waste that companies enjoyed considerable expenditure reduction in their initial efforts. As the easier initiatives were completed, it became harder to attain the same level of savings in the same amount of time with the same level of effort.

Very aggressive methods have been developed to reach relatively inaccessible quality levels. *Six Sigma*, for example, is a statistical, data-driven, systematic
approach to continuous improvement that seeks to achieve a 99.99966 percent level of quality. Motorola’s Six Sigma quality efforts focus on process performance expressed in terms of statistical results. For any selected quality criterion, a Six Sigma performance target is plus or minus six standard deviations. Another, more accessible improvement measure popularized by Motorola is defective parts per million (PPM). These measures help move organizations toward the zero defects TQM goal. Some process experts, such as Michael Hammer, find fault with the relentless Six Sigma push for process perfection. If the process design is substandard, people can work as hard as they are able and achieve only insignificant improvement and savings.6

The intuitive link between quality management, cost reduction, and increased profitability encourages organizations to move toward more mature accounting and performance systems that can track and report process management progress and the cost savings achieved. Improvement intentions and targets need to be absolutely clear in all cases. Better quality is an ambiguous goal. Defining the parameters of implementing “better” can mean the difference between a COQ of $1,000 and a COQ of $1,000,000. Context and specificity of requirements determine appropriate resource expenditure levels. Context relates to intended use. A heart pacemaker quality level generally needs to be more reliable than a $50 pair of walkie-talkies. If the context of quality is not rigorously defined, resources for improvement efforts can easily be misapplied to noncritical processes and attributes that do not interest customers, and to products with weak markets. Quality improvement efforts must be deliberate or they can become a substantial category of waste. Dr. A. Blanton Godfrey, Chairman and CEO of the Juran Institute, explained the context of quality this way:

If you ask me to define quality in the abstract, I struggle. If you ask me to define quality in terms of a telephone, which I looked into for many years, I can give you 300 very specific specifications and requirements—right down to how it would be tested and where we might want a platinum versus gold contact...Without context, quality ends up being a slogan or a meaningless phrase...What we know today is not necessarily the right information for managing the business next year. Like an instrument [panel] in the airplane, we must constantly know what needs attention and what can be ignored.7

So far, this discussion has covered the established rudiments of TQM that focus on relatively obvious, visible quality and quality relationships. More recent evolutions of TQM target subtler costs. In The Profit Potential, CJ McNair identifies these hidden costs of quality including:8

- Expediting
- Customer dissatisfaction
- Lost orders
- Stress
- Back-office waste
Discovering and eliminating waste (i.e., expenditures) in these five areas is much harder than finding the causes and solutions to defective materials and untrained employees. Quality–cost–profit linkages seem obvious, but just try to monitor and manage them with conventional accounting information systems and hierarchy perspectives. The next undiscovered territory of TQM falls inside the human dimension. In large part, TQM has been successful because it changes human behavior by refocusing attention on information that supports immediate process improvement. Even though quality methods were among the first to bring change initiative participation to all employee levels (e.g., Quality Circles), the focus remains largely on improving processes, rather than expanding to improve the quality of people's work life as does the Stage 5 organization.

Specialist employees who cannot see how their work affects quality are far less likely to buy in to TQM initiatives. Executives shielded from customer complaints and product returns fail to see a quality problem until it is too late to remedy or to salvage the customer. Cultivating and influencing behavior is one of the most important characteristics of TQM and one of the most fruitful grounds for a close partnership between TQM and performance management.

THEORY OF CONSTRAINTS

Dr. Eliyahu (Eli) Goldratt, the creator of Theory of Constraints (TOC), has also presented public lectures under the title, “Cost Accounting—Public Enemy Number One of Productivity.” So 15 years ago, Dr. Goldratt may very well have been annoyed and/or amused to find his approaches included in books about cost management. Rather rapidly, however, financial and operations professionals both recognized the value of TOC. TOC really doesn’t fit into any of the larger business categories such as process or strategy. Handbooks and method surveys usually tuck TOC carefully inside sections called something like “management trends.” TOC really doesn’t fit any conventional business or accounting category because it is one of the first of a growing number of science-based approaches based on systems thinking, approaches that have yet to truly form and take root in organizational management before Stage 5. Thus the typical Stage 2 treatment of TOC frequently tries to blend TOC with financially based tactics like ABC/M, instead of fitting the financial pieces into a larger, more comprehensive perspective on the management of the organization as a system. TOC is a system, in the scientific sense, for thinking differently about organizational management.

TOC: Performance and Development Impacts

As with many systems of thought, TOC must be understood in terms of the mind and intentions of its designer. The systems thinking approach inherent in TOC contrasts with conventional cost management in key perspectives. Dr. Goldratt was trained first as a physicist. This training gave him a practical and rigorously
Theory of Constraints

scientific mindset uncommon in business circles. TOC treats the organization as a
dynamic physical system, and considers the chief management responsibility “to
control and predict the behavior of the system.” This contrasts sharply with the
fragmented departmental, functional, and center-oriented perspectives on most
organization charts commonly taught in business curricula.

As a physicist trained in the disciplines of systems thinking, Dr. Goldratt as-
sesses management complexity by answering a fundamental question: “Observe
the system and ask yourself, What is the minimum number of points you have to
touch in order to impact the entire system? The more points you have to touch the
more complex the system.”

An additional distinguishing feature addresses the way employees manage
organizational problems. In contrast to the reproducible disciplines of the scien-
tific method, as a behavioral science, business management approaches (and
sometimes solves) problems as if they occurred in isolation rather than as a man-
ifestation of the operations of the larger system from which they emerge. Lacking
a holistic view, the common business approach usually addresses each problem
separately.

The terms bottleneck and throughput are key to understanding the holistic
organizational perspective possible with TOC. A bottleneck is a system constraint
that hinders throughput optimization, which in turn impacts profit. Put another
way, a local constraint limits an entire system. If no constraint exists, the system
theoretically has unlimited potential output. Bottlenecks and constraints are
related to capacity; and, typically, lower capacity means greater risk of constraint.
Later refinements in TOC address the scenario in which market demand is the
constraint (i.e., where market demand is less than supplier capacity).

Obviously, the profit imperative remains core to TOC. Throughput, a key
TOC profitability measure, is calculated as sales minus raw materials (alternati-
vically, revenue minus totally variable costs). Constraints and throughput both
assume that the goal of the majority of organizations is profit. Relative to profit,
TOC poses two essential, systematic relationships between operations and finan-
cial results:

1. Net profit = Throughput – Operating Expense; [NP = T – OE]
2. Return on Investment = (Throughput – Operating Expense)/Inventory;
   [ROI = (T – OE) / I]

According to TOC, operations management creates profit through ongoing
process improvement. TOC claims that cost accounting has no answer to the ques-
tion, “What is the process?” Therefore, TOC process management provides an
answer that can be summarized in five activities:

1. Identify the system’s constraint(s).
2. Decide how to exploit the system’s constraint(s).
3. Subordinate everything else to the previous decision.
4. Elevate the system’s constraint(s).
5. If, in a previous step, a constraint has been broken, go back to step 1, but do not allow inertia to become the system’s constraint.

These five points comprise the rudiments of TOC.12 Simply put, TOC drives performance by elevating the management of process above the management of cost.

Manufacturing firms were the first to embrace TOC and implement it deep within their operations, and TOC practitioners often become intensely devoted to its approaches. TOC quickly spread to areas such as strategic planning, marketing, human resources, and later to nonmanufacturing sectors. Since TOC was first embraced in the manufacturing sector, it developed strengths in logistics, distribution, production, and project management. While TQM explicitly gives managers new, nonfinancial perspectives on the organization, TOC uses a systems thinking approach that anticipates the living-systems, nonfinancial maturity perspectives used by Stage 5 organizations.

TOC Performance Advantages and Shortcomings

In part, the passion of TOC advocates arises because people learn to see themselves in more personally rewarding direct, interdependent relationships with one another. Insular, territorial, self-serving people do not last long in a TOC environment. Because the TOC approach emphasizes the many parts of a system working together, people are passionately participative, incurably curious, and endlessly adaptive—the very qualities necessary for taking the Stage 3 fork in the road. To operate according to design, the TOC organization encourages its people to explore between the lines as they work with one another to remove constraints to full performance and maximum profit. In fact, it requires that management erase parochial lines so that the whole system is visible and transparent.

TOC and Conventional Cost Accounting. Conventional cost accounting managers see incremental and isolated improvements as productive and supportive of organizational goals. In TOC language, conventional cost accounting posits that global improvement equals the sum of local improvements. In the TOC, or throughput perspective, a linked chain analogy depicts the fallacy of this equation because improvements in isolated links of the chain do not necessarily improve the strength of the chain.

Since a conventional cost accounting system relies on transaction data—each transaction is a separate event—it is incapable of a holistic or systems thinking perspective except when closing the books. Thus, a conventional approach can only track and report on focused, separate improvement efforts and sum their cost savings, regardless of system-wide interactions and impacts. Financial professionals
working in firms that have adopted TOC usually practice so-called throughput accounting to reflect changes in operations. In Stage 3 fashion, throughput accounting is typically housed in an information system separate from the general ledger (G/L) accounting system. Such stand-alone systems with informal linkages to G/L accounting and operational systems are normal at this stage of development. This separation holds true for ABC/M systems as well. Throughput accountants deal with three chief accounting components: (1) throughput, (2) operating expenses, and (3) assets, especially inventory.

Except for inventory, throughput accountants view the balance sheet in the same way as conventional accountants. Throughput inventories resemble conventional direct costing inventories in that they contain only variable costs. Throughput accounting classifies all expenses not included in calculating throughput as operating expenses (OE). The profit or loss on a conventional income statement does not differ from a throughput income statement. The throughput line (i.e., sales minus raw materials) is conceptually similar to a conventional contribution margin, except that throughput does not deduct labor and overhead. Likewise, throughput accounting does not capitalize labor and overhead in inventory.

**TOC and More Mature Methodologies.** Inventory is a key management focus in TOC. Under the throughput paradigm, operating expenses and other assets influence inventory management. Unlike conventional accounting practices such as absorption accounting, which may actually encourage organizations to build unnecessary inventory, throughput accounting principles directly seek to prevent excess and obsolete inventories. Throughput is defined as "the rate at which the system generates money (i.e., incremental cash flows) through sales. Assets are defined as all the money the system invests in purchasing things the system intends to sell. Operating expenses are defined as all the money the system spends in turning inventory into throughput."13

Another significant departure from conventional thinking in some TOC-based accounting systems is the treatment of revenue in manufacturing firms. In these circumstances, TOC can behave more conservatively than conventional accounting. Conventional accounting recognizes revenue when goods are shipped and invoiced. With its system thinking strength in logistics and distribution, TOC sees the timing of this revenue recognition as premature. Some TOC practitioners who utilize distributors between themselves and end users acknowledge the distributor’s return right, and do not book revenue until an irrevocable sale is made.14

In practice, the specific applications of throughput accounting particulars vary; however, two of this method’s strengths are its relative simplicity and its alignment with holistic systems thinking based on the reproducibility principles of hard science discipline. Since throughput accounting is not GAAP, and must be performed separately from official financial statements, the specifics of the TOC accounting design are less important than how throughput reporting supports the most important TOC goal: making money.
This kind of scientific curiosity, rigor, and willingness to perceive and adapt to a more complete way of seeing makes TOC a unique approach for seeing and managing operations and resources in a more timely, profitable fashion. However, the greatest TOC strength—a scientific approach to management—is also its greatest weakness. TOC continues to view the organization as a physical mechanism. While the TOC systems thinking characterizes the close relationship between raw materials, work environment, and work flow, it does not invoke the same level of passion in the specialist as it does in the executive and the manager because TOC treats people in the work flow too mechanically. TOC works to overcome entropy. As a physicist, Dr. Goldratt should realize that this is a scientific impossibility in a mechanical universe. TOC is also handicapped by its strict adherence to profit as the prime imperative behind its efforts to discipline employee behavior.

ACTIVITY-BASED COSTING, BUDGETING, AND MANAGEMENT

As a quantum leap in CMS development, activity-based costing (ABC) caused a great deal of excitement in accounting circles in the late 1980s. Unlike TQM and TOC, the ABC methodology represents an historic organizational development milestone designed to present financial data through an advanced accounting methodology that supports day-to-day decision making across all functions. Important in the developmental history of accounting maturity, classic ABC theory provides a kind of safety net for conservative accountants as they venture into the world of operational resource information: The classic ABC version of reality reconciles with the general ledger. In other words, total ABC costs must equal total general ledger costs. This feature reassures management at all levels when a firm first adopts ABC.

In a brilliant developmental insight, ABC analyses do not abandon preexisting costs. In other words, ABC potentially allows every person in the organization to learn new ways to see costs in terms of resources and operations. This learning remains coordinated with more familiar conventional forms of cost management information. Intuitively, ABC pioneers knew this was necessary. However, the translation of the entire general ledger into ABC activity accounts/categories is a significant effort, and not always necessary if the targets of analysis do not include the entire organization. As executives come to trust ABC data and to mature in their use of it, they may choose to translate a limited group of general ledger accounts into an ABC format or to construct a database of activity information. For example, a single division, function, or product can be the analysis target. Conservatively, however, in a partial analysis there is a risk of overlooking some relevant costs in accounts not analyzed.

The consistency between ABC reconciliation features and the G/L encourages those accounting professionals also in transition to engage proactive analysis
and to offer their insights and recommendations to management. Their confidence is reinforced by the experience that, at last, the accountants do not have to sit on the sidelines, calling out results of plays already run. Instead, they get off the bench and into the game by proactively creating cost structure visibility. The financial roots of ABC may be another reason that the practice proliferated at a rapid rate (i.e., simply, accountants understand ABC better than nonfinancial models such as TQM and TOC, hence more ably communicate its insights to executives). In turn, executive teams usually welcome ABC information as a more relevant decision support aid than inscrutable financial statements. As a historically vital link to better ways to track and understand human spending behaviors, this chapter carefully indexes ABC cost and performance management attributes because they codify the developmental learning dynamics necessary for the successful transition from the Stage 2 CMS to more mature systems.

ABC was developed to address the inadequacy of general ledger information for decision making, and as it rapidly gained popularity, many seasoned accounting elders wryly observed that ABC was just good cost accounting for operations. Conceptually, they were correct. ABC does indeed return to the operational roots of management science; however, it also furnishes an adaptable design theory and disciplined framework for analyses within a language that can be shared among financial and nonfinancial management professionals. Prior to ABC, good cost accounting was designed from the ground up in every organization.

Two people in particular are often credited with popularizing ABC theory and practice: Robin Cooper and Robert Kaplan. Their initial work together focused on product costing in manufacturing environments. Cooper and Kaplan were also among the first to place a resource perspective prominently in their model and methods. The classic expenditure flow from the G/L to ABC reports clearly displays this prominence and looks like this:

\[ \text{G/L Accounts} \rightarrow \text{Resources} \rightarrow \text{Resource Cost Pools} \rightarrow \text{Activities} \rightarrow \text{Activity Cost Pools} \rightarrow \text{Cost Objects} \rightarrow \text{ABC Reports} \]

Primarily, ABC aims to deconstruct the aptly named peanut butter jar of manufacturing overhead by reconfiguring expenditures in terms of available resources. These resources, in turn, are assigned to operations activities and subsequently linked to cost objects. As ABC practice evolved its customer and product profitability analyses, SG&A expenditures, in addition to overhead costs, were more frequently added to the resource pools.

**ABC Concepts and Terminology**

Activity-based costing and management has been widely written about for over 15 years. Nearly every business professional has at least passing familiarity with its concepts. Therefore, Appendix D contains explanations of ABC/M concepts
for those who may need a refresher. Because ABC uses a specific language, with terms designed to communicate its distinctive cost management perspectives, the appendix defines some of the most important ABC terminology based on the most current version of the CAM-I Glossary of Activity-based Management, version 3.0. In 1988, the Consortium for Advanced Manufacturing–International (CAM-I) first created this ABC Glossary of Terms to unify, standardize and where necessary, develop a set of terms pertaining to ABC/M.16

**ABC: Performance and Development Impacts**

Activity-based costing practitioners seek better understanding of the nature and behavior of cost through resource, activity, and cost object analysis. The responsibility center management structure of the so-called financial era grew out of the need to assure control of ever-larger organizations (global) while allowing units and divisions to manage the day-to-day (local). Financial accounting systems brought a needed measure of consistency and comparability by requiring use of standard charts of accounts, standard cost systems, and common financial report formats.

In the 1980s, TQM, TOC, and ABC developed side by side with proponents from each camp often disparaging the others. Addressing what he calls “sibling rivalry,” between TOC and ABC during this period, Art Schneiderman cautions managers “to recognize that both systems [i.e., operational, financial] need to be addressed if profits are to be managed effectively.” Looking beyond parochial competitive interests to the larger management perspective he points out that

Maximizing throughput and discounting to clear the marketplace of excess inventories [an extreme application of TOC] is as irrational a long-term strategy as setting product mix solely on the basis of simple product or customer profitability [an extreme application of ABC]. The operating, market, and competitive environments form a system in which the total is not simply the sum of its individual parts. Although it is the interaction of those parts that is the source of complexity, it is also the place at which real value is created.17

Mr. Schneiderman addresses the developmental progression from an either/or preoperational mindset capable of comparison (e.g., our product to theirs) to a concrete operational mindset that applies the insights of several perspectives to a more comprehensive perspective on the relationships between resources, work, and profit. By the time activity-based methods matured to include ABC/M, seasoned practitioners actually began selectively blending operationally focused improvement methods (e.g., TOC, TQM), with ABC insights to manage resources, processes, and costs simultaneously. ABC versions to assist in capacity management also arose. These developments amounted to a quantum leap in linking accounting and operational data, in effect, planting both feet solidly in Stage 3 CMS territory.
This was the kind of leap that is demonstrated by the experiences of a furniture manufacturer dealing with erratic production flow due to bottlenecks at key fabrication and assembly points. The wait-time costs at the bottlenecks became a large portion of total labor cost. An ABC/M system accurately reported these wait-time costs, but did nothing to change the problem. The manufacturer began to make steady progress correcting the erratic flow only after applying TOC methods to the bottlenecks in operations and using the ABC/M system to track changes in cost based on the TOC work.

The Participation Imperative

ABC/M’s greatest contribution to Stage 3 CMS development is its inherent cross-functionality. Many financial professionals learn the hard way that it is impossible to get the ABC design right without input from operations. In the 1980s, virtually all ABC models were constructed on stand-alone, PC platforms. Unfortunately, this made it easy for accountants in isolation from operations to build the majority of the earliest ABC models. This was predictable based on (1) the infrequent connections accounting departments had with operations at that time, and (2) the all-too-common desire of accountants to get the model right before sharing their work. The outcome was also predictable. The model was not useful in the opinion of operations people (they were right), and they eschewed using the ABC information. In fact, this scenario more often found operations staff actively questioning, if not combating the model.

Accountants began to share these war stories, and by the early 1990s, attempting an ABC implementation without a cross-functional design team was recognized as a form of professional insanity. This not-invented-here syndrome speaks directly to the participation imperative. Imperatives can’t be ignored, and once they are established, they become a permanent thread in the fabric of forces that direct human behavior in the organization. Human beings cannot learn to see in new and different ways without participating in the learning process. In terms of designing a new information decision-support system, this means active participation. As organizations mature beyond budgetary and financial reporting-based control systems, they increasingly rely on all employees at all levels to make important decisions locally. As organizations function less mechanically and more systematically, authoritative discipline slowly gives way to a sense of personal responsibility. People can feel responsibility only as they participate. Importantly, with each new stage of development beyond Stage 2, new organizational imperatives erode the dominance of the profit imperative. Still, like the most basic survival stage in the Maslow needs hierarchy, people must always attend to the profit imperative. But as people and organizations mature and meet their basic needs, new imperatives surface and exert greater influence over behaviors. Executives and managers negotiating Stage 3 CMS maturity initiatives should not move forward unless they can acknowledge and encourage organization-wide participation as a requirement.
A concrete example helps exhibit this delicate interdependence of the participation imperative. Cummins Engine implemented an ABC system at a $40 million electronics division during the period of ABC’s most rapid rise in popularity. Cummins was already an experienced TQM practitioner and encouraged experimentation with continuous improvement methods. In contrast, no other division had implemented ABC within the larger parent group that contained the electronics division. At the time, ABC software was both new and expensive; therefore, the division chose to house ABC data in the current cost function of a MAPICS standard cost system, run on an IBM System 36 mainframe. ABC reporting was produced on spreadsheets on an ad hoc basis, usually for use in preparing price quotations for new business. The ABC/M analyses proved supportive to more accurate and competitive quotation work, and the executive managers of the division considered it a significant improvement over the standard cost system that had previously been used for all costing functions. The comparative decision quality of the ABC information was due in large part to the work of a cross-functional ABC design and oversight team.

The manufacturing VP of the parent group became aware of the division’s ABC work at a quarterly operations review. He charged his own financial group to make themselves familiar with the division’s work and then develop their own ABC model. They did so. Although the group parent’s model was technically equal to or better than the division’s, ABC/M languished at the parent. The primary reason: In spite of the division’s strong recommendation for cross-functional design and oversight, the parent chose to develop the ABC model using only its financial professionals. They wanted to “get the design right” and then “roll it out to manufacturing.” In spite of the fact that the model was sound, the manufacturing function did not accept it because they had not participated in the design phase and did not trust the finance staff to understand operations. A second design phase, including nonfinancial function representatives was engaged to move the ABC model toward organizational acceptance.

ABC/M Performance Advantages and Shortcomings

So, in Stage 3, as the participation imperative emerges and grows stronger, interest naturally turns to activities, resources, and processes, the place where individual efforts intersect and become cross-functional. The Stage 3 skills of comparison and coordination get a great deal of exercise as previously isolated functional areas compare their experiences and participate in coordinating their efforts to common ends. ABC, and other Stage 3 approaches such as RCA and performance gap measurement provide structured methods that create a forum where minds meet and focus on a cross-functionally meaningful information agenda. All efforts attend to developing more facile ways to refer to costs as actionable performance measures.

A Stage 3 CMS must contain an accounting model that partners with continuous improvement methods. Activity-based models endeavor to make operational
activity costs visible, to provide insights on cost structures, and to monitor the results of cost structure improvement activities (i.e., continuous improvement). Improving cost structure means eliminating waste; therefore, by producing cost structure insights, ABC supports operations enhancements through improved financial/cost reporting. From an operational/resource perspective, all this improves the chances of wise resource management.

Since ABC focuses on the management of resources, activities, and cost objects, it becomes an “economic map of the organization’s expenses and profitability based on organizational activities,” according to Cooper and Kaplan. They refer to the ABC model as “an activity-based economic map,” to more precisely express its purpose.19 Specifically, an ABC model reveals expenditure flow and the activity structure of what goes on in day-to-day operations. ABC explores:

- The organization’s set of current activities and the resources they consume.
- The cost of performing current activities based on the cost of the resources consumed.
- The difference between activities that need to be performed and those that can be changed or eliminated to improve the cost structure; in other words, the necessary cost of activities consumed by customers, products, and other cost objects.

Another development strength of ABC/M is the way it helps isolate and clarify the components of the who-are-we and what-must-we-do questions. At the most primitive level, ABC sorts out value-added (VA) from non-value-added (NVA) efforts. Since maturity involves being able to see more, this clarification encourages exploration of intracompany working relationships. For example, a financial accountant defends tax preparation as VA, whereas a line supervisor considers it irrelevant to production.

The first round that distinguishes VA from NVA activities just warms up the engine. The next level of inquiry usually focuses on who counts when VA and NVA labels are assigned. Customers? Executives? Accountants? Rapidly, the customer-focus lessons from TQM emerge in the discussion, and the customer surfaces as the arbiter of value. This insight has held true, and helped to spawn a Stage 4 inquiry: If customer perceptions of value are critical, and employees serve those customers, how can we adequately address employee value expectations? That evolution will be discussed further in Chapter 8.

At this time, the point is that organized under a method framework such as ABC, all these questions do more than probe and test the validity of the method itself. They shape an organization’s identity through the ways people answer them. For example:

- Should we put our efforts toward superior customer service in expectation that the service will warrant paying a premium price, or should we compete on price by reducing the variety and cost of customer-related activities?
How can we maintain employee goodwill while reducing the costs of activities (a Stage 4 precursor)?

Which production activities should we keep in-house, and which should we outsource?

Today, many early adopters of ABC/M have institutionalized their activity-based models (Stage 3 stand-alone information system), or integrated them into ERPs (Stage 4 integrated information systems). A number of these pioneers have moved on to organization-wide performance measurement and management (see Chapter 8), in which they use ABC information for the financial perspective of their performance reporting systems.

Errors can creep into the application of ABC technique. Continuous improvement and waste elimination are the real objectives of ABC work. If ABC data is based only on current activity performance, without regard for potential better practices, then the ABC reports simply trace a picture of what is and fail to provide insight into what may be. A second potential failure in ABC work is to report only on the ABC-design costs (usually based on estimates), interviews, or even budgets. In essence, this amounts to a forecast or a historical view without a reference point. Targets, benchmarks, and/or actual comparisons are essential to performance visibility. Not to make such comparisons in a conventional system would be akin to paying attention only to standard costs and never reporting variances!

Specific mismanagement patterns arise in ad hoc ABC practice. One of the classics is called the so-called “death spiral.” It evolves along the lines of a predictable pattern: A total-cost ABC analysis is conducted on all product/service lines. Naturally, some products/services show up as profitable, some around breakeven, and some as clear losers. Assuming that the ABC information is reliable for current operations, management chooses to discontinue the losers. Seems fair enough. The catch is that if management fails to make corresponding cost structure improvements (e.g., adjusting resources such as equipment, facility, and labor capacities, and reducing overhead cost structure) the only cost eliminated with the discontinued product/service is the direct material cost. Consequently, costs remain the same, but with fewer products/services to support the same expenditures. The impacts on the profit imperative are obvious.

If the organization loses its grip on the beginning of the death spiral and does not implement cost structure improvements, it predictably performs another ABC analysis that turns up more losers. Additional products/services are cyclically discontinued until the company has cannibalized itself. Fortunately, such horror stories have been widely disseminated and now few organizations follow the death spiral mistake all the way to the grave.

**ABC/M and Conventional Cost Accounting.** Conventional accounting systems focus on departmental cost control, standard costs, and budget management. The chart of accounts and general ledger structure shepherd all financial transac-
tions. As previously discussed, these characteristics support a Stage 2 CMS, assuming that the accounting functions are reliable and contain accurate data. Stage 2 competence is required as a beginning platform for ABC endeavors.

The conventional structure is well and good for efficient aggregation of financial results. However, it constrains the development of useful management information. Insight and the ability to manage suffer in two particular areas: (1) input-side resources, and (2) overhead cost structures. ABC aims to address both shortcomings by clarifying how activities consume resources and by disaggregating overhead into its components and directly assigning costs to activities, whenever possible. By doing so, resources, mediated and structured through meaningful operational activities, are more accurately (i.e., in cause–effect fashion) assigned to cost objects, the targets of ABC analysis.

In its early days, ABC was hailed as the miracle cure for what ails the general ledger. Though not a cure-all, ABC definitely improves the decision-support quality of management information when appropriately applied. ABC arose just as nonfinancial managers had all but given up hope of extracting relevant information from G/L systems. On its own, ABC provides a level of insight not possible with conventional systems; however, insights do not automatically generate cost savings. To get the most out of ABC, management needs to follow a sequence:

1. Acquire reliable ABC information for selected cost objects based on widely accepted, field-tested model designs (cost object examples: service profitability, process waste, customer profitability).
2. Acquire complementary current process information using TQM, TOC, or other continuous improvement method.
3. Identify and rank improvement opportunities in terms of estimated cost savings.
4. Test highest ranked improvement opportunities from a holistic perspective.
   - Determine the interactive effects that the proposed changes may have on other processes.
   - Set up monitoring for important cost management improvement milestones or delay/eliminate the ABC opportunity.
5. Select the organization’s best improvement opportunities and assign resources to them.
6. Implement improvements and track actual cost savings against estimates.
7. Watch for unexpected interactions between processes and functions, as well as customer reactions.

Exhibit 6.1 contrasts the conventional and ABC cost management focuses whose original central concern was high-dollar, uncategorized expenditures in overhead. As ABC models made their debut in the 1980s, financial and nonfinancial
professionals alike praised its ability to make cost structures visible—a classic case of the ability to see more completely based on a new framework for perception. Importantly, the breadth of vision attended to financial and operational concerns, the hallmark of a Stage 3 CMS.

Those accounting elders who viewed ABC as just good cost accounting knew their G/L structure inside and out. Their experience is another prerequisite for implementing an ABC model to complement or replace more conventional models. Experienced conventional cost managers know how to wrest information from the G/L transactions. In practice, this means that conventional cost accountants do a tremendous amount of ad hoc reporting—reporting only as reliable as the cost accountant’s expertise and breadth of vision permit. Even with a top-notch accountant, managers may harbor lingering concerns that something may be missing. To make matters worse, it is difficult to replicate ad hoc analysis in the future. In contrast, when good cost accountants get their hands on an ABC system, there is no one better equipped to make the new perspective work.

For readers in organizations that do not yet use ABC or some operational costing equivalent, the following “ask your accountant” questions can help determine existing management accounting report reliability:

- What is the focus of our cost accountants’ background and what training do our cost accountants have? (Bad news: Only financial. Good news: Financial + operations and/or spends a lot of time working directly with operations personnel.)
Activity-Based Costing, Budgeting, and Management

- When accountants perform cost analyses, what sources of information do they use? (Bad news: Only the G/L accounts and standard costs. Good news: Specialized cost data, operations reports, most current costs.)
- Do our accountants work with operations staff to verify assumptions? (Bad news: No. Good news: Yes, they do so prior to doing the analysis and in post-analysis review/revision by operations staff.)
- Are the analysis methods fitted to the exploration objective? (Bad news: No, we usually use the same basic format, such as variable cost analysis or standard quotation forms. Good news: Yes, we design the analysis to suit the purpose, but we also use consistent cost rates for consistency and comparability.)

This is a good point to put in a word about revenue. The astute reader will have noticed that, so far, ABC profitability analyses refer to costs, but revenues have not yet been mentioned. Naturally, any profit analysis requires both. In this case, Stage 2 accounting methods can provide revenue information. Revenue accounts are usually available in a G/L system due to information generated for:

- Product/service mix decisions
- Sales commission calculations
- Customer discount calculations
- Other revenue source analyses

So, with rare exceptions, the challenge of the ABC technical implementation is in parsing expenditure data, not revenue. In addition to customer and product/service profitability analyses, Exhibit 6.2 displays specific applications of ABC.

Exhibit 6.2. ABC Applications

- Product mix and pricing
- Distribution channel options
- Product and customer profitability management
- Shared services cost assignment
- Product/service design and development
- Budgeting (ABB)
- Transfer pricing
- New business opportunity analysis
- Expansion/contraction of product/service; impacts on revenue
- Production and capacity decisions
- Make–buy and outsourcing decisions
- Cost driver analysis and improvement
ABC/M and More Mature Methodologies. At their best, conventional accounting reports segment profitability and product/service line profitability as subsidiary reports of the income statement. The revenue line of these reports is usually reliable; however, the costs in these reports are subject to overhead allocations, standard cost consistencies, and fairly arbitrary variance cost assignment. In addition, conventional reports often contain SG&A expenditures that are spread across lines by simplistic percent of revenue allocations, hiding many important cost relationships.

In contrast, ABC profitability analysis presents more accurate relationships of product/service resource consumption by (1) demonstrating a logical, cause–effect assignment (versus allocation) of overhead components, and (2) linking SG&A costs to revenue-line items. As standard features of conventional accounting systems, raw material components and direct labor can often be transplanted directly into the ABC model unchanged. Because overhead is such a large cost component for most organizations, ABC methods significantly change the profitability picture compared to conventional overhead absorption methods that use direct labor or material as an allocation base. Total profitability remains equal between ABC and the G/L.

ABC analyses of customer profitability evolved almost as quickly as ABC product analysis, and today both are considered equally important. The recent emergence of customer relationship management (CRM) has increased the value of ABC customer analyses. In addition to direct product cost, organizations invest significant and diverse organizational resources into a customer relationship: order processing, logistics, packaging, distribution, inventories, sales, and customer service attention. Conventional accounting barely recognizes these costs as customer driven, and typically aggregates these expenditures in balance sheet and SG&A accounts. However, a clear customer-profitability picture arises only when all the costs of all the resources used to serve a customer are accumulated. It is imperative to remember that:

Some of the largest customers often turn out to be the most unprofitable. A company cannot lose significant amounts of money with small customers. It does not do enough business with a small customer to incur large (i.e., absolute) losses. Only a large customer can be a large-loss customer. Large customers tend to be either the most profitable or the least profitable in the entire customer base. It is unusual for a large customer to be in the middle of the total profitability rankings.

One particular problem crops up frequently in ABC customer work: cost/resource design disputes. Wherever possible, management must build all ABC models on explicit cause–effect assumptions about the relationships between resources, activities, and cost objects, and validate the assumptions with those performing or managing the activities. Developing design assumptions for customer expenditures is not as straightforward as for products and services. Executives
involved in customer applications need to be especially rigorous in determining the customer-related resource, activity, and cost object cause-effect relationships in the design stage.

A second problem related to customer analyses is the profit-only approach. Management may make a simplistic profitability decision and automatically fire unprofitable customers. This is a classic ABC error, called the customer death spiral in the literature; and yes, its dynamic is exactly the same as the product death spiral of the 1980s. In contrast, strategic use of ABC will reveal opportunities to improve the cost structure of a customer relationship and save the relationship by turning the unprofitable customer into a profitable one. Still, firing the customer remains an option.

Another overall issue that arises in ABC design and implementation is the tendency of financial professionals to concentrate on local detail and lose sight of the big picture and cross-functional impacts. Accountants that have been schooled to reconcile to the penny, find it hard to swallow “approximately correct” standards as adequate performance for ABC accounting. Precisely correct reporting standards are never possible in an alive, in-motion environment, and the effort to achieve perfection can erode the cost-benefit ratio for an ABC implementation.

When is ABC not worth the investment? ABC may not be worth the investment if an organization exhibits some or all of these characteristics:

- Stable and well understood customer relationships
- Stable and mature product line with minimum number of new product introductions
- High-quality processes with little change; not expected to change
- Minimal level of product/service customization
- Limited number of products and/or services
- Limited number of customers
- Expenditures are nearly all direct (i.e., very little overhead)
- An all-under-one-roof organization (i.e., one location for all operations)

More Recent ABM Developments

Activity-based budgeting (ABB) is a relatively recent extrapolation of activity-based concepts. Since cost pools of resources and activities are the first transformation point in translating expenditures from the G/L to the ABC model, the question of budget allocations naturally arises. As managers at all levels become more comfortable with the advantages of the ABC/M perspective, they also become more frustrated with the allocation of organizational resources through a conventional budget model (e.g., based on a fragile sales forecast, and/or on a plus or minus x percent change over last budget cycle). ABB logic is easy to see and very hard to implement.
The obvious activity-based logic is that budgets are made up of resources designated to specified managers and their functional areas. It stands to reason that when activities change, budgets need to change. CAM-I sponsors a group of experts charged with ABB research and development, the Activity-Based Planning and Budgeting (ABP/B) Interest Group. Exhibit 6.3 depicts the group’s view of a practical application of the ABB methodology that requires a disciplined and highly mature management framework—nothing less than Stage 4. ABB should be implemented only after an organization has become comfortable with the benefits of ABC/M and comes to appreciate the differences between ABB and traditional budgeting.21 The fact that there have been almost no ABB success stories may provide tentative evidence that very few organizations have reached Stage 4 maturity.

Readiness Assessment—One of the Developmental Fruits of ABM Work

The CAM-I ABC/M-ABP/B Interest Group is a sponsor-led (organizations pay to participate and share insights) consortium of experienced ABM practitioners from many sectors: industry, government, academia, consultancies, and software

Exhibit 6.3. The CAM-I ABB Closed Loop

Exhibit 6.3. The CAM-I ABB Closed Loop

Circled numbers indicate sequential steps for the ABB Basic Model

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developers. A few years ago, this interest group commissioned a cross-representational project team to identify the critical success factors for ABC/M implementation to assist its sponsoring organizations in ABC/M applications. They found that most implementation failures could be traced to the starting gate—before the gun was ever fired. ABC/M implementations fail when business needs do not align with the ABC/M strategy and when the people within the organization have not received the experiences and information they require to embrace and participate in creating the requisite changes. As a result of investigating these conflicts, the interest group project team created an ABC/M Design Framework report that identifies four practical phases that enhance implementation success. The team recognized that development cannot be forced. As a condition of readiness, development is a matter of learning through appropriate experiences. Preparation is the name of the game.

Phase One of the project is the Readiness Assessment composed of two survey modules that diagnostically identify current business alignment in terms of the risks involved in performing an ABC/M implementation. The process gathers empirical information about the need for ABC/M from a business perspective while assessing existing implementation risks and factors that could contribute to success. With information that documents organizational and cultural strengths and weakness before implementation, executives guide their implementations to more positive outcomes.

The first survey module, the Situational Profile, provides feedback on business objectives that indicate compelling needs for ABC/M and targeted ABC/M applications suited to the organization’s current performance. The second survey module, the Change Readiness Profile, gives more precise information about the capacity of the organization’s people to successfully implement and institutionalize ABC/M.

The process combines the data from the two survey modules into an overall risk profile with scoring for success criteria, which reflect organizational and cultural strengths and weaknesses. Remedial risk alleviation methods such as ABC/M education, communication strategies, and articulation of potential benefits increase the chances of effective, successful implementation.

**PREDICTIVE ACCOUNTING**

One of the great pioneers of ABC theory and practice, James A. Brimson, has recently explored predictive accounting. His broad experience in the application of activity-based accounting methods led him to see new ways of appreciating the importance of process as an essential element of organization management.

"Processes provide invaluable insight into financial planning, and organizations behave as processes... financial performance is the consequence of a series of interrelated
cause-and-effect business events and activities. Through integrating process data and performance measures with financial data, predictive accounting concerns itself with closing the books for next month, as opposed to closing them for last month." 

Predictive accounting methods are being considered for use in improving earnings forecasts and pro formas—a timely functionality in light of recent accountancy scandals. In effect, predictive accounting complements an increasingly long line of operational resource focused accounting improvements over conventional financial forecast models.

The essence of predictive accounting is captured in the way Mr. Brimson and his associates synthesize management responsibilities, continuous improvement, TOC systems thinking, responsible product/service line management, and basic cost accountabilities.

Excellent financial performance requires a vigilant process improvement practice. Process capacity must be constantly matched to process demand. Too little capacity results in bottlenecks and all the consequential non-value-added activities. Too much capacity results in high process cost. Process variation must be understood and constantly eliminated. High process variation results in poor predictability. The root causes must be identified and constantly eliminated. Processes must be constantly evaluated to identify environmental, safety, and legal risks. The bottom line is that an organization behaves as a process regardless of whether they monitor and continuously improve those processes. 

**RESOURCE CONSUMPTION ACCOUNTING**

Resources: the beginning of all processes; the means to all profit. All of the methods discussed in this chapter deal with resources. However, Resource Consumption Accounting (RCA), one of the most recently developed formal cost management methods to be embraced by both the practitioner and academic management communities, puts resources front and center just as activities function as the centerpiece of ABC/M and quality serves as the driving force in TQM. RCA complements the activity focus of ABC with its methods for detailed analysis of the nature and behavior of resources and by introducing ways to measure and manage capacity, including the many aspects of inactivity inherent in capacity management.

**RCA: Performance and Development Impacts**

In the first iterations of RCA, proponents focused the discussion on features that distinguished it from ABC/M, but they soon realized the importance of blending the strengths of the two approaches. In a natural evolution, RCA practitioners concentrate on the resources/operations perspective that launched ABC logic. A related word of caution to long-time ABC practitioners: If an existing ABC/M
system design has not changed significantly in the last three to five years, this may be a good time to revisit it with recent developments, like RCA.  

RCA seeks a more precise understanding of resource element utilization, leading to the better management of limited assets. It employs the discipline of a mapping method to more accurately identify and delineate resources utilized by processes and activities. RCA practitioners start by identifying a set of eight ABC shortcomings concerning resource management:  

1. As a system that recognizes activities, ABC is incapable of measuring or managing inactivity, therefore a homogeneous measure of capacity is not possible.  
2. While ABC took an important first step in better resource management by creating resource pools, its methods primarily analyzed activities and cost objects, not resources; therefore, ABC insufficiently addresses the interrelationships among resource elements (e.g., output quantities, utilization statistics).  
3. ABC fails to characterize specific relationships between resource pools and the customers that use them. Because ABC model designs often use estimates, as opposed to actual data, costs, and quantities for each cost pool, the initial inherent nature of resource cost is not reflected (i.e., the fixed and proportional characteristics of the costs, given the capacity, skill, technology, operating characteristics of the resources deployed).  
4. Excess and idle capacity is not properly accounted for.  
5. Interrelationships between resource pools (i.e., the grouping of related resource elements into a pool) are only indirectly expressed.  
6. The changing nature of cost as it relates to the cost model is not reflected.  
7. Fully burdened resource costs are not provided.  
8. Inferior information is supplied for effective resource management and certain strategic decisions.  

The list highlights three important threads RCA seeks to complement in the evolution of ABC/M methods: (1) capacity, (2) resource interrelationships, and (3) the nature of cost as it represents human spending behaviors. ABC/M practitioners developed methods for managing capacity, but the methods matured some time after the first major phase of activity-based implementations; therefore, a hefty percentage of active ABC models do not address capacity management. Capacity management inherently depends on resource management. Capacity utilization in day-to-day operations moves resources into the activities tracked by ABC. RCA creates an intuitive answer to capacity management by formally attending to comparable measures of capacity, and by measuring resource pool outputs.  

In the second complementary thread, RCA reveals the interrelationships within a group of resource elements and between resource pools. In contrast to the
slow-moving worldview portrayed by Stage 2 results-based CMS perspectives, Stage 3 resource managers recognize that nothing stands still. Processes change only by design, and, people participate in informal changes by forever tweaking their existing routines as a means of creating a personal presence within the workplace. Modifications to a process change the resource utilization on which the process depends. The relationship between resources and the customers who use them constantly fluctuate. RCA defines resource pools more deliberately so that they contain similar technologies, machinery, or human capabilities. The pooling of interrelated resource elements contributes to more homogenous cost pools with more accurate output measures that enable consistent cross-functional decision making. This is important to capacity management and continuous improvement, as well as to planning and budgeting.

Finally, financial and nonfinancial cost managers have been looking for better ways to understand the nature of cost since the beginning of business itself. Better capacity management and more transparent views of resource pool interrelationships give them a more complete view, more insights and, therefore, more decision options. However, potential RCA practitioners must be patient in order to reap the rewards that the third complementary thread has to offer. Understanding the nature and behavior of resource costs in a dynamic system requires a significant time investment. But once understood, the management decision making process becomes more uniformly focused, and consequently, more simplified across all functions.

From the operations perspective, RCA methods work from a cost perspective embedded in day-to-day Stage 3 detail that anticipates Stage 4 strategic execution and improved cost structures. The methods focus on the wise management of limited resources, where resource utilization is predominantly determined and managed at the input end of processes. RCA resembles the input–output logic of process analysis in many ways that naturally align with process improvement initiatives. With the important role that consumption rates play in its methodology, RCA is a natural partner for organizational cultures that deliberately monitor process improvement.

**RCA Performance Advantages and Shortcomings**

At this point, RCA is best used in partnership with ABC/M because it effectively extends the ABC resource logic, but RCA lacks some of ABC’s intuitive strengths in terms of activity management and cost object analysis. An organization should have significant grounding in ABC/M before attempting to understand or use RCA. Put another way, RCA can best be understood in terms of ABC’s shortcomings, and vice versa.

**RCA and Conventional Cost Accounting.** The closest equivalent conventional accounting term to the word *resource* is the word *asset*. However, although
New Ways of Seeing

assets are captured on the balance sheet, a conventional system rarely analyzes assets beyond a fixed-asset property-tagging procedure, and/or a set of standard financial ratios and calculations—for example, return on assets, current ratios, and inventory turns.

Conventional systems can only see outputs. Like ABC, RCA focuses on the manageable process inputs—in terms of resources and operations—that eventually create financial results reported by conventional systems. To its credit, resource management, in the operations/resource perspective, is about the very beginnings of value creation. Conventional cost accounting is about value creation obituaries, at times, belatedly reported. RCA can prevent waste; the traditional approach merely reports unrecoverable waste.

RCA and More Mature Methodologies. RCA implementations are just beginning. Pioneer practitioners recommend that a greenfield site or an atmosphere of serious strategic renewal are best-suited to RCA cost management system development. This view is based on the maturity of the RCA cost accounting method, which depends on a vision for organizational design within a strategy already committed to specific capacities, competencies, and technologies, grounded in committed operational priorities. This in turn assumes deliberate, conscientious resource commitments.

RCA typically elicits one of two responses in even the most seasoned cost managers: intense curiosity or blatant animosity. Some see the enhancements it brings to resource management as too much bother—especially when they consider how current systems must be modified to blend with yet another new approach. Others believe ABC/M has already adequately addressed resource management. Still others can intuitively see that resource management enhancements add value to the quest to understand the nature and behavior of cost and resources in the context of human spending behaviors. The important point is not who is right and who is wrong, what works and what does not work. These debates can be settled only case by case, one organization at a time. Organizations, and the cost managers within them, learn to understand more mature methods, each at their own unique paces. The real adventure is the exploration and learning—and the continuous improvement that comes with this adventure.

NEW WAYS OF SEEING

Chapter 5 introduced the essential conceptual components of a new way of seeing cost and performance management in terms of resources and operations. This chapter indexed the cost and performance management characteristics of the most popular ways that organizations committed to a development initiative first learn to apply the high level concepts of Stage 3 operational insights. Executive, manager, and specialist groups each carry specific teaching and learning
responsibilities as they work together to master any of these operationally focused applications.

Executive

The greatest challenge for the executive team truly committed to an organizational development initiative is the deliberate reexamination and restructuring of their primary relationship with all stakeholders. In light of a new and developmentally necessary organizational imperative, the participation imperative, the importance of internal employee concerns must be tangibly elevated closer and closer to that of the shareholder.

Stage 2 organizations make decisions and assign priorities according to a results-based information system built to serve the profit imperative. As information systems begin to report real time information that demonstrates the cause-and-effect relationship between better operations and profit, operations (and consequently, profit) improve. This occurs as people are allowed and encouraged to improve processes as new insights arise. The day-to-day working needs of the internal employees fuel the operational process improvements that lead to more profit. The most important day-to-day working need of the internal employee in this equation is active participation in process design, maintenance, and enhancement.

Consequently, as organizations move deeper and deeper into Stage 3 cost and performance development dynamics, executives have new responsibilities regarding the shareholder and the internal employee. As a vital extension of the organization, shareholders must learn about the link between operational resources and value creation from the most senior members of the executive team. To create an environment for long-term financial success through continuous operational improvement, shareholders must modify their expectations and priorities to be consistent with the long term. Anyone who thinks this shareholder perspective shift is impossible is staring into the deep developmental chasm between Stages 2 and 3.

In terms of the internal employee, executives must look for every opportunity to allow managers and specialists to participate in continuous operations improvement, according to each one’s management responsibilities and productive accountabilities. Participation means learning. As they do so, the executive team must model a deliberate patience with learning groups and establish an appropriate learning focus according to organizational readiness. To borrow a well-worn phrase from Ford Motor Company, quality is job one. Organizations need to learn quality management before they migrate a conventional CMS into an ABC or RCA system.

Once the transitional organization has established an institutionalized quality management agenda, all employees must learn the interrelationships between work processes and their own jobs. By self-mandate, executives learn
high-level process interrelationships, managers learn cross-functional process interrelationships, and specialists learn local process interrelationships, each in the context of the organization as whole. As each employee group creates a process map of its own work responsibilities, the organization redefines the way it sees itself. This new interrelationship perspective visually demonstrates employee participation at all levels and becomes the foundation for Stage 4 and 5 developmental dynamics.

At this point, the deliberate patience of the executive team’s agenda for organizational learning pays off in an organization-wide readiness (probably manifest as impatience) for a new CMS that gives employees current cost information in terms of the activities, processes, and resources they now know so well. All three employee groups will be developmentally ready, willing, and able to participate, for example, in a productive activity-based costing design. As organizations move through Stage 3 and beyond, the executive group acquires a new management responsibility. With each new course change in organizational Stage 3 development, the executive participates through a commitment to provide all stakeholders with the means to see the new vision. Stakeholders believe executive commitment because executives are present every step of the way. (See Exhibit 6.4.)

Managers

Managers are the organization’s process experts. They know how operational processes interrelate better than the executives or the specialists. Stage 2 executives see a process picture where the outside competition, shareholders, regulators, vendors, and employees seem to be trying to pull the organization apart.

Consequently, as organizations move into Stage 3, managers must work first with one another as a group, and later with the executive team, to raise awareness of internal process interrelationships. In the earliest stages of organizational process mapping, managers will undermine the developmental initiative if they

Exhibit 6.4. Stage 3 Learning Group Matrix

<table>
<thead>
<tr>
<th>Role</th>
<th>Work Focus</th>
<th>Management Responsibility</th>
<th>Productive Accountability</th>
<th>Primary Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>Strategy</td>
<td>Direction &amp; Commitment</td>
<td>Precision &amp; Presence</td>
<td>All Stakeholders</td>
</tr>
<tr>
<td>Manager</td>
<td>Process</td>
<td>Resources &amp; Collaboration</td>
<td>Accuracy &amp; Openness</td>
<td>All Employees</td>
</tr>
<tr>
<td>Specialist</td>
<td>Activity</td>
<td>Productivity &amp; Surveillance</td>
<td>Quality &amp; New Insights &amp; External</td>
<td>Customers, Internal &amp; External</td>
</tr>
</tbody>
</table>
misrepresent the interrelationship dynamics of historical adversaries. Process mapping is a time for revealing in-house animosities so that they can be corrected. Managers must first map process interrelationships as they actually occur, not the way they should occur. Whether the map depicts process interrelationships between divisions, functions, or any other significant organizational component, groups composed of representatives from each component must draw the maps. Ideas for improvement should be logged for future action.

As the organizational developmental work matures into a specific CMS maturity initiative (e.g., ABC), cross-functional and cross-unit representation becomes even more important to assure an accurate working model that represents the actual relationships between activities and spending. Financial and non-financial managers share equal responsibilities for teaching and learning from one another. Financial managers guide the nonfinancial managers through a logical model flow in terms of cost targets, drivers of spending, and the cost of activities. To be able to do so, the financial managers must gain some first-hand experience with the operational processes characterized by the new cost system model, and the nonfinancial managers assist as their guides.

The learning/teaching dynamics of the financial and nonfinancial managers before and during Stage 3 CMS design demonstrates the importance of the organizational participation imperative. ABC and RCA systems cannot be successfully designed by the accounting function alone. In fact, design in isolation is the most common cause Stage 3 CMS implementation failure. Like executives, Exhibit 6.4 shows that managers also acquire new management responsibilities and productive accountabilities commensurate with Stage 3 maturity. Stage 3 financial and nonfinancial managers collaborate as colleagues who openly share their unique process information expertise with one another.

Specialists

The relationship between quality and cost starts many organizations down the road to operational resource accounting. Anticipating the future, since the specialist employee is the activity expert whose product is judged in terms of its quality, organizations move down this developmental road according to the degree that specialist employees participate in organizational learning.

In short, if activities do not change, nothing else does either. Specifically, some organizational processes are so complex that the process complexities are too complicated to be visualized by anyone but the expert process manager. As organizations learn to understand process interrelationships, people are better served, in general, starting at the activity level. Processes start with activity sub-components that people can see more easily. Groups of specialists can help each other and managers see processes in terms of activities. Managers can gradually draw the big picture of processes to give purpose to activities. In fact, process mapping and activity-based or resource consumption-based accounting systems cannot be designed without precise identification of key resources and activities.
and how they interrelate. Working together in the mapping phase of the Stage 3 development initiative, activity specialists commonly are eager to display dysfunctional activity interrelationships within processes hidden from the eyes and experience of the process managers themselves.

As valued members of an organization that balances the participation imperative with the profit imperative, specialist employees acquire a new management responsibility and production accountability. Beyond their basic productivity responsibilities, activity specialists become responsible for product/service surveillance—a natural offshoot of their primary production accountability—product/service quality. How can executives and managers know that activity specialists are living up to this new management responsibility? Executives and managers should expect a steady stream of new insights for practical ways to improve product/service production and quality (see Exhibit 6.4).

DEVELOPMENT CHECKPOINT

142nd Ferengi Rule of Acquisition: There’s no such thing as an unfair advantage.26

Organizations develop as people learn to see work in new ways. Therefore, trying to make a traditional cost system cough up decision-quality information is a waste of everyone’s time. Decision-making maturity depends upon different kinds of cost and resource information: detailed and aggregate, historical and predictive, strategic and process, global and local. Executive teams committed to developmental initiatives who explore the existing cost system and find only one cost flavor—usually retrospective—or cost reporting used only by accountants, need to assemble a cross-functional cost management system design team.

Summary developmental insights from this chapter for those organizations in early or late transition from Stage 2 to Stage 3 include:

• The work of TQM is the work of waste elimination, and it is never done.
• The return on the cost of quality is measurable and significant, but the fruit ripens slowly.
• As a method of managing systems, TOC anticipates the close relationship between cost management and operations.
• TQM and TOC methods help managers in conventional cost accounting environments become familiar with the essential links in understanding the relationships of cost (i.e., spending), resources, and operations.
• ABC information is only as good as the underlying model design and the data that populates it. Organizations that choose to implement ABC must have financial and nonfinancial managers with an intimate understanding and appreciation of the relationship between resources and operations.
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- ABC insights must be accompanied by continuous improvement efforts, or no benefit will accrue; that is, total ABC cost equals total G/L cost.
- RCA principles, especially capacity and resource management, complement ABC models as an enhancement of resource accounting and management maturity.
- Beware of project sprawl. New cost management approaches must be selected according to the needs and readiness of the organization, not by how popular they are.
Pattern recognition is an important skill in human learning. People take advantage of repeated patterns and associations as they learn new ways to see themselves in relationship to local and global environments. Preoperational cognitive skills (i.e., comparison and coordination) use images, symbols, and concepts as the learning foundation for pattern recognition. Maturing comparison skills allow people to classify events, objects, and people according to common identities. As individuals and organizations mature, each becomes increasingly aware that it enters into a variety of relationships with events, objects, other people, and groupings of people. Consequently, an index of organizational development beyond early Stage 3 must begin to include developmental subsystems in addition to the cognitive. Cost and performance management systems may become more technically sophisticated in late Stage 3 and throughout Stage 4. However, as new organizational imperatives augment the profit imperative, other developmental subsystem influences begin to replace the primacy of cognitive skills.

Developmental subsystems coevolve. Exhibit 7.1 shows the parallel coevolution of the three most influential developmental subsystems during Stage 3. The potent interrelationships between the three subsystems can be traced back to earlier stages. This gives context for the changes in relative influence that occur during Stage 3 development. Stage 1 organizations symbiotically depend on the budget as they work to fulfill rudimentary survival needs. Stage 2 organizations establish an us-against-them identity through their fixation on financial results as a means of creating a sense of safety and self-protection against a hostile, competitive environment. Stage 3 and 4 organizations have learned the value of the participation imperative and strive to shape their people and systems into an integrated membership community. Stage 3 organizations begin to balance their management focus by developing a new sense of identity that relies heavily on the patterns of internal interrelationships. The Stage 3 organization begins to define its external identity in terms of its resource and process patterns in addition to external financial profiles. Naturally, this internal identity development has a significant impact on CMS design.

Patterns are everywhere in organizations. An organization’s identity—who we are—is one of the dominant patterns that provide a compass for choices, decisions,
and behavior. An accounting method, such as activity-based costing/management (ABC/M), is a pattern for learning that focuses on process interrelationships and self-identity. In fact, ABC starts with one organizing pattern (the general ledger) and transforms the general ledger (G/L) data into an activity pattern. In Stage 2 companies, patterns tend to be rigid and nonadaptive. This is so because people at the Stage 2 level depend on classification (e.g., fixed vs. variable cost) to manage resources. With its emphasis on control, Stage 2 patterns need to be simple, repeatable, and recognizable, as for example, in financial statement formats. Insight into the patterns of defective materials and poor service are beyond the grasp of a Stage 2 company.

As they approach Stage 3, people explore both operations patterns (process, activity) and their relationships to familiar financially classified components. Only in early Stage 3 do people really begin learning to expand from a simple classification (e.g., that dollar amount is a materials usage variance) to seeing potential causal patterns (e.g., our materials waste may be due to lack of new-hire training and to our 50 percent annual turnover rate). Stage 2 managers are left to their own ingenuity to discover problem causes because the organization has no supporting tactical structure to investigate and discover what’s wrong.

So far, at the early Stage 3 point on the CMS developmental journey—assuming a healthy, adventurous mindset—people have had some fun exploring and experimenting as they look for meaningful patterns between cost and operational processes. Lots of inquiry has surfaced new insights and lessons. Some of the most important accomplishments in early Stage 3 include:

Exhibit 7.1. Cognitive and Self-Identity Subsystem Coevolution

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Needs</th>
<th>Self-Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>sensorimotor</td>
<td>survival</td>
<td>symbiotic</td>
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<tr>
<td>preoperational</td>
<td>safety</td>
<td>self-protection</td>
</tr>
<tr>
<td>concrete</td>
<td>membership</td>
<td>conformity</td>
</tr>
<tr>
<td>operational</td>
<td>self-esteem</td>
<td>conscientious</td>
</tr>
</tbody>
</table>

Intentional Tactics: Patterns, Participation, and Performance
Intentional Tactics

- The satisfaction of breaking through the financial-only barrier
- The initiation of a cross-functional dialogue, and the excitement of collaborative interdisciplinary discovery
- The knowledge and experience gained from experimentation with intriguing techniques such as those described in Chapter 6
- People throughout the organization have discovered that they are much more than another head to count, a boss to be feared, or just one more expense item in overhead.
- Most importantly, as people at all levels of the organization learn to change day-to-day operations and resource utilization in ways that quickly translate into profit, the organization becomes more focused and intentional. It discovers the meaning of looking forward and identifies specific ways to make itself better. It becomes strategic.

INTENTIONAL TACTICS

The more intelligent an organization becomes the more it utilizes a greater range of management methods and tactics. With greater experience, the knowledge emerges that blending methods and tactics work best. This means creating clear intentions based on a growing sense of organization identity. An emerging identity statement might sound like this: We used to be the low-cost provider and compete on price, but now we’re going to change our internal processes so that we can guarantee quality and give our customers services they value because we want to keep them. Notice that this statement could be stated as a premise or assumption, along the lines of, “If we do x, we expect y results.” The articulation of such clear intentions is the first step toward strategy formation. Only a company that is what Peter Senge first called a “learning organization” can develop this kind of competence. An organization that stumbles in the long run is the one that seeks the single right answer and punishes those who deviate from simple, short-term, cost-obsessed solutions.

Organizations with opportunity and information-rich environments need the discipline of focus that clear intentions and formal strategy statements provide. This focus facilitates tactic selection. Although disciplined focus is most often called strategy, there are other focusing frameworks such as process, mission, and vision. Unfortunately, the word strategy carries many different meanings, and people misapply the word or use it interchangeably with related terms: objective, goal, target, vision, or mission, each of which has a different, precise meaning in practice. Strategy clearly articulates high-level intentions; however, strategy may remain a remote call to action if supportive tactics and targeted activities do not quickly follow. A focusing mechanism like strategy provides a self-referencing pattern to follow, around which groups and individuals can organize their work.

This chapter indexes the developmental cost and performance management characteristics of six selected tactics with a focus on the organizational learning
patterns they give employees. These six generally familiar, developmentally innovative tactics each demonstrate patterns that enable people to see internal resources and process interrelationships in new ways that support optimal resource use and process change. When used properly, each of the six tactics addresses both the profit and the participation imperatives.

From Stage 3 through all subsequent developmental stages, the two most important cost and performance information repositories become the employee and the process, as opposed to computer data. In these learning organizations, people continuously discover better ways to deliver a product/service and immediately transfer their new learning insights into their work. Smarter people build smarter processes.

PROFIT IMPERATIVE REMAINS

People in this transitional phase do not ignore the profit imperative as they learn about processes and nonfinancial metrics. Profit means resources, and in this material world, resources remain necessary to achieve performance goals. However, at this stage of development, organizations take the profit imperative as a given, and move into deeper waters in search of the causal factors of profit.

Stage 3 leaders learn to be tactically innovative because they have learned about some of the interrelationships between profit and the operational resources that produce profits. As they spend more time fishing for profit, they discover some of the best fishing holes in their own backyards. Having at least an inkling that profit must be hooked at the end of a tactical line, and that the fishing itself must come first, they begin to look for leading indicators of profit in nonfinancial processes, activities, and metrics. At first, it’s hunches, intuitions, and educated guesses, just like fishing. But the more they fish and the more hits and misses they record, the more executive profit anglers develop a better understanding of organizational profit-making dynamics in reference to operational resource value creation. This is commonly a phase of executive epiphany when the bottom line, strategy, and the most basic production/service activities finally become visibly interrelated, and therefore, manageable.

TACTICS AND STRATEGY

Organizations advance their vision, mission, and purpose at two primary activity levels: the strategic and the tactical—the global context for local action. Leadership sets the strategic direction by clear communication of focused intentions for future performance. The entire organization then executes the work necessary to achieve strategic objectives through tactical use of asset-based resources and competencies. Strategy directs and assigns resources; tactics provide a methodology for resource utilization.
Even though most employees have some notion of strategy and execution, the terms have become so familiar in the current business lexicon that most people take them for granted. Strategy and tactics are not synonymous. Few companies have mastered managing the connection between the global (strategy) and the local (tactics). Successful companies have leaders who recognize that this connection must continually be attended to, not taken for granted.

Strategic drivers, such as client and customer demands and the profit imperative form the context for most strategic choices, that in turn lead to selection of tactics best suited for executing the strategy. Tactics are tightly focused methods to execute specific goals within the overall strategic plan. Although tactics may deliver several strategic advantages, each was developed to achieve a specific strategic advantage, for example, to improve quality, contain cost, or speed up cycle time. Successful tactical execution depends on employees who understand the relationship between the strategic plan and the tactics selected for its execution. Resource-based competencies make strategic execution possible. The following principles lay the substructure on which the interplay emerges between strategy/tactics, and the cost/performance management practices that support them. In elemental form:

- A strategy states what will be done.
- A tactic states how the strategy will be achieved.
- Aligned activities execute tactics.
- Resources provide a semi-fungible foundation of human, physical, and financial capital configured into identifiable, competitive competencies.
- Existing and pending conditions and context influence strategic and tactical choices.

Unfortunately, many business professionals fail to articulate the important distinctions between management tactics and strategy and use the terms interchangeably. In addition, without disciplined, formal strategic renewal, executives adopt and abandon management tactics at an unsettling rate. This adopt-and-abandon pattern has obvious roots. First, executives pressured to show rapid results hope that choosing the correct tactic could mean a rapid solution to the many problems that face a strategy-poor organization. Since cost management can be one of the quickest routes to improving the bottom line, they bite on the first better–faster–cheaper worm that comes along, giving little or no thought to how the tactic aligns with the organization’s strategic intent. Sometimes a tactic seductively masquerades as the answer using marketing language such as “total business solution.” The quick fix is a chimera.

When it comes to aligning tactics with strategic cost management objectives, executives must work hard to balance three interdependencies:

1. Strategies and management tactics are created anew in every organization—they cannot be copied. Every company must design the tactical solution to fit
its particular intentions. The successful deployment of a management tactic in one company is no guarantee of success in another.

2. Tactic selection is a deliberate, disciplined process. Too frequently, managers do not spend time identifying the strategic attributes of different management tactics—what a tactic does best. Tactic selection is all too often performed like movie selection at a video rental store.

3. Tactical deployment uses up resources. That means people, space, equipment, and importantly, valuable executive presence and participation.

THE STRATEGIC ATTRIBUTE ARRAY

Human beings are born with the capacity to categorize based on familiar patterns—people, places, and objects—and to assign qualities accordingly. In business, revenue and cost are two important organizing categories. In Stage 2, cost–benefit analyses help managers crudely determine the “goodness” of an opportunity. The prudent selection of tactics that enable specific strategic objectives goes beyond revenue and cost. Selection now depends on the identification of more carefully characterized strategic attributes as they align with current and future needs of the customer and the organization. For example, a rare work of art, a well-groomed puppy, and an absorbent sponge may be qualities of some concern for specific products in specific enterprises. However, each of the attributes discussed in this chapter is valuable to some degree to all organizations and each attribute significantly impacts cost and performance management decisions. The strategic attribute array is another sequence of developmental milestones.

Each organization must develop its own context-relevant criteria for tactic selection, and periodically review and renew it. As selection sense skills develop, predictable cost and performance results become more common. This part of the discussion examines the development of selection sense by indexing how each of the six tactics was designed to facilitate its own particular set of strategic attributes. Exhibit 7.2 illustrates the evolution of nine strategic attributes. These nine attributes represent a significant portion of the competitive qualities and characteristics organizations seek to demonstrate. However, this is not a finite set. Companies should develop attribute names and descriptions most suited to their specific intentions.

The strategic attribute array is another sequence of developmental milestones that traces the evolutionary history of maturing trade and commerce practices. It is this attribute array—or one designed to be organization specific—that contributes an organizing pattern for improving tactic selection sense. Importantly, as tactics address the most mature strategic attributes, cost remains a key performance measure, but now in proper balance and context with operational measures as well.

Although die-hard proponents of any management tactic claim that profitability is also one of the tactic’s strategic attributes, profitability is like “goodness,”
in that it is only an attribute if it is present. After all, profit is a results metric. The trick is to match a tactical option with specific attributes to a given strategic context. Therein lies tactical success or failure. The sections of this chapter highlight primary and secondary strategic attributes for each of the management tactics profiled.

One striking element of these tactical methods and their associated attributes is their specific management focus. Less mature tactics were designed to deliver earlier strategic attributes focused on increasing control—controlling people, processes, and even the customer. More mature tactics begin to see people, processes, and customers in new ways. As executives move the organization from an exclusive focus on past performance, everyone begins to see ways to manage current and future resources and assets. Interestingly, with each new layer of maturity, the management focus becomes more and more preoccupied with people and the choices they make—employees, customers, and shareholders. People in Stage 3 organizations learn to see the patterns of these interrelationships and apply the new lessons to continuously improve internal processes and resource utilization with the tactics indexed in this chapter. A parallel developmental characteristic of both more mature organizations and more mature tactics is that each is able to simultaneously integrate a greater number of strategic attributes.

Before moving to the six tacticals, each strategic attribute is specifically defined. People starting with a shared vocabulary develop a common selection sense for choosing tactics that align with strategy. Simple applied questions at the end of each description verify common understanding for each attribute definition.

- **Rapid.** If one transaction means profit, the basic logic follows that many transactions yield more profit. Business owners naturally developed an early historical interest in improving performance by increasing the pace that products and services could be made available to paying customers. Business processes (e.g.,
delivery, design-to-market, production, distribution) depend on speed for market success in most competitive environments.

What cost and performance management benefits might we expect by increasing the speed in our internal business or customer-related processes?

- **Economical.** Synonyms include cheap, reasonable, price-competitive, efficient, and value-for-money. This strategic attribute is relevant to both the buyer and seller points of view. Once merchants and traders experienced competition, they sought ways to distinguish themselves from their rivals in the eyes of their customers. Price is a perennial differentiation favorite. The Industrial Revolution inaugurated a more sophisticated era with economies of scale, an enterprise cost management goal based on large volumes and repetitive processes. Economical tactics apply to internal process management as well as to customer concerns about value-for-money. Reasonable, efficient tactics make business processes less costly over the long run, thus impacting customer pricing.

How can we make our internal business or customer-related processes more economical? How would these changes help us better manage our costs and contribute to performance goals?

- **Easy, automated.** Technologically advanced, mechanically enabled performance improvements and innovations attract business because they save the customer time and effort, or because they improve operations by saving employees’ time and effort. Other important intuitive aspects of this performance dimension include access, user friendliness, and storage-related characteristics. (DVD and VCR manufacturers take note!)

How can we automate our internal business or create greater ease of use for our customers? How would these changes help us better manage our costs and performance?

- **Reliable.** It doesn’t break; it’s durable; and it’s there when you need it. All the speed, economy, and automation in the world fall to ashes if the product/service or internal process breaks down or intermittently becomes unavailable. Enter the Quality Movement. (Computer hardware and software providers take note!)

How can we make our products/services and internal business/customer-related processes more reliable? How would these changes help us better manage our costs and raise our performance image?

- **Variety.** A provider makes a wider array of products/services available based on a keen understanding of the selected market. Colors, options, accessories, and models are performance improvements/innovations that fit under the umbrella of this strategic attribute. In sharp contrast to the creation of the performance dimensions in the next strategic attribute, the managers of the tactics that enable variety as a strategic attribute decide what choices are available, not the end user. An attendant method is market segmentation.
How can we create greater variety in our products/services and efficiently produce this variety in internal business/customer-related processes? How would these changes help us better manage our costs and improve our performance?

- **Customized.** The flip side of the variety coin. Organizations using management tactics that capture customer preferences for choices in forms, functions, and accessories have learned the performance power of customization innovation. Enter the customer-focused era. (Retail clothing manufacturers take note!) Both variety and customization were born of the Quality Movement where attention to customer satisfaction achieved temporary equality with profitability imperatives.

  How can we create more customized products/services and efficiently deliver this customization from internal business/customer-related processes? How would these changes help us better manage our costs?

- **Flexible, adaptable.** Variety and customization are desirable in the current marketplace. The ownership of flexible, adaptable processes and resources supports profitable variety and customization. Such processes are capable of attending to multiple products/services, and resources, especially human beings. Performance innovations that emphasize flexibility and adaptability can consume proportionately more resources even in Stage 4 companies. Currently, only the more mature firms are attempting to employ management tactics designed to leverage this performance dimension. Eventually, in line with the profit imperative, innovative companies must develop more economical ways to be flexible and adaptable.

  How can we design more flexible and adaptable internal business/customer-related processes? How would these changes help us better manage our costs and bolster our performance image and efficiencies?

- **Innovative.** Consumers value the “newest version,” the “latest fashion,” and the “next generation.” Whether or not innovation means more value, the competitive profile of the current market-driven economy demands that organizations in highly competitive environments create innovative performance advantages both inside company processes and in customer products and services to stay ahead of the competition. (Institutions of higher education take note!)

  How can we regularly introduce more innovative products/services and internal business/customer-related processes? How would these changes help us better manage our costs and perform in both consumer and capital markets?

- **Humane, simple, environmentally responsible.** Although this set represents an emerging strategic attribute complex that may or may not stand the test of time (and the profit imperative), many corporations, large and small, are embracing an increasing concern for their environmental image and the limited resources of our planet.\(^1\)
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How can we limit complexity in our business processes, relate with our employees more humanely, and act more responsibly toward society and the environment while remaining cost and performance conscious?

Notice how each attribute is judged for both cost and performance in its attendant question. Any given attribute has a designed-in performance range and focus. For example, a grass mower powered by one human pushing is more automated than a scythe or hand clipper; however, its power is puny compared to a riding lawnmower. However, environment-conscious consumers may very well prefer the non–fuel-dependent tool. When insisting on building in attributes, consider: (1) the actual needs of potential customers, (2) the resource requirements and sustainability needed to satisfy customers, and (3) the longevity of market position for a product or service facing prospects of changing attribute preferences. Accurate identification of the exact attributes that a tactic is likely to deliver contributes greatly to targeted use of resources.

From holistic and developmental viewpoints, as organizations mature and learn to incorporate more recently developed strategic attributes, older, tried-and-true strategic attributes hold their value. Recall that in development nothing is lost. Reliability does not replace the importance of speed. Similarly, customization must remain within economical reach of consumers. Imagine Henry Ford telling today’s automobile customer, “You can have any color you want, as long as it’s black.” Each strategic attribute requires deployment resources. When management tactics deploy more attributes, organizations consume more resources. The math is elementary: Increased resource expenditure on tactics that deploy complex, mature strategic attributes means profit erosion, unless revenues/prices can be increased and/or internal efficiencies improved. Greater maturity fails to change basic mathematics.

ORGANIZATIONAL DEVELOPMENT AND APPLIED TACTICAL SELECTION

Well-designed strategies integrate resource allocation and cost management as significant elements of strategic execution. Since the profit imperative drives strategic intent through Stage 4, strategic tactics carry significant cost management implications. Organizations negotiating the developmental transition through Stage 3 use management tactics to institutionalize new operational resource insights and to guide organizational development along more deliberate, less reactive strategic trajectories. For these transitional organizations, management tactics should be chosen to address and support the new ways people see the relationship between cost, performance, and strategy. Tactical selection teaches people to proactively manage toward future cost and performance management targets rather than reactively adjust to dated financial performance reports. The strategic-attribute identification can be applied to any tactic, not just those discussed in this chapter. Exhibit 7.3 lists
The system-wide tactics indexed in this chapter and other more focused tactics that address a wide range of strategic mandates.

The following five-question set (1) provides a structured way to identify the strategic attributes of any management tactic and (2) demonstrates cost and performance impacts that can be expected from their appropriate use. In addition to the discussion of the six system-wide tactics, this five-step sequence can be applied to any strategically appropriate business tactic under consideration. The five steps support a deliberate process of tactical evaluation and develop a tactical selection sense.

1. Define what needs to be strategically accomplished and organizationally learned. These clear intentions are conventionally stated as strategic objectives, but they must also be articulated as learning tasks. When it comes to strategic execution, cultivate an attitude toward tactical methods as an array of specialty tools, each designed for a specific strategic objective and a means to demonstrate new ways of seeing organizational cost and performance management. Discourage silver bullet thinking; that is, the search for the one right tool that will solve all our problems—this month/quarter.

2. Develop tactic selection criteria based on clearly defined, predetermined strategic attributes as they relate to each strategic objective in the context of the next most important lesson people need to learn about operational resource management. After employees at all levels have learned the developmental lessons of continuous quality improvement, tactic selection should reinforce the ways people learn the interrelationships between work processes and their own jobs. A strategic attribute is the functional capability

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**Exhibit 7.3. Systematic and Focused Management Tactics**

<table>
<thead>
<tr>
<th>Systematic</th>
<th>Focused</th>
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<tbody>
<tr>
<td>Reengineering</td>
<td>Offshore production</td>
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<tr>
<td>Value Engineering</td>
<td>Outsourcing</td>
</tr>
<tr>
<td>Target Costing</td>
<td>Cycle time management</td>
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<td>Life Cycle Management</td>
<td>Public offering</td>
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<td>Lean and Agile</td>
<td>Enterprise Resource Planning</td>
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<td>Supply Chain Management</td>
<td>Performance Scorecards</td>
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<td>Trade Discounts</td>
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<td>Division spin-off</td>
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<td></td>
<td>Merger, acquisition</td>
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<td></td>
<td>Test market</td>
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<td></td>
<td>Franchising</td>
</tr>
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that the tactic was designed to deliver in the context of what people need to see to perform their jobs accordingly. Identify primary and secondary strategic attributes for each potential tactic, and clearly differentiate whether and how the strategic attribute works in the best interests of the customer and the learning needs of the organization.

3. Compare and contrast viable tactics using pertinent criteria such as cost, human resource requirements, implementation time, use by competitors, and most importantly, how the tactic will build organizational knowledge and experience for seeing and adapting to new ways of operational resource management.

4. Select a tactic based on clearly articulated connections that align the global (strategic intention) and the local (tactical execution and organizational learning), and define expected results in measurable performance objectives in terms of profit and learning. Include a set of abandon tactic signals. Chart progress against best estimates of reasonable timelines.

5. Test the performance of selected tactical strategic attributes in an organizational context by means of a limited prototype, by running simulations, and/or by exploring with trusted sources who have used the tactic, other than consultancies selling the tactical idea. Assuming successful test results, deploy tactic and obtain strategic feedback through measures of performance and emergence of improved work patterns.

Notice that tactic selection begins with strategy (i.e., clear intention), but the execution focuses on organizational development and learning. Strategy creates the context for management tactic selection; organizational learning creates the means for sustained development. In summary, emphasize the distinctions between strategy and tactics, global vision and local execution.

REENGINEERING

Reengineering may seem like an odd choice to examine in the range of available tactics because its early failures made it a bit of a black sheep in the tactical family. Even the word reengineering is now used sparingly because of the method’s checkered past. Strongly in its favor, however, is its basic soundness when implemented with an attitude beyond cost cutting, and the fact that the reengineering parent model spawned a number of offspring methods in the 1990s.

From the perspective of organizational development in transition from Stage 2 to Stage 3, some form of reengineering simply becomes necessary. Reengineering is a method that fundamentally, and often totally, redesigns processes. Stage 2 work processes historically develop out of a rigid mechanical environment built to mirror the budget and later comply with the exigencies of a slow, lagging results-based information environment of the financial reports. Early Stage 3 organizations must reengineer these less mature processes to include the day-to-day responsiveness required by the operational resource management focus.
Reengineering

A true management child of the 1980s, reengineering is arguably progeny of the Quality Movement and a loose collection of methods called process value analysis. Without an appropriate developmental context, these tactics were initially used to expose the working dynamics of resources/costs within processes, to drive out non-value-added costs and to modify processes accordingly. Looking back across more than 15 years since its inception, reengineering was one of the first formalized attempts to unravel and optimize the intricacies of organizational design—now an area of intense management interest—but its first use was cost-cutting.

Under the name reengineering, some executives implemented significant downsizing initiatives and lapsed into a cost-cutting mania. For executives influenced by 50 years of financial metric predominance, reengineering probably looked like a good tool to make costs go away. Some costs did indeed go away, but in the process of reducing costs, process capabilities were undermined, and valuable people were fired, often, only to be rehired as contractors. The cost-cutting shortcuts inappropriately superimposed on reengineering principles fouled the workings of a valid method.

In essence, reengineering champions took a look at the “can of worms” that dysfunctional business processes had become and said, “Don’t Automate, Obliterate.” In other words, start from scratch and build a process/organizational design that works significantly more efficiently and effectively. At that time, executives were rapidly computerizing and automating anything that moved, but automating an inefficient Stage 2 process is nonsense. Stage 3 organizations need more mature processes that give authority and improvement guidance to the activity specialists. In this context, reengineering is a powerful tactic.

In 1993, Michael Hammer, with co-author James Champy, wrote Reengineering the Corporation: A Manifesto for Business Revolution. In the interim, the Hammer and Champy publishing efforts diverged. Hammer relentlessly pursued “the process enterprise,” and Champy focused on organizational process improvements through leadership and better management. Champy subsequently wrote Reengineering Management: The Mandate for New Leadership in 1995—probably in response to a pervasive middle management resistance to reengineering in the early 1990s. This resistance can be summed up in a familiar question: If the last reengineering project laid off three of your close colleagues, what will your attitude be toward the next reengineering round? The reengineering Achilles’ heel is forgetting about people. Michael Hammer himself took some of the blame for the false start, saying, “I wasn’t smart enough about that. I was reflecting my engineering background and was insufficiently appreciative of the human dimension. I’ve learned that’s critical.” There is something to admire in this admission of a missed dimension, and a lesson about participation for every leader.

Reengineering: Strategic Attributes and Behavior Patterns
Reengineering practitioners in Stage 2 transition who use the tactic to distribute process enhancement authority to the activity specialist and thereby combine higher
process efficiency with job enrichment for employees can expect the following strategic attribute performance profile from this management tactic:

Primary Strategic Attribute: Easy and automated—from the customer viewpoint
Secondary Strategic Attributes: Rapid, flexible/adaptable, economical
Deployment Risk: Employee resistance

Reengineering work cannot succeed without the collaboration of cross-functional specialists. The radical alterations called for require the specific knowledge of specialists intimately familiar with process interactions, waste, and points of opportunity. In short, tolerance of reengineering initiatives is not enough. People must embrace it as a way to first, improve their own working lives, and only second, to improve organizational efficiency and effectiveness. This order is essential to successful reengineering efforts.

Reengineering must never be mistaken for a strategy. Above all, it must not be donned as an organization identity. When used in its proper developmental context, reengineering helps employees redesign and enhance how they do their work as manifest in the organization’s processes. Reengineering is about radical, out-of-the-box change that establishes new processes amenable to continuous improvement. Although such fundamental change is needed at the Stage 2 transition and periodically thereafter during sudden, abrupt changes in the business landscape, it is no way to live day-to-day business life.

Reengineering Data Sources. Financial improvements are expected to accrue directly from the radical, fundamental process changes that reengineering facilitates. Operational process information, once again, from any and all sources, is the focus of work and attention. Where reengineering projects succeed, a parallel data source is in place: An ongoing diagnostic of employee well-being. This complementary data source was absent in most of the early reengineering initiatives. Now, when utilized, the tactic’s impact on the workforce—monitored and measured—is considered equally important to the process changes. Work life enrichment through more task variety and greater responsibility, with commensurate pay and benefit increases has proved a winning combination. Management’s job is to balance steady, effective process change with quality of work life.

Reengineering Data Management. Because neither financial results nor impacts on people are directly addressed in the original reengineering model, top management must fill in these gaps. Executives should proactively ensure emphasis and cultivation of process/financial comparison relationships. They can do so through frequent, consistent comparisons between process changes and perceived customer and financial value created. Likewise, those in supervisory roles should regularly take the pulse of people in their sphere of influence,
as even a short exposure to reengineering’s blistering pace can cause fatigue casualties.

Reengineering Essentials

Reengineering developed as an attempt to make a difference in process management. Although its roots predispose practitioners toward technical process myopia, it is a rapid and powerful management tactic for improving process performance when the people issues are carefully managed. Neglect the human dimension and employees will obstruct implementation. People participate by making their presence known through the absence of goodwill and cooperation. Reengineering proponents claim that the tactic can produce significant cost savings; however, it is difficult to prove that other efforts (e.g., parallel initiatives in TQM, ABC/M, natural attrition) do not account for a portion of professed impacts. Forget about costs; focus on sustainable processes. Reengineering is an investment in the future—a Stage 3 future in which all processes by definition continuously improve and become more efficient.

Michael Hammer’s more current work on the “process enterprise,” with its emphasis on process ownership, has finally addressed reengineering advantages to include a more holistic view of the developing organization. However, the enduring tactical characteristics aimed at process redesign remain:

- **Fundamental.** Aimed at core competencies and entrenched ways of doing business
- **Radical.** Disregards existing structures versus attention to fixing existing processes
- **Dramatic.** Quantum improvements versus marginal or incremental

Reengineering achieves these three tactical characteristics when they successfully blend four essential elements of the reengineering methodology to guide the work.7

1. **Mobilization.** Create a business process map, determine process priorities, and appoint process owners and reengineering team.
2. **Diagnosis.** Understand customers and current processes, identify weaknesses, and determine targets for redesign.
3. **Redesign.** Fundamental, radical, dramatic business process redesign, followed by prototype design, tests, learning, and improvement iterations
4. **Transition.** Initial release (i.e., rollout) followed by succeeding releases, reaping the benefits, and finally institutionalizing

Reengineering is a tactic, not an organizational identity. As a tactic, reengineering can be just the right medicine during Stage 2 transition or if organizational processes are hopelessly complex.
VALUE ENGINEERING

To understand value engineering, a brief background in value analysis is helpful. The terms value engineering (VE) and value analysis (VA) are synonymous terms for a management tactic with significant cost and performance management implications. General Electric was one of the first firms to use value engineering, initially applying it to purchasing processes in 1947. Rooted in the engineering discipline by way of common goals, VE connects directly to TQM customer and quality objectives and indirectly to the ABC/M focus on “what the customer will pay for” (i.e., value). VE, TQM, and ABC/M share two common objectives: eliminate waste and extraneous functions, and realize high quality at the lowest possible cost.

Used successfully, VE supports development and drives growth by (1) presenting a superior value proposition to customers and (2) producing cost reductions that contribute to a greater profit margin. The VE approach particularly attracts product designers and target costing practitioners. VE tactics chiefly seek to design functional product/service qualities that deliver the most value to customers based on well-understood customer preferences. After design and development work, VE deploys its value analysis elements that focus on production cost management by monitoring cost structures during the manufacturing cycle.

Robin Cooper and Regine Slagmulder point out that “Target costing and value engineering can be viewed as concurrent activities as can kaizen costing and value analysis.” They emphasize that, “It would be wrong to view VE as just another cost-reduction program. VE is primarily about product functions and only secondarily about cost. The motivating force behind VE is to ensure the product achieves its basic function in a way that satisfies the customer at an acceptable cost. Consequently, VE programs are the domain of the product engineer, not the accountant.”

Even so, VE has a significant impact on cost structure, where the leading indicators, customer value and manufacturing efficiencies, are assumed to lead to improvement of lagging financial results.

Value Engineering: Strategic Attributes and Behavior Patterns

Value engineering tactics assume that well-understood customer-value imperatives dictate the quality of product design that in turn is aligned with effective production process design that then leads to reduced costs, increased customer satisfaction, and greater profits. Depending on the specifics of the design objectives, VE tactics address many different strategic attributes in the array. From the customer perspective, VE can help organizations adaptively create strategic advantages that include more economical, easy/automated, reliable product/service performance attributes. However, from the organizational perspective, the strategic strength of VE lies in innovation. Balancing innovation and profitability takes great skill because the VE process itself is expensive, as is the discovery of customer value perceptions.
Value Engineering Data Sources. Since VE programs appropriately hail from the engineering function, industry-specific, technical information comprises the major data input. The connection to financial results comes through detailed profitability management within the design and manufacturing functions.

Value Engineering Data Management. Talk about tracking value from the resources that create it! Value engineering management begins at the beginning, where value is designed in.

Value Engineering Essentials

VE tactics come in a number of formats. Cooper and Slagmulder use a three-part classification to describe the varied approaches: (1) product-direct application, (2) comparative tear-down approaches, and (3) miscellaneous limited but focused applications of VE tactics such as the checklist method, the one-day cost-reduction meeting, mini-VE, and the VE reliability program. The authors succinctly describe the first two categories that they consider most fundamental. (Emphases in the first paragraph are added.)

[Product-direct] VE can be applied directly to proposed products at different stages of the product design process. These different approaches are called “Looks.” Zero-look VE is the application of VE principles at the concept proposal stage, the earliest stage in the design process. Its objective is to introduce new forms of functionality that did not previously exist. First-look VE focuses on the major elements of the product design and is defined as developing new products from concepts. The objective is to enhance functionality of the product by improving the capability of the existing functions. Second-look VE is applied during the last half of the planning stage and the first half of the development and product preparation stage. The objective of second-look VE, unlike that of the zero- and first-look, is to improve the value and functionality of existing components, not create new ones. Consequently, the scale of changes is much smaller than for zero- and first-look VE.

Comparative applications of VE consist of tearing down other products to identify new ways to reduce costs. Tear down is defined as “a comparative VE method through visual observation of disassembled equipment, parts, and data arranged in a manner convenient for such observation.” There are numerous approaches to tear down. The six dominant techniques are dynamic, cost, material, static, process, and matrix tear down. The first three methods are designed to reduce a product’s direct manufacturing cost. The next three are intended to reduce the investment required to produce the product through increased productivity.¹¹
All VE tactics aim to achieve two simultaneous performance goals: cost reduction and customer-driven quality improvements. In the spirit of Total Quality, VE practitioners usually apply VE techniques to VE processes as well. Cross-functional information exchange is another hallmark trait of VE.

The participation aspects of VE are intriguing. Because this tactic starts at the design, or even idea phase, technical personnel know that they are helping to create value at its foundation. The rigors of VE design may be tedious at times, but they are unlikely to allow many conventional design errors such as creating functionality isolated from customer preference information. As VE-designed products move into production and sale, manufacturing and sales staff members have the satisfaction of knowing the valuable information they hold has been part of the design process. In addition, production and sales staff members have a jump on product familiarity because they have participated in design and development. They will be better able to monitor and enhance production processes during ongoing continuous improvement work.

A common VE pitfall relates to pricing. Although consumers want variety, innovation, and customization, when push comes to shove, cheaper (i.e., more economical) wins out as long as a product is reliable. The engineering discipline sometimes fails to take this into account. This stems from a misunderstanding of what cheaper means to the consumer. It is not simply price. The value of consumer time is a more subtle addition to the price tag. Specifically, VE can make errors in assuming consumer willingness to pay for an array of product bells and whistles. Designing in 1,000 capabilities costs the developer money that the customer may not want to pay for the sake of the 980 functions that will never be used. VE practitioners do well to repeat the following mantra: The customer will pay the price for only those features that the customer needs. Successful VE practices depend on good information about customer cost–benefit expectations.

Even price cutting has risks, as it may not entice more buyers who vigorously avoid extensive functionality requiring considerable time investment to learn. Naturally, technology products are vulnerable to this pitfall: Think software applications and set-top boxes. The only way to get most consumers to invest money in using new product/service functions is to make using them very, very easy. Think ease of user interface. Spending less time to acquire a new skill acts like a credit/discount to the monetary price, and therefore, makes the investment cheaper. Standard economic models do not even approach explaining this kind of interdependent dynamic. Repeat the VE mantra.

TARGET COSTING

Target costing (TC) is a direct answer to the faults of cost-plus pricing and a direct contributor to the profit imperative. Informed by market conditions, TC tactics use engineering-based principles to manage costs and resources. Target
cost management tactics aim to enable prices that yield a specified level of profit when employed during product/service planning and development stages or redesign efforts. Robin Cooper and Regine Slagmulder have a long history of experience in TC development and tactical application. They define TC as a “structured approach to determine the cost at which a proposed product with specified functionality and quality must be produced in order to generate the desired level of profitability over its life cycle at its anticipated selling price. It is as much a tool of profit management as it is of cost management.”

Japanese manufacturers were among the first to use TC tactics in their quest for profitable manufacturing process innovation that combined product variety, quality, and economy. In a sterling example of Stage 3 learning and development, they used target costing tactics to enhance the ways that people learn to make the production systems smarter from start to finish. In conjunction with the TQM practices and lean and agile tactics, aligned target costing tactics allowed the Japanese to penetrate Western markets quickly and profitably. North American manufacturers partially closed the competitive gap created by the Japanese when they started to utilize TC tactics. That said, some firms that adopt TC tactics make a big mistake when they use TC as an isolated cost reduction tool. As an integrated tactic that strategically orchestrates (1) customer preference information, (2) market dynamics, (3) product development, and (4) production management, target costing becomes a dangerous method when used for conventional cost-cutting purposes. Using TC tactics with incomplete information in any of these four areas produces risk.

**Target Costing: Strategic Attributes and Behavior Patterns**

The integrated nature of target costing places it more comfortably in the developmental skill set of a Stage 4 organization. However, Stage 3 firms can mature more rapidly by engaging TC activities as early (and as patiently) as possible. This tactic relies heavily on cross-functional participation of design, production, and sales personnel. It encourages patterns of teamwork and collaboration as everyone works toward a specified common goal. The TC pattern of work, itself, creates an intrinsic sense of contribution to a common objective characteristic of Stage 3 developmental dynamics.

Target costing is designed for profit enhancement through better cost and pricing management. Thus TC addresses all three of the income statement’s major sections: revenue, expenditures, income/loss. Heavily market and customer driven, TC methods inherently integrate an appropriate quality level based on the customer preferences that drive its tactical dynamics. TC is roll-up-the-sleeves cost management with crystal-clear objectives and no fancy talk. It directly serves the profit imperative by leveraging several cost-focused strategic attributes.

<table>
<thead>
<tr>
<th>Primary Strategic Attribute</th>
<th>Economical</th>
</tr>
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<tbody>
<tr>
<td>Secondary Strategic Attributes</td>
<td>Reliable, innovation supportive</td>
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Deployment risk Use without the necessary discipline or market information; losing a sense of changing conditions in the profit "forest" during lengthy, focused analysis of the target cost "trees".

Target Costing Data Sources. TC serves the most conventional financial measures: cost, price, and profit. However, the chief data sources for target costing are far from conventional. They are in rank order: (1) customer preferences, (2) accurate volume predictions, (3) alternative cost structures, and (4) attendant risk factors. None of these flows easily from a Stage 2 CMS.

Target Costing Data Management. Again, the task of TC is to track value from the resources that create it, and TC provides a sturdy structure to do so. TC managers work directly toward desired relationships between cost, price, and profit. Importantly, TC has a learning curve that depends on experience in working with these relationships.

Target Costing Essentials

Cooper and Slagmulder define the essentials of target costing: “At the heart of target costing lies a deceptively simple equation: Target Cost = Target Selling Price − Target Profit Margin.” This deceptively simple equation belies the work and focus required to design and produce a product to a targeted cost. Four questions need to be answered, one by one, before a target price or cost can be established.

1. What do customers want? The Quality Movement established customer focus. Pushing products into the marketplace without adequate customer inputs became a risky proposition. Based on preselected market segments and internal capabilities, a firm must discover what customers truly value. Firms discover customer preferences through sales and market history, focus groups, surveys, and other methods that determine what products/services have a reasonable chance of success. The discovery process includes ascertaining what competitors are already doing or may do in the near future.

2. What and how much can be sold? Few things in business are harder than setting a price on an undefined product or service with unknown demand. In this situation, the strengths of TQM blend with TC to clarify product definition, design, and market. Design decisions focus on the level of quality and fitness specifications. Serious market research, not just conventional sales forecasting, assists in answering volume questions. Finally, target costing practitioners investigate how the new or redesigned product/service aligns within an existing product/service line.

3. What are the possible cost structures and the pricing constraints based on our profit expectations? This is where the cost rubber meets the pricing road. Creating a cost structure begins in the design or redesign phase of a product
or service. Recall that about 80 percent of cost structure is determined at this stage. Production costs represent the downstream results of design work; therefore, marketers, designers, and producers need to coordinate from the beginning of the product/service life cycle. Supplier cost structures for components and support services also need to be included.

4. **How can new product/service risk be mitigated?** The answers to questions 1, 2, and 3 mitigate risk. Life cycle costing tactics, discussed later in this chapter, work with TC to expand the view of product/service economic timelines. Many companies set return-on-investment hurdle rates for products and services. Fewer firms terminate a product or service when hurdle rates are consistently missed. TC tactics deliberately guide management through resource investment and disciplined design planning to improve the risk–benefit ratio.

Many small and medium-sized companies have neither resources nor expertise to gather comprehensive market and customer data, but firms can still make use of target costing tactics through product-level and component-level target costing.

Product-level TC depends on internal production and engineering staff to manage toward cost reduction without jeopardizing customer satisfaction. Product-level target cost managers focus on functions, features, and service levels. Even the smallest organizations can calculate their current product-level costs, set strategic objectives for cost improvement, and track progress by matching these efforts to actual costs. Supply-chain management of component costs complements product-level TC at the parts procurement level.

Naturally, more benefit accrues from TC work at all three tactical levels—market, product, component—but work at any level usually yields improvements. However, risk increases when only one or two TC levels are used because managers work with incomplete information. See Exhibit 7.4 for a summary of the primary steps in market-driven, product-level, and component-level TC tactics.

One lingering cost-related question arises during TC discussions: Which resource expenditures should be included in TC analyses? Conventional cost accountants would answer, “All variable costs.” However, as pointed out in the first three chapters, conventional variable costing has serious shortcomings. A better approach performs ABC product-cost analyses that include all costs directly related to the product in question. The complexity and cost of this ABC application can be limited by the scope of the inquiry.

Finally, as with the use of any predictive tactic, target costing accuracy is subject to human errors (inaccurate cost information) and egos (But I want the price to be x). The most reliable TC practitioners have learned to adopt a just-the-facts, scientific attitude to keep the work as realistic as possible. They keep a record of past TC efforts against actual results to temper enthusiasm. The profit forest/cost trees analogy refers to the discipline required to also watch the big picture as it changes in the market while deliberately following target costing method detail. Getting lost in the details of a target costing initiative is a real danger. Target costing takes
Exhibit 7.4. Step Summary for Three Target Costing Tactics

**Market-Driven**
- 1. Long-term sales and profit objectives
- 2. Structured product mix
- 3. Target selling price
- 4. Target profit margin
- 5. Allowable cost

**Product-Level**
- 1. Set product target cost
- 2. Value engineer to support TC
- 3. Cost guidance
- 4. Cost monitoring
- 5. Adopt/Abandon

**Component-Level**
- 1. Set TC for functions and subassemblies
- 2. Set component-level TC
- 3. Select suppliers
- 4. Manage suppliers
- 5. Reward suppliers

Life Cycle Performance and Costing

Time, and the more time and energy invested, the harder it is to let the product go. But conditions change, competitors make moves, and TC practitioners must monitor factors beyond internal cost and process to make certain that their efforts go into the most promising products/services.

LIFE CYCLE PERFORMANCE AND COSTING

The very admission that products and services have a life cycle is a giant step forward in business maturity. The most common Stage 2 experience in managing products and services follows a familiar sequence: careful concept analysis followed by design and preparation for the launch, then scrupulous shepherding of the new offering, and in short order, the fledgling blends into the indistinguishable, aggregated mass of the income statement. Ad hoc or cumbersome attempts to terminate or redesign an offering often end in either no decision or an uninformed mandate from the top.

The macroeconomic perspective of life cycle cost and performance management (LCCPM) can change this situation for the better. The typical LCCPM initiative focuses on products and services, but the same tactics apply to managing the life of a brand, a technology investment, a customer relationship, the progress of major initiatives, and even to the life cycle of an entire business or industry. Just as maturing individuals conduct their own lives differently as infants, adolescents, adults, and elders, right up through death, so valued products and services can be attended to properly at different life phases. What better way to introduce people to developmental management principle during Stage 2 transition?

Like target costing, LCCPM is conceptually simple but requires rigorous design and implementation discipline. Ideally, LCCPM practitioners blend their efforts with TC tactics to create a broader scope for product/service management. TC focuses on design and production; life cycle costing takes that information and adds a birth-to-death perspective. Together, TC and LCCPM are the guardians of profitable innovation. In parallel, people within the organization can participate in the life of the product/service, and know approximately where they are in guiding its full life cycle. Participation with context and knowledge is far more productive than management by general principle. For example, take a product line manager, who knows from years of experience, that the line should be allowed to die with dignity. Instead, Stage 2 executives pressure the manager to revive the terminal patient again and again for the sake of “not deleting an item from our full line of offerings”—a conventional, and incorrect, Stage 2 rationale.

Life Cycle Management: Strategic Attributes and Behavior Patterns

Like target costing, LCCPM focuses equally on profit management and cost management, and brings the added perspective of lifetime performance. Both
approaches operate at the nexus of the diverse functions and energies that combine to launch a new product, implement an ERP system, or revitalize a brand.

Primary Strategic Attribute  Economical
Secondary Strategic Attributes  Innovation supportive; humane
Deployment Risk  Use without the necessary discipline or market information; failure to compare actual to estimate and/or failure to act on LCCM information to alter cost and profit structures.

**LCCPM Data Sources.** Nothing less than all data elements from an offering’s conception to its burial. This tactic aligns comfortably only in a Stage 4 CMS or higher, because information must be drawn from disparate sources, and only an integrated, nonredundant Stage 4 system will accomplish such work. The purpose of the data is to monitor the needs and vital signs of an offering and to balance those needs with all other organizational products and services.

**LCCPM Data Management.** The management dynamic operative in life cycle work remains tracking value from the resources that create it. The additional perspective, however, is that resources may be tracked for years or even decades. In conventional financial language this would amount to a lifetime income statement for a single product. Quite a daunting task for a Stage 2 CMS.

**Life Cycle Management Essentials**

Life cycle management, done with good intentions, provides the first glimmers of Stage 5. Organizational life, viewed through its products and services, begins to be seen comprehensively. This obviates the contributions a product may make in one quarter or one year, and thus helps mature management thinking. While Stage 3 encourages new behaviors through the redistribution of authority, Stage 5 requires that people learn to change activities and goals as soon as opportunities arise. This means letting go of things in their natural course, and embracing the new. In addition, the holistic perspective of Stage 5 looks to the well-being of the whole organization (and more), and not to the selfish benefit of the few—for example, a sales manager who receives commission on revenue generated by an unprofitable product that has passed its time. LCCPM is good practice for these aspects of Stage 5 work.

A life cycle runs from birth to maturation to death, or in product/service terms, from idea to design to test to production to the marketplace to revitalization or to abandonment. Some products/services have several incarnations, like the American Motors/Chrysler Jeep or the Harley-Davidson motorcycle. Life cycle analysis tactics can either precede or coevolve with TC to provide a go/no-go signal prior to innovation or renewal investments. All products/services need monitoring and
Life Cycle Performance and Costing

adjustment at critical points in their life span, particularly when profit objectives change. LCCPM practitioners deploy many specific tactical nuances dedicated to accumulating, analyzing, and altering costs over the life cycle. LCCPM tactics also justify investments, affect interim cost reduction, and identify hidden life cycle costs. Exhibit 7.5 depicts six key life cycle stages.

Cost management permeates the life cycle in the following ways:

• Creating a cross-functional consensus for the LCCPM design
• Keeping senior management honest by providing “just the facts”
• Producing preliminary life cycle cost estimates to assure that all relevant costs are included (i.e., SG&A as well as production)
• Comparing actual ROI and/or recalculation of ROI at appropriate intervals (not done in most conventional environments)
• Leading cost reduction activities
• Monitoring and reporting production cost and product/service profitability
• Signaling alerts to profit erosion
• Managing costs during phase-out and termination

Traditionally, the income statement aggregates an organization’s bundle of products and services along business segments and product/service lines. But just as a household budget can accumulate a significant negative position by over-spending in several small categories, small losses on products/services can also add up to a disturbing negative position. Three disciplines that avoid or even prevent embarrassing situations like this include:

Exhibit 7.5. Life Cycle Stages
1. Reliable profitability information for actual performance of each product/service (ABC/M)

2. Timely management of information coordinated across all products and services, with attention to synergies or conflicts between different offerings

3. Rigorous target and life cycle costing

When applied together, these three disciplines may not guarantee profitability, but they provide management with early insight to risks, explicit cost/profit goals, signals that cost reduction efforts are needed, and information to “manage out of” the product or service before it significantly erodes total profit.

LCCPM also minimizes premature bailouts based on early nonprofitable status reports. LCCPM prepares managers to expect a profit-learning curve that includes start-up costs and time to penetrate markets as natural parts of the life cycle. An ABC/M analysis will help managers assign LCCPM costs where they belong: to the new product/service rather than spread them across all products, as in conventional overhead/absorption accounting.

In summary, life cycle cost management creates predictive advantage for any strategic intention that involves the management of costs over the long term. It does so by evaluating revenue-generation against cost and guiding cost reduction activities. LCCPM is a powerful organizing tool, well worth the investment when aligned with appropriate long-term strategic cost management intentions.

**LEAN AND AGILE MANAGEMENT**

*Lean* and *agile* are two complementary terms for management tactics that carry significant cost and performance management implications. They arose from the legendary manufacturing process management practices of Toyota. Originally applied only to the manufacturing sector, other sectors have since learned to apply lean and agile principles with increasing success.\(^{15}\)

Lean tactics preceded agile tactics. In the most general terms, lean management practices work to eliminate all forms of waste that occur during product/services production and delivery. Agile management tactics work to eliminate the rigidity of the traditional dependency on economies of scale by increasing production/service delivery flexibility without sacrificing quality or incurring added costs. Lean and agile management practitioners emphasize resource, operations, quality, and continuous improvement perspectives in the design of their tactics.

A company that forms an intention to have a lean and agile identity sets in motion a pattern of continuous improvement, that in turn becomes part of all operating procedures. The organizational way of life is to continually look for leaner, more streamlined methods that maintain a specified level of quality with greater flexibility. People take pride in finding and eliminating waste, especially when they are rewarded for it. One of the problems with lean and agile identities is that they tend to
be overly focused on in-house processes, and sometimes miss seeing external changing conditions. Another danger is that lean and agile identity can become stingy and mean (i.e., cost-cutting) unless top management sets a consistent and balanced tone.

An organization using lean and agile management principles shapes its image as a serious and efficient supplier of goods and services. The firm’s culture should be in love with its own processes, wanting to know everything about them, to provide the best input resources to those processes, and to check in regularly to see what adaptations are needed. However, this internal process dedication must be largely transparent to customers because purchasers value only the results of lean management—value pricing, speed, and quality. The last of these, quality, is the check-and-balance point on the lean, waste-elimination values.

**Lean and Agile Profile: Strategic Attributes and Behavior Patterns**

*Lean management* practitioners who use its methodologies to eliminate waste while maintaining product/service quality can expect the following strategic attribute performance profile from this management tactic:

- **Primary Strategic Attribute**: Economical
- **Secondary Strategic Attribute**: Rapid, easy/automated
- **Deployment Risk**: Quality

A lean enterprise cultivates a waste not–want not mentality. As long as people feel confident that they do not endanger their own jobs or those of coworkers they participate in finding and eliminating waste. A pattern of reward for innovative and high-dollar waste elimination reinforces participation. In contrast, when management begins a pattern of eliminating people and departments without satisfactory reassignments and/or reliance on attrition, the lean effort is almost always short-lived. Naturally, people stop waste identification when the cause-and-effect relationship is clear between their ideas and the disappearance of jobs. A Stage 2 company making this mistake commonly regresses to cost-cutting procedures.

*Agile management* practitioners use its methodologies to balance higher process efficiency with job enrichment for employees in expectation of the following strategic attribute performance profile from this tactic:

- **Primary Strategic Attribute**: Flexible/adaptable
- **Secondary Strategic Attribute**: Economical, rapid, easy/automated, customized
- **Deployment Risk**: Disruptive innovation by competition

An agile enterprise cultivates quick, coordinated reflex responses to customer preferences and to competitive encroachments. “Stay three steps ahead of everybody,” would make a good motto for an agile company. Agility is an attractive
quality and typically generates innovation and creativity. However, agile practices may be too focused on adapting quickly to customer preferences. An adaptation can be too much change, at too great an expense toward customer preferences that shift before the agile implementation is paid for. Where people are concerned, an intense, rapid series of agile adjustments can cause employee burn-out, and management must take care to advocate for balanced work lives or there will be fewer agile employees to care for customers.

**Lean and Agile Data Sources.** Financial results are a litmus-test comparison point only. Working data sources are operational, including waste and source-of-waste reporting. Information systems for a lean and agile environment typically begin on stand-alone platforms similar to ABC/M software. Specific process management applications are also common. Management’s job is to place interest in financial performance measures in the context of the processes, activities, and resources that create financial results. Lean and agile organization remain so only as employees transfer and formalize their learning into enterprise processes.

**Lean and Agile Data Management.** In the process of Stage 3 maturation, leadership actively emphasizes and cultivates comparison of resources with financial results to guide people toward insights on how value is created. Of particular importance, management must continually reference external conditions such as customer satisfaction and supplier relationships to keep a balance between perceptions of internal operations and external constituents. That being said, process management in various forms remains a key attention point.

**Lean and Agile Management Essentials**

*Lean management tactics* take many forms. One of the more mature subsets is the just-in-time (JIT) production model. JIT is a set of lean manufacturing practices used primarily in repetitive manufacturing processes that work to minimize waste by creating efficient flow processes through linked work centers eliminating any activity that adds cost without adding value. As materials move through the assembly process across work cells, the right part can be found in the right place and the right time. JIT managers learn to streamline process operations and focus their waste elimination efforts on the interactions of three principal process components: material, space, and human.

Resource flexibility is a key feature of JIT tactics. JIT managers increase the number of multiskilled workers in all processes and select nonspecialized equipment for any process that depends upon tools or machines. Similarly, JIT managers carefully design the physical layout between humans and machines and sets of teams for any given process.

One of the most important features of JIT process management is the integrated “pull” dynamic of process workflow. In contrast to more conventional
“push” systems, JIT does not use inventory as a production cushion. JIT management coordinates workflow pull according to eight principles with significant cost management implications.

First, small lot production saves space and capital. Work groups can be moved closer together and transportation costs reduced. For organizations using TOC methods JIT helps identify and correct process bottlenecks. Second, JIT management tactics emphasize process setup efficiency to minimize human or machine downtime. Third, lead time management focuses on the interrelationship and cost management implications of three additional key time-related elements of process efficiency: human proficiency, product movement, and waiting times. Fourth, the simple, automated kanban control system regulates the movement of goods through the production process between work teams minimizing costs of waiting, downtime, and human oversight of process flow.

Fifth, uniform production levels smooth processes during final assembly and permit more accurate output forecasting. The tight internal process management depends on the sixth JIT management focus, the supply network. A few of the ways JIT manages supplier relationships toward greater quality and responsiveness include locating processes near the customer, standardizing delivery schedules and containers, and accepting installment payments rather than payment on delivery.

Finally, quality at the source and total process maintenance ensure quality while processes become more efficient and cost-effective. Total process maintenance focuses on practices that address breakdowns and breakdown prevention within the production process. Careful records track breakdown costs, frequency, and intervals so that employees can design preventative maintenance schedules and participate in the goal of zero defects.

Since JIT production methods discourage inventory, quality must remain high. Traditional approaches depend on inventory as a hedge against defective production. Employees take responsibility for quality inspection of their own work and never pass along a defect. JIT schedules continuous quality improvement activities into periods of undercapacity so that employees can solve problems or receive new training. As people learn, the processes immediately become smarter. By reducing inventory and space requirements, JIT practitioners have deployed these tactics of process management to increase capacity, productivity, and product variety; maintain quality; simplify control activities; and lower their costs.

Agile tactics build on lean tactics. The consumer electronics industry has joined the automobile industry to meet an increasing need to compete in a market in which economies of scale cannot respond quickly enough to changes in competitive innovation. The Japanese originally characterized agile manufacturing in terms of challenges such as the “three-day car,” delivering a custom-order car to the dealer in three days or less.

As agile management has spread to other sectors, several agile principles apply to cost managers in all sectors. First and foremost, production economies of
scale bear significant setup costs. The second principle for manufacturing and
other material-dependent processes, the so-called Lego-block approach to product
design, saves significant cost by creating interchangeable parts across production
lines and creating the ability to configure the same components in different ways.
The third principle calls for including the customer in the product design process.
The automobile industry accomplished this by simply installing a computer on the
showroom floor that allowed the customer to visualize composites of different
optional features; data on customer choice is then easily compiled. Agile man-
gagers use these tactics without abandoning JIT principles, such as locating close
to the customer and supplier relationship management.

Importantly, organizations practicing agile management integrate vast amounts
of cost and performance information into a single decision-support system whenever possible. However, these same organizations thrive only when the same information is integrated into the processes themselves.

SUPPLY-CHAIN COSTING AND
INTERORGANIZATIONAL COST MANAGEMENT

Some time ago, cost and performance management burst through the confines of
individual organizations and began connecting cost and resource performance man-
agement efforts across and between organizations. Outsourcing, the strategic pur-
chase of ongoing external production capabilities and other services, was the first
wave. Gradually, alliances deepened between customers and suppliers. Where once
internal company cost information was secret and closely guarded, organizations
started to share analyses and data openly with customers and suppliers in hopes of
attaining mutually beneficial changes in cost structures. Richard Schonberger cap-
tures some of the early lessons. First, he cites what he calls, “a lesson from Japan,
circa 1980: Don’t have too many suppliers.” Next, he cites, “a lesson from the
United States, circa 1985: Don’t have too many part numbers [i.e., components].”16

Lean and agile manufacturing approaches developed during this time advocated
both outsourcing and supply-chain management to optimally utilize internal re-
sources and to manage costs.

With each of these developmental insights, organizations learned to embed
human learning into productive processes far beyond a focus on in-house products
and processes or the limitations of technical information systems. Interrelation-
ship patterns began to develop beyond the walls of the conventional enterprise.
Supply-chain and interorganizational management resulted from the birth of new
ways to see business relationships outside the wall. Importantly, organizations
that participate in these extended relationships begin to redefine their own identity
and they learn to experience living systems principles that will guide them into
Stage 5.
More recently, progressive companies use systems thinking throughout the life cycles of products/services and customer/supplier relationships to form affiliations that create opportunities to manage costs strategically. A term has emerged to describe supply chain cost management efforts: Interorganizational Cost Management (ICM). Robin Cooper and Regine Slagmulder describe ICM as interdependent cooperative relationships, and define it as “a structured approach to coordinating the activities of firms in a supplier network so that total costs in the network are reduced.”

Supply-Chain Costing and ICM Strategic Attribute Profile

Supply-chain and ICM tactics exemplify the trend toward blending a greater number of strategic attributes within a single cost and performance management methodology thereby integrating several business methods into more comprehensive models. Note how many strategic attributes these more mature tactics possess compared to the attribute profiles of earlier methods. Remember that these tactics (and the strategic systems indexed in Chapter 8) are presented in a rough chronology of their development.

Primary Strategic Attribute: Economical for customers and all members of the supply chain

Secondary Strategic Attribute: Easier/automated, reliable, rapid, innovative, flexible/adaptable

Deployment risk: All attributes are at risk when an organization attempts to implement supply chain and ICM tactics without also applying the principles of lean and agile manufacturing. Failure can also quickly develop when the good of the whole supply chain partnership is sacrificed to the avarice of one or two members.

Supply-chain and ICM execution involves the collaboration of many functions across each participating organization in the network. The work must be meticulously planned and coordinated if it is to succeed. Eight major steps enable such an achievement over an extended timeline. This is no overnight fix, but rather an integrated process and relationship improvement effort (see Exhibit 7.6).

Supply-Chain Costing and ICM Essentials

Cooper and Slagmulder provide a concise synopsis of the ICM worldview and describe how target costing and value engineering developmental precedents blend and mature into supply-chain tactics that become more than the sum of their parts:
Target costing lies at the heart of interorganizational cost management. It has two primary objectives. The first is to identify the cost at which a given product must be manufactured if it is to earn its target profit margin at its expected or target selling price. The second is to decompose the target cost down to the component level. The firm’s suppliers then are expected to find ways to deliver the components they sell at the target prices set by their customers while still making adequate returns. When the suppliers also use target costing to discipline their product development processes, chained target costing systems emerge. Chained target costing is an important element of interorganizational cost management because it transmits the competitive pressure faced by the firm at the top of the supply chain to the other firms within the chain. It aligns the cost management programs of the firms in the chain by indicating to the suppliers where the buyer expects cost reduction to occur.

Target costing systems, whether stand-alone or chained, operate at arm’s length as the cost reduction efforts of the buyer and supplier are undertaken in isolation. However, this isolation limits the effectiveness of the overall cost management process because each firm confines its analysis to local savings. Interorganizational cost management overcomes this limitation by creating formal mechanisms for the design teams of the firms in the supply chain to interact. These interactions enable the product and its components to be designed in ways that reduce costs throughout the supply chain.

Exhibit 7.6. Adopting ICM Step by Step

1. Identify the parts of the product/service that will be externally sourced.

2. Determine the appropriate level of the buyer-supplier relationship for each externally sourced item.

3. Rationalize the supplier base.

4. Develop the appropriate supplier relationships.

5. Increase the efficiency of the buyer-supplier interface.

6. Develop the necessary skills in the techniques of ICM.

7. Extend lean supply and ICM both upstream and downstream in the enterprise supply chains.

8. Demonstrate lean supply and ICM to internal suppliers.

the supply chain. Value engineering, an organized effort to find ways to achieve the product’s functions in a manner that allows the firms to meet their target costs, lies at the heart of these interactions.¹⁸

ICM and supply chain tactics focus on design and production phases similar to target costing and value engineering within a significantly larger framework of networked interrelationships. Importantly, though cost management drives supply chain collaborations in the initial phases of transition from Stage 2, other important advantages become glaringly apparent in this interorganizational paradigm. The adage “Two heads are better than one” applies; ICM facilitates creativity and innovation as diverse expertise and viewpoints are permitted to come together. Internal administrative and operational process improvements frequently emerge as part of such interorganizational cross-fertilization.

Organizations must balance related cost reduction objectives with other supply chain/ICM advantages. “The key point is that the supply chain must be managed for competitive advantage, not just to reduce costs. . . . cost management should not be practiced in isolation. The competitive advantages from more effective management of the supply chain focus on improved quality and functionality of the components supplied, and hence on end products, as well as on reduced costs.”¹⁹ As organizations develop, cost and performance management becomes more a matter of organizational learning that enlightened and engaged employees can apply directly to the processes that create value, within and outside the walls of the conventional enterprise.

In Supply Chain Development for the Lean Enterprise, Cooper and Slagmuller offer four questions for people to investigate the activity level of ICM within their own organizations. These questions should be asked of both accountants and purchasing staff.

1. Does our firm set specific cost-reduction objectives for its suppliers?
2. Does our firm help its customers and/or suppliers find ways to achieve cost-reduction objectives?
3. Does our firm take into account the profitability of its suppliers when negotiating component pricing with them?
4. Is our firm continuously making its buyer-supplier interfaces more efficient?²⁰

Only a mature Stage 3, 4, or 5 CMS can support such interrelationship goals by accurately targeting and tracking cost reductions and cost structure changes. In addition, a mature CMS enables two additional aspects of great import to ICM alliances: better demand forecasts and improved capacity/inventory management.

Some time during the flowering of Stage 3, farsighted people begin to catch glimpses of Stage 4 cost and performance management. They ask themselves, “If we’ve come from a strictly financial view of everything to a more comprehensive
operations–activities–resources perspective, what else is there beyond this? What else could there be?” Curiosity is at work once more, leading to explorations, discoveries and greater maturity. At first the inquiry reveals only ghostly flits and glimmers, but they are real, and the insatiable human appetite for learning about “the something more” will not rest.

NEW WAYS OF SEEING

As organizations develop more mature ways of seeing cost and performance, cost and performance management authority moves from a centralized hierarchy to the people who possess the knowledge and experience to make a direct and timely impact on the product/service processes. This leads to enhanced quality in the eyes of the customer. The organization develops a new identity that balances the importance of profit and participation because people begin to see that participation is the means to greater profit. This chapter has focused on some of the most reproducibly successful tactics that organizations have used to advance their strategic intentions through the distribution of decision-making authority.

Unlike other chapters, this section addresses developmental visions, management responsibilities, and productive accountabilities across several stages of organizational maturity—Stages 2 through 4. Recall that each of the management tactics aligns with a different stage of organizational cost and performance management maturity. Once past Stage 3, distinctions begin to blur when compared to the stark maturity differences and management practices between Stages 1, 2, and 3. As a fork in the developmental road, Stage 3 cost and performance management practices will not be significantly challenged until the emergence of Stage 5 organizational learning insights.

In the context of organizational development, reengineering is a process improvement tactic best applied after the Stage 2 organization makes a formal commitment to a CMS development initiative. Executives must emphasize that the purpose of the reengineering effort is to overhaul outdated processes from the ground up and give employees at all levels a chance to focus on process and become participative as part of the organization’s more mature emerging identity. This is not the time to use reengineering to cut costs. However, this is an ideal time to seek an experienced guide and begin the process of building an activity-based system for tracking costs. The accounting and reengineering insights will only reinforce one another, and people will begin to see the practical connections among cost, resources, and operational processes.

After the organization has used reengineering to design major processes consistent with an operational resource focus, people can sharpen the process management skills they learned during the reengineering effort and apply them to more focused product/process maintenance and enhancement tactics. Value engineering, target costing, and life cycle management tactics are available as they support the cost and performance management mandates of the strategic plan. Each of these
Patterns, Participation, and Performance

three tactics best addresses a specific product or process. In this delicate early phase of Stage 3 development, people at all levels must remind one another that the most important information for value creation does not sit in the data warehouse, it resides in the minds of employees and in the processes themselves. All of the tactics discussed in this chapter teach employees how to enhance processes. Smart employees who are given the authority to transfer what they know to their work processes create the value that eludes organizations in Stages 1 and 2.

Lean and agile management is a comprehensive organizational commitment to process interrelationships. Organizations become ready for lean and agile management gradually as people learn to become more participative and refocus on real time process management rather than results-based cost management. By the time an organization becomes developmentally ready for lean and agile, employees at all levels should be eager for the opportunity to employ the tactics. However, patience is a virtue. Don’t run out and duplicate Toyota—it’s not possible. Like individual humans, every organization is unique, and the people in each organization learn how to create smoother, more efficient process flow step by step. When everyone participates in a continuous improvement culture, learning becomes a part of the job, and positive change occurs much more quickly and fluidly than enforced mandates.

Supply chain and ICM can and should begin in the stodgy Stage 1 organization, but its practice becomes significantly more mature as the organization matures. Supply chain and ICM are all about interrelationships. As organizations become more mature, they see that their identity begins to blur in terms of the inside and the outside of its walls. Supply-chain members become one another’s customers and, eventually, true partners.

As organizations learn to see cost and performance in new ways, the distinctions between employee groups begin to shift radically as decision-making authority is redistributed from a chain of command hierarchical model to a fluid, local level of experiential authority where information and insights can be effortlessly translated into lasting organizational learning. Relationship and interrelationship identities become the essence of decision-making priorities because they create added value as they are better managed. Each of the tactics formally indexed in this chapter adds a new dimension to the developmental relationship equation. Executive, manager, and activity specialist roles continue to develop corresponding degrees of new responsibilities and productive accountabilities in terms of designing, maintaining, and enhancing their primary work processes.

PATTERNS, PARTICIPATION, AND PERFORMANCE AS NEW WAYS OF SEEING

The strategic attribute array provides a structure for seeing more about the characteristic strengths of tactical methodologies. This is helpful. However, a listing of desirable performance qualities alone is insufficient for tactical implementation,
much less for successful strategic execution or organizational development. Attributes serve as directional indicators and as criteria for tactical method selection. To actually manage and execute new tactical methods and attributes, executives and managers can use three proactive postures to shape the new pattern, to cultivate participation, and to manage authentic performance objectives.

Patterns

Patterns figure as central operations of human cognition. Recognizing familiar parts and rapidly organizing components into a holistic conceptualization is an essential developmental skill, especially for leaders who are expected to justify their reasons and directions for change. Pattern recognition is a substantial part of how all people process information and make decisions. Patterns build from successful repetition. The number of repetitions required for new pattern establishment varies with the intensity of experience and the obstacles to change.

Obstacles to change suggest a pattern construction relevant to organizations in development. The emotional experiences of employees—wherever they occur—create patterns that are difficult to alter or relearn. For instance, if corporate improprieties cause employees to lose their entire 401k retirement savings, the unfortunate employees will not only mistrust (and likely leave the unscrupulous employer), but there is also a strong likelihood that these employees will carry the painful experience into relationships with future employers. The people offended may develop behavior patterns of their own to counter future abuse—behaviors not necessarily appropriate to the new employer. The point here is that the perceived pattern of experience ripples out to create ongoing patterns of response behavior.

Malfeasance produces obvious behavior patterns. The example of the reluctant student presents the possibility of more subtle patterns created by inertia, passive resistance, and general undermining of goals. In the organizational world, consider the following comment. “I’ve been doing this job for 20 years, and the fun went out of it 15 years ago.” When coming from an IT specialist, this statement indicates a common work issue. Various surveys state that between one-third and one-half of employees are greatly dissatisfied with their jobs, yet for their own reasons they continue to perform unfulfilling work. Often the people they report to are not aware of the nature of their dissatisfaction, but they still know something is out of balance. Even when the organization recognizes employee unhappiness, it is the rare manager who chooses, or is able, to remedy the conditions. Mechanical inertia tends toward entropy, the situation worsens, and more often than not, a crisis emerges leading to employee termination, voluntary or otherwise. Inertia–resistance–crisis. This is a recurring organizational pattern that shows up in a standard organizational performance measurement: personnel turnover. This pattern also affects work-related injuries and productivity, not to mention the impacts on personal and family concerns.
This book does not explore individual behavior modification per se, nor does it address the use of operant conditioning in business life. Rather, the exploration examines how cost and performance methods can be utilized to advance developing organizational goals by creating the conditions that have the best chance of producing positive work patterns generated through the behavior of many individuals. Group dynamics enter the picture in Stage 3 management and development. Just as one person perceives particular organizational conditions and formulates opinions, and then acts out behaviors based on those opinions, so too, teams, departments, divisions, or the entire company can and do produce a perception that leads to recurring behavior patterns.

Consider life in a healthy company where trust and respect are the norm at all levels. The top executive group decides to advance three manufacturing divisions toward lean manufacturing principles to test lean methodology appropriateness for organization-wide implementation. Executive behavior exemplifies care, consideration, full disclosure of risk and reward, and conveys confidence in divisional performance as well as excitement about improvement possibilities. Because of executive consistency over time and their commitment of appropriate resources, people in the division perceive that they are valued, and more, that they are trusted to lead and carry out an important inquiry. This positive energy infuses the project and beyond. Whatever the outcome of the lean manufacturing experiment, this adventurous posture moves the organization forward because of the self-perpetuating energy pattern that it establishes.

Two key developmental operatives guide organizational learning. First, employee behavior, whether contributive or counterproductive, is based on logic deduced from historical organizational experiences and preconceived expectations about future experience. Put another way, an experience in one time and place generalizes to similar times and events. People quickly extrapolate a seemingly small experience into a logical conclusion, even when their information is but a speck of a developmental pattern as it emerges. People learn cumulatively, but they learn according to their own personal experience, and they use their past experiences to navigate and judge the validity of new ones.

The second key point is addressed to executives and managers: People closely watch the behavior patterns of management; therefore, leaders must model the attributes and values they wish to create. Create the conditions for innovation, creativity, customer-friendliness (or any other strategic attribute) and those qualities are far more likely to self-perpetuate themselves in contrast to when the same directives are imposed by coercion or mandate.

So, the performance index of the six tactics presented in this chapter demonstrates the natural patterns of behaviors encouraged by specifically focused tactics. Therefore, in addition to identifying desirable strategic attributes, organizational management must choose tactics for executing strategy with full awareness of the behavior patterns the tactical methods cultivate. Executives concerned with shaping a specific organizational learning profile and identity need to evaluate whether
the anticipated organizational behavior they expect from the use of a given tactic is synchronous with the values of the organizational identity they envision.

**Participation**

Learning patterns typically emerge without conscious effort. In a way, they are a by-product of human cognition—a way of making sense of and navigating life after taking in primary sensory input. Therefore, although human behavior is directly observable, behavior patterns become evident only with careful attention and study—especially in the organizational context. Paradoxically, human beings instantly sense whether or not they participate. Either I am active or I am not. Participation is much like breathing; we know it first and foremost by its absence.

In addition to cumulative learning through pattern recognition, human beings learn about themselves and their organizations primarily through active participation. Participation occurs at various degrees of consciousness. For example, humans regularly participate in patterns of personal grooming. Only on rare occasions does a person jump (or not) into a river to save a drowning person. Yet the jump into the river may happen more automatically than a grooming ritual, despite preceding participative behavior patterns and experiences. Interestingly, the higher the emotional charge the more heightened the sense of participation. This correlation is clearest at some point of crisis in a person’s life. People participate in brushing teeth and the drive from home to work without much conscious awareness. But when the unusual happens, human powers of awareness become stimulated and supercharged.

This routine versus nonroutine pattern of participation/nonparticipation is important to tactical performance selection and management in two ways. First, *routine* activities become invisible as the body continues through its habitual activities while the mind is elsewhere. Careless errors may occur as worker boredom increases. A dissatisfied employee resists meaningful change, and may even develop severe behavior dysfunctions. Second, *nonroutine* events and activities, with the heightened sensitivities they provoke, can excite, engage, and even inspire people. Alternatively, “the unusual” can just as easily intimidate, frighten, and anger—another kind of participation.

Executives and managers must study and be aware of all this. The delicate job of orchestrating appropriate participation is more art and intuition than pure science. However, a few principles can be useful. Almost no human being can participate in an activity without involving ego-identity. My speech and my actions are me. When I look in the mirror at what I am doing and saying—what I am participating in—I define myself. An important organizational corollary to this is, “When I am not allowed to participate, nothing about me is defined; therefore, I am ignored and negated.” Ego identities don’t take kindly to this treatment.

Statements about participation such as these become obvious with close observation and study, but they do not commonly rise to overt consciousness. However, the sequence and effect are the same: “I am not allowed to participate.
Therefore, I am discounted or negated. As a consequence, I am not part of this (project, change, decision); therefore, it is not my responsibility—although I may need to pretend/act like it is.” Shudder at the thought of what this dynamic does to productivity measures. Conversely, the more a human being participates, the faster and more accurately patterns can be recognized, and the more cumulative knowledge there is to create the next pattern and make the next decision. Stated more bluntly, people will not participate in any project, vision, initiative, or next-big-thing unless they have intimately helped create it.

Performance

A nationally known birdwatching expert describes his experiences while looking for rare birds:

Typically, I’ve already defined a particular pattern before I go looking for specific features. But then there are many times when I get the sense that something is different, and I take time to explore that difference because it could mean something… There have been times when I’ve been out birding and have just gotten a strong sense that there might be something unusual around, that I was about to find a rare bird, and sure enough there’s a rare bird. The expectation probably comes from deep knowledge… You find rare birds if you’re looking for them.

Exploring the differences that could mean something—finding and seeing what you look for. People skilled in performance management explore for meaning, and they know exactly what they want to find. They know the results they want and the personal qualities of people who can produce those results. These performance masters may not always know the precise tactic, time, or even product or service required, but their informed guesses and intuitions are more often than not on target. Such leaders are very good at clearly describing performance objectives, and at attracting the right people to those goals.

Organizational cost management is based on patterns of human spending behavior and on the boundaries and conditions surrounding that behavior. Performance management, in large part, results from management’s ability to correctly identify patterns in competition, the marketplace, and customer and employee preferences. Skill in mapping a profit-generating path through this complexity is a mark of a leader. Pattern-identification capabilities are associated much more with the life sciences than with the mechanical sciences that generate the numbers-oriented decision-making paradigms typical of Stage 2 organizations. Stage 3 is the entry point to discovering patterns within organizational systems, and coordinating and coaching the people energizing the patterns.

This focus on patterns and participation leads fluidly to more predictable performance. The pattern–participation–performance paradigm is diametrically opposed to the mechanistic cost–benefit analysis, a typical Stage 2 method for
choosing among alternatives. The performance mindset evaluates tactical effectiveness on an ongoing basis, after careful scrutiny of (1) the behavior patterns the tactic is likely to foster, (2) the opportunities for widespread participation, and (3) the links that the participative behavior has to desired performance. In fact, tactical performance can be assessed with formal performance measurements keyed to the tactic’s (1) fidelity to creation of predicated behavior patterns aligned with desired strategic attributes, (2) actual level of participation engaged, and (3) contribution to specified financial and operational outcome performance measures, where the tactic is the means, and the outcome measures are the ends. Much time, money, and human frustration can be saved by first setting performance expectations for tactical implementations so that actual effectiveness can be fully evaluated as an exercise in organizational learning—the best of all management investments. A tactic that can’t stand this scrutiny is sure not to measure up.

Of course, a perfectly good tactic can fail due to human error during implementation. When asked about what makes a good pattern finder, the birdwatcher has a few words that seem as if they were directed to organizational leadership:

A couple of the key things that I would stress would be self-awareness and self-criticism. The lack of ego is also an extremely important trait in a pattern finder because you have to be able to go back and review the decisions you made a year or two ago and admit where you were wrong. Sometimes new experiences just don’t fit the patterns you thought you observed before. But you can’t be defensive and cling to the identifications you made in the past because that will only obscure the newer patterns that are turning up as you learn more. So in this sense, the first lesson of birding is that mistakes are an opportunity for learning.22

An opportunity for learning: This is a concept just getting a toehold in organizational life. Most executives are still expected to construct the right strategies; often they are pressed to deliver earnings and profit objectives to the penny. That doesn’t leave much room for learning, but it opens the floodgates for manipulation and lack of grace under pressure. Likewise, managers are expected to pick the right tactic—the one that costs little, implements rapidly, and, of course, delivers profits in this current quarter. Such expectations squeeze out any margin for experimentation, much less error—brilliant as the lessons may be from both. This management viewpoint characterizes the thinking of a Stage 2 cost and performance mindset that misses a vital piece of logic. Instead of recognizing that a tactic is a means to an end, they see the tactic as the end. Thus tactical fanatics are born. These evangelical types are usually so pressured to deliver financial results without missing the beat of a single reporting period. They are so afraid of being accused of making a strategic or tactical mistake that they become wedded to their self-elevated strategy or tactic of choice. Frequently, such a tactic is adopted inappropriately as a strategy (e.g., as in many recent Six Sigma implementations), and the organization works only with a tactical means, toward no well-articulated strategic end.

This chapter has indexed the patterns, participation, and performance characteristics of six effective management tactics. Many more tactics are available, and
none is a complete answer. The point is not to identify “the” tactic, but rather to understand all tactics from a more mature perspective that recognizes the participation imperative as the fuel that runs them all.

Recall that Stage 3 is the context for surveying tactics as a means to increase organizational awareness and operational performance. That doesn’t mean that the tactics are always operative in Stage 3 companies. As in the marriage contract, no maturity license is required to engage the choice for a new way of living and working. Stage 3 maturity is characterized by rapidly emerging curiosity and experimentation. This is the stage for shaping a distinctive organizational identity, and for discovering the value identity that the organization wants to present to the world of stakeholders. Exploring and learning from tactics in Stage 3 develops prerequisite coordinating skills for navigating the developmental opportunities of Stage 4 and 5 skill sets. The abilities to test and discover, to organize for adaptation, and most of all to coordinate learning, all have their roots in Stage 3.

The management dynamic in Stage 3 is all about learning to track value from the processes, activities, and resources that create value. While choosing from the tactics indexed in this chapter (or any others), develop a tactical selection sense based on a desired organizational identity and contemplate the performance focuses generated by each tactic’s unique pattern and participation opportunities. Discover and clarify what every Stage 2 organization learns in order to move to Stage 3: The relationship between process and profit, leading and lagging indicators. If you have diagnosed your organization’s maturity as Stage 2, investigate the milestone hurdle necessary for entering the transitional phase toward Stage 3. Once the transition is underway, ask what specifically must be done to move firmly into Stage 3.

**DEVELOPMENT CHECKPOINT**

218th Ferengi Rule of Acquisition:

*Sometimes what you get free costs entirely too much.*

The more intelligent an organization becomes the more it utilizes a greater range of management methods and tactics, with greater knowledge that *blending* methods and tactics works more efficaciously. This means creating an organizational strategy, intention, or focus as an overall umbrella to guide selection and execution of the right management tactics, in the right degree, with the right method-partners. Only a learning organization can develop this kind of competence. An organization that fails in the long run is the one that seeks the single right answer and punishes those who deviate from simple, short-term, cost-obsessed solutions.

Efforts to create successful, profitable customer and supplier partnerships carry no guarantees of success. New product/service failures are expensive ways to waste precious time and resources. Chapters 6 and 7 index the developmental applications of management tactics and approaches that can support better cost
management, mitigate risk in new ventures, and preserve organizational learning within work processes. Again, tactic selection sense requires the ability to:

- Articulate clear intentions before choosing tactics.
- Choose a management tactic based on the capacity of its strategic attributes to execute strategic intent.
- Link capital allocation and performance expectations to strategic planning and supportive management tactics.
- Blend management tactics to suit the unique set of needs for each initiative.
- Whenever possible, test run a management tactic in a simulation or prototype effort; proof of concept saves time and resources.
- Keep in mind that strategies and management tactics are created anew in every organization; they cannot be copied.
- Allocate appropriate resources. Tactical deployment takes resources. That means people, space, equipment, and, above all, executive participation.

DEVELOPMENTAL DOUBTS

Early Stage 3 is a delicate developmental time. A new, more comprehensive way of seeing has been glimpsed but not engaged, and the full transition looks like a whole lot of work. The old, familiar ways seem easier, especially since few substantial, sustainable outcomes have so far resulted from the work with the experimental methods. This is a period in which snapback is a real and present danger. Snapback means the tendency to revert to the familiar as opposed to enduring the discomfort on the way to the new.

After experimenting with methods like those described in the previous chapter, people in a maturing, healthy company have learned at least two things: (1) exploration of the new, in itself, is a great teacher, no matter the particular technique or its success or shortcomings, and (2) more exploration would be a good and logical next step. The stage is set for the next developmental activities. Learning has been established as a valued activity, and begins to become an organizational way of life. In the healthy, maturing organization, if leadership has done its job, people know they are free to explore and experiment. Getting to the point where such a mindset exists depends heavily on executive leadership.

During the early Stage 3 time of transition, executives must articulate ever more clear intentions and strategies in terms of operational resource priorities. They must overtly and repeatedly praise gains and find lessons in learning mistakes. This assists people in consolidating clear progress from the experimental phase, and in moving ahead to more informed exploration. The work of executives here is to identify strategic value in activities and to communicate what they see.
Developmental Doubts

at every opportunity. This work in itself develops the skills involved in informed tactic selection (i.e., selection sense).

Sound too good to be true? No one has to pass a test of experience to get a marriage license or to become a parent. People develop partnering and parenting skills through intuition, trial, and error. Executives do not always do a good job articulating strategy and communicating the specific activities that support it. Maturity development includes the freedom to misstep, the candor to admit mistakes, and the wisdom to pass along the lesson.
In spite of the healthy array of more mature approaches available, a significant number of executives—especially in public companies—continue to manage with a short-term, financial focus. This is no secret. The reasons why are equally evident. The prime suspects, revealed so thoroughly by the media in recent months, include:

- Investor and analyst focus on financial measures: earnings per share (EPS), share price, price-to-earnings (P/E) ratio, and so on
- Executive compensation keyed only to share price and financial results: stock options, revenue growth, economic value added (EVA), return on net assets, and so on

Recent events have called into question short-term and obsessive focus on financial measures. The bursting dot-com bubble, eroding confidence in accounting firms, exposure of business shenanigans, and increasing regulatory strictures may exert the necessary pressure to force a level of disclosure capable of changing counterproductive business practices. Anyone with an ounce of integrity knows significant changes are needed. No one seems to know how to make them. Worse, those with authority tinker inside the small, artificial, opaque world of financial reporting and regulations. Only a few voices speak to the realities within business operations. Most commentators appear obsessed with getting the results reporting right without dealing with leading performance indicators.

The approaches discussed in this chapter stand at the forefront of current Stage 4 management maturity. Within each framework, cost and performance management remains a core practice but serves the larger strategic intentions and organizational identity-context. Although cost information always serves performance management, in Stage 4, operational performance dominates cost, and the qualities of partnership eclipse hierarchical control systems. Everyone’s work matters. In Stage 4 firms, performance greatly outranks cost because specific performance standards and consistency define enterprise identity to all constituents.
Likewise, collaboration and respect for each person’s expertise grow because accomplishments emerge from an interdependent workforce. The familiar CMS (cost management system) evolves into a Performance and Cost Partnership System (PCPS) as Stage 4 organizations learn to integrate stand-alone cost and performance management systems into a comprehensive unified management perspective.

In the context of organizational development, Stage 3 practices and methods encourage collaboration—the precursor of partnership. The distinction between partnership and collaboration is important. Collaborative efforts focus on goal achievement where the relationship is the means to an end. Partnership conveys a strong, long-term commitment based on mutually valued patterns of ethical behavior and shared responsibilities. A long-lasting, mutually nourishing marriage makes a good analogy. Not every human interaction, however, requires a marriage. Similarly collaborative participants retain their individual identities while working in a group; partnerships transform the identities of the participants because they become interdependent. In partnerships, the relationship is the means and the end. Stage 4 organizations begin to manifest partnership relationships at the employee, customer, supplier, and leadership levels.

STAGE 4 HORIZONS

The Stage 4 methods covered in this chapter all focus on strategic intention. In addition, Stage 4, itself, does not just have a strategic focus, it is a strategy, no matter which cost and performance management methods are employed. By their nature, the organizational competencies acquired in Stage 4 development bring internal cohesion and solidarity that foster collaboration. Externally, distinction from competitors arises naturally from this mature mindset. One of the paradoxes of Stage 4, however, is that the farther into Stage 4 a company goes, the less it worries about competitors. People in a Stage 4 mindset are occupied with creating deep partnerships—customer, supplier, and most of all, employee—and the competition becomes an interesting but secondary focus. Attention to partnership and relationship manifests advantages not easily duplicated by competitors.

As organizations approach the learning they need to negotiate the Stage-3-to-Stage-4 phase of development, they recognize the inefficiencies that stand-alone systems introduce into decision making and process improvement on an organizational level. The urgency becomes, “If only there were a way to bring these stand-alone systems into interrelationship.” This need becomes widespread, and the organization’s development is driven by a relationship imperative that augments needs unsatisfied by the profit and participation imperatives. Imperatives can’t be ignored, and once established, they become a permanent thread in the fabric of forces that direct human behavior in the organization.

Lots of companies like to think they are already in Stage 4. Many of them base their self-assessment on information technology implementations such as
enterprise-wide resource planning systems (ERPs). All their data is in one box. That’s not a bad step. While many companies with ERPs have practiced organizing isolated components into an information technology (IT) architecture that looks something like a system, managing via the information system is an altogether different developmental step. Self-assessed Stage 4 firms should ask themselves if they:

- Operate with customers, partners, and employees as an integrated unit
- **Proactively** apply specific goals to resource utilization
- Continuously coordinate all profit-making activities

Consider the word *system*. A pre–computer era dictionary, circa 1955, gives a first definition as “a set or assemblage of things connected, associated, or interdependent, so as to form a complex unity; a whole composed of parts in orderly arrangement according to some scheme or plan.” Somewhat further on, in the biology section of the definition, system is defined as “the organism in relation to its vital processes and functions.” But is the organization a biological system? If we accept that living beings form organizations for the purpose of business/service to other living beings, the logical conclusion is that an organization is a living system supported by mechanical and material structures.

If this premise is unacceptable, organization administration continues on purely mechanical principles, and misses the opportunities inherent in human resource management, development management, and a late-blooming asset category, intangible assets. So, even though many people would like to **control** an organization and the humans in them, they cannot profitably do so for long. And that’s the essence of Stage 4, represented by three major developmental dynamics that operate at all employee levels:

- **Release:** Let go of control.
- **Reliance:** Once the illusion of control is put behind, people are ready to rely on those client/customer-facing people who deliver the work and services.
- **Reversal:** As implied by the reliance dynamic, Stage 4 deliberately moves the bottom of the conventional hierarchy pyramid to the top, and the top becomes the bottom.

Reversal is such a fundamental shift that it requires more explanation. Importantly, in contrast to hierarchies, the reversal view does not suggest ranking and subordination. Rather it reflects the actual work and responsibility that are required to realize strategic accomplishments. Concretely, those people who are hands-on, face-to-face making and providing products and services become the tip of the triangular spearhead launched into the marketplace. The good news for leadership is that they get to do what they should be really good at doing: Assuring resources, supporting collaboration and partnership efforts, nurturing new
Developmental Check-In

competencies, enabling specialists to do their jobs, and counseling and guiding at appropriate intervals.

Stage 2 dynamics—control, monitoring, and financial reconciliation—recede in significance, but do not disappear. These traditional functions become targeted and automated. In parallel, the Stage 3 milestone skills of comparison and coordination, specifically tactic selection sense, propel the organization into the transition space between Stages 3 and 4 where application of these accumulated abilities continues the task of self-structuring, including further work on identity manifestation (i.e., vision, image, brand). Since profit-generating performance happens throughout the organization, but most concretely at the specialist level, executives and managers must work to enable, support, correct, and guide—in other words, to rely on and sustain those who perform customer-facing work.

The transition space between Stages 3 and 4 is marked by periods of doubt, and people ask predictable questions. Who are we if we don’t compare ourselves with the competition? Can specialist employees really be trusted to autonomously do the right thing? Who am I if I don’t sit at the top of this company? Can we really take the patchwork of systems and tactics we’ve already implemented and unify them? The answers to these questions are the developmental learning tasks that take place during the transitional phase between Stages 3 and 4. Perhaps the work indicated by such questions is the reason why there are so few Stage 4 organizations, and why so many try to substitute an ERP application for the real thing.

DEVELOPMENTAL CHECK-IN

The challenges and paradoxes of Stage 4 behavior have one source: relinquishing the concept that one can control or is controlled, and replacing that illusion with trust in the wisdom of a self-organizing living system. This is not unlike the Western transition from middle school, or its equivalent, to more education and/or a job work life. Through middle school, most people have some kind of support system; if not family, then school counselors, or at least peer groups. The progress through the educational system is built on rules and roles that require only a moderate level of maturity to navigate. The concrete operational stage of development is all about discovering and applying rules and roles. Rules and roles are the information processes that young people work incessantly to figure out and push against. Embedded in the hierarchical perspective of youth, key questions emerge as they negotiate personal development. Who has the most dominant role? What are the rules? How flexible are the roles and the rules? In essence, the answers to these questions shape personal identity as they find their own place in the social environment.

Stage 4 behaviors require significant practice in comparison and coordination, as well as cogent insights into rules and roles. In short, an organization must become ready to go beyond current rules and roles in search of a more mature and
productive identity. Interestingly, because traditional hierarchies are constructed with rules and roles, they cannot function in a more mature set of conditions based on partnership. That is why so many implementations of Stage 4–level methods fail: Stage 4 structures connect people and functions to share knowledge. This is not a dynamic of hierarchies. One of the most difficult organizational development lessons is that the first order of business is to gradually dismantle hierarchies at all levels with measured, deliberate steps. Only then can an organization take the components and competencies earned in Stage 3 and build them into a partnership capable of creating performance that is singular and meaningful.

THE RELATIONSHIP IMPERATIVE

Just as the participation imperative distinguishes Stage 3 development, so in this chapter the relationship imperative marks a new, complementary development imperative in Stage 4. Moving away from the component-based perspective of organizational management, Stage 4 development characteristics begin to exhibit some of the dynamics of change as it happens in living systems models according to the autopoietic definition from Chapter 1:

> Autopoiesis. A network of processes of production (transformation and destruction) which (a) maintain their defining organization throughout a history of environmental perturbation and structural change and (b) regenerate their own components in the course of their operation.2

Some of the principles of the relationship imperative as manifested in living systems have already appeared in Stage 3 organizational development.

- Living systems can be influenced, but not controlled. Efforts to control a living system (i.e., an organization) are futile.
- Answers emerge from the work process itself. Executives don’t always have the answers; neither does any other group or individual. But where information flows freely, and respect is the norm, some group does have the next-step answer, or at least a better question.
- People have intelligence, and if they do not know, they can learn what needs to be done.
- The majority of people’s behavior self-references to whatever is currently normative within the organization; therefore, behavior is subject to change, and can be influenced by leadership.

Organizational identity is a self-referencing pattern of vision and related values that manifest consistently in behaviors and relationships throughout the
organization. Identity organizes intention—what we do, based on who we are and how we want to be known. The single most important developmental influence in Stage 4 is the deliberate management of strategic intention and the consistent communication of intentions throughout the organization. Costs, resources, activities, operations, and performance remain vital management facets, but the Stage 4 organization integrates all these management focuses under the umbrella of strategic intention. Stage 4 organizations manage strategy first, and employ other focuses as they apply to strategic implementation and renewal. Strategy gives people a clear context for their roles, implementation rules, intra- and interorganizational relationships, and the focus of what they need to learn most. Stage 4 methods support the creation of self-organizing relationships for getting work and service done within the strategic context. They encourage collaboration and partnership, as well as open transparent information of all kinds. They trust in the intelligence operative throughout the organization.

STRATEGY: A ROSE WITH MANY NAMES

So far, the word strategy has been used without definition. That gap must be filled at this time for three reasons. First, all of the system coordination methods discussed in this chapter use strategic intention as an organizing concept, to varying degrees. Second, the word strategy has degenerated into a generic term, like Kleenex®, when in fact there are many schools of strategy. Finally, whether they know what they are doing or not, most medium and large corporations in the West use strategic planning and objectives as a significant organizing structure—at least on paper.

Analogies for strategic planning call on many images; for example, sailing a large ship, winning a team sports event, and navigating an aircraft instrument panel. Always, the analogy involves something sizeable and complicated, with dynamic components subject to changing variables. Anyone who has sailed a ship, flown an aircraft, or played a team sport knows the feeling of being on the edge of control. Organizational life operates under similar conditions. An unexpected gust of competitive wind can upset balance. A sudden storm of disruptive technology can cloud the business landscape. The unanticipated departure of a key employee can injure a winning sales or operations team. In positive contrast, there is the exhilaration of sailing with a well-coordinated crew, the adventure of flight, and the thrill of a game well played. The business parallels are obvious.

Weathering adverse conditions is much easier when an organization has a vision, strategy, and directional course for the enterprise. Employees can be replaced, competition can be countered, and technologies can form and emerge. But if executives do not chart a clear course, articulate it well and often, and change that course when necessary, resources wither and waste, performance targets lose their meaning, and the workforce becomes distressed. Yet, contrary to
the teachings of most business schools, strategy need not be complex. After all, strategy is a straightforward statement of intentions (i.e., what we intend to do, based on who we want to be—an organizational identity).

The term strategy is so generic that managers often do not bother to confirm a common understanding of strategic process. Frequently, executives in strategic planning sessions tacitly assume everyone around the table understands strategy in the same way. More often, the truth is that in a roomful of executives there are as many descriptions of strategy as there are people in the room. It is probably fair to say that many executives could not name the school of strategic thought they adhere to, although they regularly create strategic plans.

Strategic planning and success depend more upon a common strategic vocabulary than on any specific strategic theory. Without this commonality, disjointed management tactics conflict with one another, projects proliferate, and employees get confused. Confused employees create confused customers.

A clear intention/strategy, communicated widely and articulately, has the opposite effect. Tactical choices align with overall strategic direction. Limited resources are efficiently conserved. People at all levels make decisions within clear guidelines, knowing which actions contribute to success and which do not. Customers and clients who sense organizational and employee confidence are more likely to purchase products and services.

Many Models for Forming Intention

In an article titled “Reflecting on the Strategic Process,” Henry Mintzberg and Joseph Lampel categorize strategic management into ten schools. This forms a fairly comprehensive as-is picture of strategic approaches. Rather than push the merits of a single school of strategic thinking, they describe the strengths and weakness of each and recommend a deliberate, three-step approach to any strategic practice:

1. Choose the appropriate strategy for specific conditions.
2. Blend relevant constructs from two or more schools.
3. Avoid overdependence on any single strategic perspective.

The article recommends blending all ten schools into a new perspective: strategy formation as a single process. The authors also insist that the chief responsibility of executives is to formulate strategy and discover what works in practice—over and over again. This ongoing creative work relies on coordinated organizational learning. Obviously, strategic thinking has grown beyond the static confines of the familiar SWOT analysis—strengths, weaknesses, opportunities and threats. Therefore, executives should forget about finding the perfect strategy and become facile in creating and evolving an adaptable process for forming and adjusting intentions.
Keep in mind that strategy is not the only framework for aligning an organization’s processes and activities. Some companies do very well with strong vision and cultural values. Others consider themselves process-oriented firms in the spirit of the process enterprise. Human service organizations are frequently mission-driven. In process, vision, and mission contexts, strategic planning may not be emphasized at all. The critical point remains: the primary context for setting and renewing an intentional future direction for the organization and its activities must be clearly articulated and widely communicated. Whether the organization sets direction based on strategy, vision, mission, value creation, process, or even the budget, everyone must speak the same language. Think about the difficulty in the American health care sector as it migrated from a healing, mission focus to a corporate style cost containment strategic focus. The central values and raison d’être of an organization should be handled gently and changes made with patience.

A last word of historical caution. As this is written in late 2002, pundits and analysts are still trying to decide whether the global economy is in recession, recovering, or already mended. The signals are mixed and volatile. A disturbing number of organizations have reengaged the predictable slash-and-burn cost-cutting tactics typical in uncertain business climates. During good economic times, there is plenty of time for strategy and performance management. When the financial measurements deteriorate, managers rivet their attention on the short-term and revert to counter-productive cost cutting. A manager with a cost-cutting hatchet will more likely destroy significant value than save significant costs. Cost reductions for their own sake (e.g., indiscriminant layoffs, cutting all department budgets by x percent) disable value creation; in contrast, strategically grounded resource and cost management creates value.

The Developmental Difference

Stage 3 organizations grow beyond the financial report-driven cost management system by learning the value of capturing more managerially relevant information step by step. For example, first, as they learn the value of managerial information, Stage 3 organizations introduce more operationally oriented resource accounting systems, like ABC, to complement the external reporting focus of the traditional cost accounting system. Next, once employees become accustomed to the timeliness of operational resource accounting information, they begin to see the need for more immediate operational feedback and control. ABC matures to ABM. As insight develops, organizations learn the difference between leading and lagging indicators across these independent information systems, and strategic performance becomes a meaningful and manageable next step.

The strengthened strategic intention that emerges with a clearer sense of organizational identity motivates Stage 4 organizations to integrate Stage 3 stand-alone information systems to provide internal and external constituents with a balanced performance database that reports up-to-date, relevant information on cost,
customer, operations, and strategy from a single system. Stage 4 organizations frequently utilize a form of cause-effect mapping of intentions and strategy, to explicitly chart the path of execution.5

The following sections index strategic cost management, value-based management, and performance management in terms of how each of these coordinating management systems reconcile financial and nonfinancial information and guide decision-making across functions. This reconciliation and guidance facilitates a unified approach to achieving organizational objectives. No matter what technical form a cost or performance information system takes, it serves a more elevated purpose. This point is as critical in Stage 4 as in any earlier stage—perhaps even more so. The coordinating systems about to be discussed are currently considered leading edge, comprehensive management methods. They have all been widely implemented in various forms. Still, reports of implementation failures are alarmingly high because immature organizations are often too impatient to do the hard work of developmental learning.

Specifically, the coordinating systems presented in this chapter are comprehensive, and capable of reaching and influencing all people and functions in the enterprise. They cannot be purchased in the form of software. Impressive software applications are available to support execution, ease of access, and timely information delivery and update. Most applications at this level are Web-based, thus displaying unlimited communication potential. Yet, they fail to deliver desired changes and results more often than they succeed. The identified causes are many: lack of executive commitment, inadequate resources, and so on. Beneath these, however, are two primary developmental sources of difficulty.

1. The organization is not ready to understand and utilize the coordinating system the software is designed to manifest. Adequate education and development work has not been done. This fact is so well known among consultants and management researchers that there are now many efforts to create readiness assessments to predict whether or not a company is prepared to integrate a particular method.

2. The coordinating systems appear so powerful and so comprehensive that they look as if they are themselves the solution. They are not. They are tools for real people to use—people experienced enough and with sufficient development to use them properly. Place power tools in the hands of an eight-year-old learning carpentry? Better a hammer and handsaw first. Implement a full-blown Balanced Scorecard in a Stage 2 company? Better to take some interim development actions first.

**STRATEGIC COST MANAGEMENT**

Executives design organizations—intentionally or not—to display a particular profile: a mission-driven entity, an economic profit machine, a complex adaptive
Strategic Cost Management

living system, a military operation, or a competitive athletic team. Strategic Cost Management (SCM) practitioners see, direct, and guide the organization as a cost structure designed for generating value through strategies supported by appropriate resource allocations. In short, this coordination system is no-nonsense profit mechanics. SCM is defined as the “application of cost management techniques so that they simultaneously improve the strategic position of a firm and reduce costs.”6 Organization design ideally mirrors the strategic cost structure, with more resources evident in priority activities, and less in activities that are merely maintaining or even phasing out products and services.

For example, if the firm is primarily driven by R&D efforts, significant portions of both resources and authority reside intentionally and strategically in R&D functions in the classic architectural principle of form follows function. A company that wishes to be identified as a premier researcher must place visible resources in that function. Ritz-Carlton Hotels, well known for care and attentiveness to guests, are another example. Significant resources are consistently dedicated to hiring the right people, training them well, and monitoring their performance. Each Ritz-Carlton employee carries a laminated pocket card with the firm’s “Gold Standards” as ready reference. In such ways, organizational identities are built over time. Under SCM principles, strategy structures and integrates all resource allocation and cost management techniques.

In short, SCM is an updated form of advanced cost management, a term used in the 1980s. Using cause–effect logic, SCM deploys any suitable cost management tactics and concepts discussed in all previous chapters of this book. People who reach the competency milestones capable of utilizing SCM, understand conventional cost accounting and mature cost management methods well enough to create a highly visible and transparent system of strategic cost structures for resource allocation and cost management. SCM means never having to say either/or, as in “Either we cut costs to meet profit targets, or we spend money to achieve strategic objectives.”

Strategy demands integration. From the top down, executives must orchestrate strategic execution through integrated processes and activities, supported by suitable resources. That includes information resources. Most executives are in organizations where information processes and systems already exist. Thus, design and implementation of a Stage 3 or 4 tactic or coordinating system must take existing functions and IT platforms into account. Without exception, SCM relies heavily on strategic coherence and coordinated information technology.

The relevant point is that connecting a mature cost management system to existing business and financial processes is a work of management art, as much as technology. Specifically, SCM practitioners strategically select and utilize tactics from the same pool of options as the examples discussed in Chapter 7 to enhance or replace conventional systems. For instance, within an SCM context, ABC/M is capable of organization-wide impact to cost structures. When methods and tactics such as these are strategically applied, they support improved management of processes, products, services, customers, suppliers, resources, and capacity.
Strategic Cost Management and Financial Management

As its name implies, Strategic Cost Management approaches resource management from both cost and strategy perspectives. Cost provides the financial emphasis. Strategy provides activity alignment and integration structure. This combination makes it possible for SCM practitioners to directly impact financial results through intentional resource allocations based on management’s strategic choices. Within cost and financial systems, the SCM approach improves budgeting (ABB), transfer pricing decisions, product costing and pricing, and the measurement of waste. These financial aspect improvements are a direct result of more complete resource information and a common set of management priorities for decision making across functions.

From an information systems perspective, nearly all ERP systems now contain cost and performance management modules. These modules use the same cost database for financial and cost management reporting; therefore reconciliation—total cost to total cost—is a practical, automated matter. While the financial module facilitates firmwide and segment profit reporting, the cost module addresses internal management concerns related to customer, product, and supplier profitability. These functions describe the basics of a Stage 4 CMS information technology appropriate for supporting SCM.

Information technology, yes, but the data is only as good as the applications people make of it. Constructing an SCM view of cost can be an expensive exercise with little benefit, unless the information is used to change cost structure to better align with organizational intentions. All Stage 4 methods are capable of creating ooh and ahhhh reactions to their impressive fireworks displays of different colors and patterns of cost. However, the entertainment and conversation value is usually not worth it, unless those cost structure colors and patterns can be transformed into a masterpiece of recognizable organizational identity.

In a business environment ruled by the interests of the profit imperative, managers will predictably pay more attention to the information in the system that is used to determine incentives and bonuses. The incentives typical of conventional accounting systems push managers to make decisions based on GAAP profit, or in public companies, on share price measures. In contrast, Stage 4 companies that take an SCM view typically use an ABC/M system to report more accurate and timely information about the contributions that strategic activities make to the profit imperative. Unlike GAAP accounting, ABC/M points directly to opportunities for process and activity improvement. These are the concrete achievements that directly contribute to profitability, and thus a superior incentive basis.

Unfortunately, many Stage 3 companies experimenting with SCM still ask employees to serve two masters when they pay incentives based on the GAAP system, but manage activity and process improvements with SCM tactics. The key insight here is that SCM tactics lead to profitability, whereas financial accounting reports results. Executives need to resolve any conflicts or mixed messages between systems. Diligent attention to incorporating decision support and incentive logic is essential, especially during ERP implementations.
Self-Organizing Characteristics of Strategic Cost Management

Strategic cost management practitioners direct resource allocation and cost structure surveillance both inside and outside of organization boundaries. Since SCM, at its best, occurs throughout the company, every employee must understand the company’s value propositions to stakeholders, including to themselves. People must be skilled in coordinating limited resources to contribute where their effort is the most valuable. Mature SCM practitioners at all levels of the organization know where to spend their money and time because intentions and strategies are clear and actionable.

Everyone knows what is important and everyone focuses energy on strategic priorities. Performance measures for the organization and individuals provide directional pointers that remind people about the priorities. SCM works best in a self-organizing environment where people are trusted to seek out the collaborations and partnerships they need to get their work done. This requires diligent practice in letting go of control at the executive and management levels, where leaders must now evaluate specialists from the perspective, “By their fruits you shall know them” (Matthew 7:15–18, 20). Therefore, as individuals and groups seek out SCM tactics that work, applications can cover a lot of ground. Some of the more common SCM practices include:

- Supply chains and the lean enterprise
- Internal markets—for example, streamlining transactions, creating pseudo-profit centers
- Capacity and supply–demand analyses
- Organizational design studies based on cost and resource structures
- Product design and development, using target costing (TC) and value engineering (VE)
- Product mix and pricing
- Value-chain management
- Customer profitability
- Brand or product line support

Frequently, ABC/M is the cost management information method of choice for working with these analysis objectives within the SCM context. Take a moment to notice how the lines between tactics blur at this Stage 4 level, where the solution is typically a blend of tactics rather than the sure-to-disappoint tactic-as-solution mindset.

All SCM initiatives address market and competitive positions, promote improved cost frameworks, and work to align human behavior throughout the organization. These are SCM’s points of self-reference that create vital work patterns and activity structures. For example, a Stage 4 organization using activity-based costing (ABC) under SCM principles would not be nearly as concerned about a fully reconciled (to the general ledger) ABC implementation, as it would
be about getting the costs related to specific targets of analysis as accurate as possible (e.g., customer profitability inquiries).

With so many possible applications and so many degrees of freedom, prudent SCM practitioners regularly perform a strategic assessment of all current and planned resource allocation and cost management initiatives. Assessment objectives include confirmation that each effort supports the organization’s strategic intentions, that projects are not redundant, and that insights are quickly and widely shared. Organizations new to this practice can use strategic surveillance and assessment to refocus the entire cost management system and realign its components with strategic intent.

Refocusing cost management means abandoning the easy answers like across-the-board cuts, and turning to more intelligent tactics such as ABC/M, resource consumption accounting, and supply-chain management. Refocusing also means rearranging the hierarchy so that specialists point their energies outward, while behind them, executives and managers generate all the strategically indicated resources they can muster.

**Intention and Identity: Joint Unification Forces in SCM Work**

*I must meet strategic goals for which I have inappropriate resources, but I must use those inappropriate resources according to budget directives that prevent me from applying the resources I have toward meeting strategic goals.*

This “catch-22” statement could be uttered by any manager constrained by conventional cost accounting and budgeting practices, no matter which Stage 3 or 4 tactics might operate in parallel to them. For example, a Fortune 500 retailer intending to implement a performance measurement system allocated a sizeable sum to the initiative—the lion’s share to IT and software implementation. Knowledgeable (and frustrated) project leaders wanted to apply some of the funds to data research and analyses and to consulting support. They were unable to do so because IT “had the budget.”

The constraints and controls of conventional budget systems frequently conflict with more mature tactics such as SCM. Often, these conflicts are unintentional—simply a matter of not rationalizing old accountability systems in light of more mature perspectives and tactics.

Deliberate, consistent work in defining identity and strategic intention avoids this wasteful dilemma. Recall that organizational identity is a pattern of vision and related values manifested consistently in behaviors and interactions throughout the organization. This identity pattern organizes and drives formations of intention; what we want to do based on who we are and how we want to be known. SCM methods tend toward the technical and analytical, so it is important to assure that SCM work directly aligns with and contributes to strategic intentions. For instance, SCM directed at a high-functioning and healthy
customer service function that is one of the firm’s core competencies may be exactly the wrong thing to do strategically.

Strategic cost management makes sure that resource allocation follows a clear logic and has the consensus of those charged with implementation. Again, ABC/M is arguably the chief cost management method in the SCM arsenal, because it focuses on connecting resources to activities and, subsequently, to cost objects identified as strategic points of interest. Executives are capable of delivering appropriate resources (e.g., people, space, money) only when the information systems they use have a unified language for strategic planning, budgeting, and resource allocation activities. Organizations that emphasize financial objectives and incentives based on them develop a budget-driven culture; organizations that employ fiscal control systems that adapt and blend with the actual business environment cultivate a strategy-driven culture. The strategy-driven culture collects and integrates nonfinancial information necessary to deploy the strategy and connects it to financial results.

Strategic Cost Management Capabilities Assessment

The greatest risk in SCM applications is associated with the letter “C,” for cost, in the SCM acronym. Although SCM is a mature and comprehensive coordination system, its identity alignment with cost can cause behaviors that are regressive, not progressive. The simplest blunder occurs when executives apply the SCM label to activities that are actually conventional cost cutting, and not strategic at all. Less obvious tactical errors include:

- Failure to rigorously select and target SCM work to the most strategically important areas. This, of course, presupposes clear and actionable intentions and strategies. Where these are lacking, SCM work should be postponed until objectives are articulated and agreed upon.
- Expecting suppliers to absorb all cost reductions as opposed to the more effective partnership model that SCM advocates.
- Expecting SCM to manage production capacity using only cost-related information such as ABC. A more operational capacity tactic (e.g., portions of Theory of Constraints methods) is usually necessary as a partner with cost tactics.

Perhaps the greatest hazard for successful application of SCM involves conflicts with existing primary measures, usually financial. Take, for instance, the example of a rapidly expanding discount merchandiser who finds that merchandise profiles used successfully in the United States and Canada garner an anemic reception in Mexico and Latin America. Margins are very thin in these new markets. However, developing an alternative merchandise profile is considered too costly in terms of new suppliers and distribution channels, for which SCM would be perfectly suited. Instead, southern store managers are encouraged to design
deep discounts to boost sales revenue growth, the primary performance measure for the company, and the basis of compensation incentives at the executive level.

On the positive side, SCM has high potential for integrating an array of less comprehensive tactics because it functions inside and outside the walls of the organization. SCM works to create significant management value in terms of customer and supplier relationships. When coordinated under an SCM umbrella, ABM methods can provide clear cause–effect insights into customer profitability, especially when combined with statistical methods. SCM practitioners investigate the profitability of customer relationships in terms of the cost of customer-focused strategy. In other words, SCM helps identify the costs that are incurred but go unrecognized in more conventional customer analyses. New strategies bring new activities with unexpected and sometimes unconventional costs. ABM translates strategic innovations into activity cost elements and cost drivers so that profitability can be more accurately determined.

Similarly, SCM utilizes ABM to investigate and compare the costs of different customer relationship profiles by size, complexity, required service-after-sales, and other distinguishing features. Sometimes the costs incurred serving a customer can significantly undermine the profit that customer’s purchases bring the organization. Fire the customer? ABM can discover the actual costs behind these high cost relationships and help managers negotiate and control the costs of serving various customer types. Here are some examples of customer cost-to-service activities that detract from customer proceeds, but remain invisible in conventional profitability accounting:

- Rebates
- Pricing schemes
- Special customer services at zero incremental price to customer: breakpacks, small-order size, desktop delivery, software support, special packaging, special labeling, warehousing, contingent sales inventory
- Expanded product line and product customization
- EDI order entry errors by customers

Incentive structures help explain why organizations usually do not understand or manage customer profitability. Where incentives are based on sales revenue growth, executives pay attention to the top line of the income statement and hope for the best in terms of costs associated with that growth. Likewise, when compensation depends on profit, share price, or price/earnings measurements, executives attend to the bottom line of the income statement. Share price, sales growth, and aggregate profitability are the most common bases for incentive calculation. All these points of focus omit product-specific cost (COGS) and expense (SG&A), the main lairs of major cost drivers. Neither top- nor bottom-line perspective directs executive interests in, nor gives a structure for, examining customer profitability, the point of analysis that can actually deliver insights to profit dynamics.
Value-Based Management

Last, some SCM practitioners believe that the flexibility of the SCM financial/nonfinancial information system creates important diagnostic opportunities for mapping profitability for the next round of strategic planning. Each strategic cycle attempts to enhance profitability. Profitability maps show the most important areas of analysis for decision-support information gathering and reporting before and during each strategic cycle.

For example, ABC information could be used to characterize the relationship between resource expenditures and revenue generation. Very high- and very low-profitability products, services, and customers are obvious starting points for profit probability mapping. Similarly, some organizations may choose to map new, or proposed, product, service, or customer profitability performance against well-understood business offerings and customer relationships. The same logic can be applied to important but poorly performing products, services, or customers. This kind of ABC-generated profitability mapping guides managers to make optimal decisions in line with organizational strategy.

VALUE-BASED MANAGEMENT

Value-based management (VBM) is a newer concept than SCM. As business practitioners mature and experience the revelation that cost reduction is only as good as the value it preserves or enhances, there is typically a rather immediate search for a focus other than cost. Recently sights and hopes have turned to value concepts. But the meaning of the term value can degenerate quickly when it is defined too narrowly; in particular, when it is confined to shareholder wealth. Once again, any value-based tactic must serve a higher purpose: a robust organizational identity and the execution of strategic intentions.

To illustrate, consider a large electronics manufacturer, McGregor, Inc. (a pseudonym), which currently uses a value-based scorecard to manage toward its strategic goals. Although the scorecard contains a number of both financial and nonfinancial measures, everyone in the company knows that shareholder return is the prime measure of organizational performance and consumes most of management’s attention. McGregor executives have agreed to use value management principles to execute their strategy; however, they realize they are too fixated on shareholder returns. The executives remain uncertain how to bring nonfinancial measures into balance in the face of the largest shareholders (not active in the business) and their demands for steadily increasing returns.

The path to value creation is one of learning. Commerce and trade have been interested in value, for centuries, but in the last part of the twentieth century, value concepts became explicitly defined. ABC/M and TQM were among the first formal methods designed to eliminate waste and focus attention on value-added and non–value-added activities and processes. More recently, the term value proposition has been popularized.

For the most part, financial reporting, the stock market, and the profit imperative place the focus on value in activities that create shareholder value. But owners...
are not the only constituents with value expectations. What do customers really value? What do they really want? How can managers positively distinguish the organization’s value proposition from the competitor in the eyes of the customer who buys the product/service that leads to revenue and profit? Should leaders be as concerned about value propositions for internal constituents (i.e., employees) as they are about customers and shareholders? Is there any profit to be gained by managing employee value propositions? How do all the converging interests of those concerned with an organization’s success or failure work together to create mutually satisfying value? Executives manage the expectations of the most diverse set of primary relationship responsibilities. Their answers to these questions lie in how each organization uniquely chooses to define, create, and measure value.

In its most fundamental sense, James Knight provides a good working definition of value-based management as a “systematic approach to creating shareholder value.” As a value management colleague, Paul Sharman believes that cost management falls under the larger umbrella of value-based management: “Value-based management (VBM) is the super-system of measurement and management, within which cost management is subordinate.” Brian Maskell describes value-based management in practical terms.

If companies are to focus on the value they create for customers, they must have a method of recognizing and evaluating that value. Organizations must clearly understand their value proposition and how that value proposition can be applied daily to the benefit of their customers and to signal their employees to further enhance the value created and to reduce waste. This requires that market research, product development, and customer development activities be integrated with a detailed assessment of the financial implications of this work.

So, like strategic cost management, value-based management is a conceptual umbrella that coordinates a variety of tactics and systems to accomplish its ends. Unlike the Balanced Scorecard, discussed in the next section, no one has yet come up with a widely accepted model for VBM.

**Value-Based Management and Financial Management**

Value-based management, in its current applications, usually targets shareholder value and directs all organizational energy toward maximizing shareholder wealth. Although the validity of this singular focus is strategically questionable, shareholder wealth remains the current VBM focus. The cost of capital also figures significantly. The biggest risk in using a VBM approach is that it may encourage the financial measurement myopia that operationally mature resource managers try to avoid as they seek new ways of understanding the impact of non-financial, operational resource performance on the organization’s overall performance. This risk is greatest when value is measured only in monetary terms. Many VBM proponents argue that valuation in monetary terms is the whole point,
and creating shareholder value focuses the organization and drives its success for all constituents. Arguably, the profit imperative has made VBM, in some form, the current predominant business model. However, many value-based managers have learned that shareholder value propositions depend on other predecessor value-proposition relationships.

Customers grow ever smarter and more savvy as more mature organizations include them in their management processes. Identifying and meeting shifting customer expectations has become an essential part of the game. Even notoriously price-sensitive customer constituents will not always be swayed by price tags alone. The equation is a simple one: “Fulfill customer expectations at a price that the customer is willing to pay.”

Self-Organizing Characteristics of Value-Based Management

Value-based management systems of organizational coordination will be short-lived because they currently do not align with self-organizing system principles that anticipate Stage 5 development, and therefore, are not viable in the long term. They must begin to measure value in nonfinancial, operational terms; unfortunately, in most VBM implementations, operations measures are defined at highly aggregated levels (e.g., COGS) and in financial terms. Thus, resource managers at all levels are left to fend for themselves, and people in management and specialist ranks are left without clear direction other than the mandate to maximize shareholder wealth. Although, shareholder value creation remains a necessary goal under current business paradigms, financial capital management falls short when nonfinancial value dimensions remain unaddressed. The limited scope of its self-referencing point, shareholder wealth, is insufficient to mobilize organizational development. This view of relationship is simply too limited.

A long, complex process of market research, product/service design, employee performance, resource allocation and utilization, and other leading-indicator activities determine share price and profit. Therefore, shareholder value creation must be managed from strategy and operations first, executed through enabling processes and activities, then carried out by people who believe that their own value propositions are also being met in the process. The cause–effect relationship of various VBM models is emerging as:

Satisfied employees $\rightarrow$ Satisfied customers $\rightarrow$ Profitability $\rightarrow$ Increased shareholder wealth.

Sears jumped on the strategic value creation wagon early (and successfully). The Sears model actually links three key stakeholders with the following formula:

<table>
<thead>
<tr>
<th>Investors</th>
<th>Customers</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>invest</td>
<td>shop</td>
<td>work</td>
</tr>
</tbody>
</table>

Sears, a compelling place to:
Using a tremendous pool of interview and research data, Sears analysts learned how to construct a model of cause and effect for value creation starting with employees all the way along the value creation chain to shareholder profit. Even though they appear financially lopsided, mature VBM systems lean heavily on leading nonfinancial indicators to achieve their financial goals. The shareholder comes last in the value food chain but first on the priority list. The Sears analyst team describes their approach to understanding how to meet stakeholder value expectations.

We wanted to go well beyond the usual balanced scorecard, commonly just a set of untested assumptions, and nail down the drivers of future financial performance with statistical rigor. We wanted to assemble the company’s vast body of interview and research data... and construct a model to show pathways of actual causation all the way from employee attitudes to profits.\textsuperscript{15}

The causal links in any value proposition chain will feature these four steps with varying degrees of emphasis. The steps preceding profitability focus on the nonfinancial elements that support shareholder value creation. Shareholder wealth is a downstream result.

\textbf{Intention and Identity: Joint Unification Forces in VBM Work}

One of the best known approaches for value creation is the Stern Stewart Economic Value-Added (EVA) model that uses the following equation to generate shareholder value:

\[ \text{EVA} = \text{NOPAT} - \left[ \text{capital times the cost of capital} \right] \]

where \( \text{NOPAT} = \text{net operating profit after tax} \).

As accurate as this equation may seem from a financial perspective, it is not a particularly inspiring call to action for employees who are not shareholders and who do not receive performance incentive compensation. The intention of this mathematical equation is perfectly clear; however, anyone would be hard-pressed to find nonequity-holding employees who would be genuinely enchanted by this calculation. Absentee shareholders and investor analysts may find the formula satisfying, but they are the recipients of value, not its creators. Even executives with equity positions may find managing under this banner quite difficult. Furthermore, if organization identity is a critical pattern, it is difficult to imagine people wanting to identify with working hard to make other people wealthy. VBM as it has been practiced to date is a flawed system. There have been some attempts, however, to improve on its short-lived, brutish image—not unlike the early efforts to mollify the image of reengineering malpractice. Naturally, an obvious enhancement is to broaden the base of equity holders.
To address nonfinancial components and nonshareholder elements, some EVA-type methods sometimes include a stewardship perspective. Typically, this is interpreted as the care and nurturing of assets not one’s own, like the Biblical good steward. Some of the best VBM models cascade financial and nonfinancial measurements throughout the organization, all aligned toward the profit imperative, but cognizant of nonfinancial drivers, and the need to engage human hearts and minds.

Strategic cost and performance management models sometimes employ VBM approaches as subsets to a broader management perspective. ABM and EVA are capable of acting as complementary partners in cost and value management under mature organizational directives. Organizations enhance their economic value added by integrating activity-based profitability maps into EVA concepts. The point is that any justifiable economic investment must earn at least the cost of its capital as follows:

\[
ABC - EVA = \text{Revenue} - [\text{ABC Cost} + (\text{Capital Employed} \times \text{Cost of Capital})]
\]

This EVA/ABC arrangement means that the organization must determine the capital deployed for each cost object and identify a risk-adjusted rate for that capital. This kind of specificity points out VBM strengths that fall squarely in the financial perspective.

Without argument, VBM explorations are an improvement on Stage 2 financial presentations. For example, value-based models make good candidates for the high-level objectives within the Balanced Scorecard’s financial perspective discussed later in this chapter. “EVA’s contribution as a financial metric is to go beyond accounting net income by recognizing an explicit capital charge for a business. . . . Whether companies use ROI, ROCE, EVA, or some other value-based metric as the high-level financial objectives, they have two basic strategies for driving their financial performance: growth and productivity.”

Strong VBM methods like EVA are worthy candidates for measuring financial capital and explicitly managing the financial aspect. VBM systems work best when blended with other methods that more thoroughly address employee well-being, customer and supplier profitability, intellectual capital, brand value, and process management dimensions.

Value-based Management Capabilities Assessment

By this point in the discussion, it should be increasingly clear that as coordinating systems mature, developmental focus can move in two directions. First, as in the case of SCM, they become less rigidly structured and more amendable to synergistic blending with complementary tactical methods. Second, as typified by VBM, they become sharply focused on a particular perspective. Although the second direction may not be conceptually flexible enough to accommodate a comprehensive organizational view, it may be exactly fitted to a particular perspective,
in VBM’s case financial. The most important caution is to be sure to consider the value propositions for all significant stakeholders, not just shareholders.

Employee stakeholder benefits include greater job security, increased compensation that includes nonsalary types such as more valuable stock options, autonomous decision making, and opportunities for promotions and other forms of job enrichment. The greatest challenge to VBM practitioners is keeping a balance between financial concerns and the nonfinancial processes and activities that drive monetary results. Pressures from institutional investors and other short-term-focused stakeholders to create immediate, short-term value often compromise the long-term value propositions for employees and customers, as well as for society at large.

PERFORMANCE MEASUREMENT AND MANAGEMENT SYSTEMS

The purpose of From Cost to Performance is to show the developmental stages required to progress from the confined perspectives of Stage 2, toward more comprehensive views and practices. The chapters proceed from Stages 1 and 2, focused on cost and financial measures, to performance practices (and more) in these final chapters. And finally, the discussion indexes a coordinating system that explicitly includes the word performance. This section contains information on systems, in the true definition of that word, that expressly require balancing the relationships among several perspectives, including the financial viewpoint.

As discussed in this section, performance measurement and management systems are organization design structures that comprehensively coordinate all organizational resources, processes, operations, and strategic decisions into an integrated guidance system. Performance management paradigms come in many flavors (and brands), but they all share three common characteristics:

1. Financial and cost information serve as one element in a balanced, linked set of financial and nonfinancial information resources.
2. Continuous improvement, as measured by the system, becomes part of daily management life for all employees, activities, and functions.
3. The performance management system aligns all employees, business units, and constituents by means of a few, carefully articulated central management objectives.

Measurement changes behavior. When organizations reach a level of high operational resource management maturity and insight, executives begin to more ardently value clarity and consensus about central management objectives because they can see the resources that are being used well or wasted. This focus permits leadership to decentralize authority and decision making throughout a
well informed, strategically aligned, motivated workforce. Performance management systems leverage information resources by establishing a formal architecture for the organization’s financial and nonfinancial information intelligence. A key goal for the performance system architecture is to balance financial and operational/nonfinancial information.18

Most organizations base their performance management information architectures on strategy and value creation, and build them from basic information categories: financial, process, customer, supplier, and sometimes research, innovation, and employee data. Less frequently, information categories include more mature components such as community health, individuals and specific groups of employees, and environmental impact. Performance management systems emphasize organizational intentions and priorities through various information architecture designs, using information access, performance measure accountability, and results visibility to signal preferred actions and to direct employee attention. Ideally, this information is conveyed immediately and widely through Internet and Web sites. Four central management focuses most commonly establish the foundation of the performance information system design: budgetary compliance (Stages 1 and 2), process improvement (Stage 3), value creation for identified constituents (Stages 3 and 4), and strategy (Stage 3 and 4).

Budget-centered performance management systems use a conventional information system design that parallels the arrangement of organizational structure in either a classic corporate/divisional/departmental hierarchy (see Exhibit 8.1a) or occasionally in a more mature framework such as activity-based budgeting (ABB). Corporate headquarters develops and assigns responsibility for performance measurements that focus on the primary budgetary accountabilities at each organizational level or activity focus.

Financial measurements typically dominate traditional performance management systems because the organizations that employ this Stage 2 architecture depend upon the budget and conventional accounting systems as the primary means of control. Primitive systems frequently measure success against the budget. Even advanced budgeting methods, such as ABB, cannot achieve strategic balance or execution on their own. Consequently, this discussion addresses three performance measurement systems that attain a more balanced and comprehensive management perspective.

First, the process-centered performance management system, at a Stage 3 maturity level, uses an information intelligence architecture that captures and links the organization’s interdependent performance dynamics across three broad measurement layers:

1. The overall organization
2. The processes that support it
3. The activities that support the processes (see Exhibit 8.1b)19
Exhibit 8.1. Performance Management Information Intelligence Architectures

Process-centered architectures measure the performance of each of these three levels with appropriately chosen metrics for organization, process, and activity. In this model, perspectives A, B, C, and D might be Financial, Customer, Quality, and Supplier. Process-centered systems work well in organizations that need rapid continuous process improvement to remain competitive. Process-centered systems measure success in terms of process and activity metrics supporting high-level organization goals.

Second, in late Stage 3 or Stage 4, the value-centered performance management system uses an information intelligence architecture that maps value chains throughout the organization. Greg and Raymond Reilly articulate value creation performance management with their Measure Net (see Exhibit 8.1c).20 The concept is that stakeholders’ value propositions, not strategy, hold the central position as a guiding force in decision making. Strategic planning is viewed as one of several management processes. Manager, employee, shareholder, customer, and supplier stakeholders manage interdependent value-creating activities by mapping performance measurement value chains across an organizational metric pool. Appropriate measurement sets reflect the concerns of each stakeholder group, as well as common points of attention. Organizations choose value-creation–centered performance management architectures when, for example, success depends upon continuous marketable innovation and product/service value enhancement.

Third, the strategy-centered performance management systems (Stage 4) measure strategic success. The Balanced Scorecard, developed by Robert Kaplan and David Norton, currently stands as the most widely embraced performance measurement and management coordinating system. With strategy front and center, organizations select performance measurements that align with strategic objectives in four measurement perspectives: financial, customer, internal business process, and learning and growth (see Exhibit 8.1d).21 This deceptively simple measurement architecture demands that leadership apply and tailor metrics from each perspective to all levels of the organization, including business units, processes, and employees. The Balanced Scorecard (BSC) and other strategic performance management systems measure success in terms of how well each organizational member performs in the four measurement perspectives. When done well, employees participate in depth in the design of measures in all four perspectives to test the organization’s strategy. Consequently, organizations that depend upon innovation and/or rapid strategic renewal choose this kind of strategy-centered information architecture to guide performance management.

Performance measurement and management approaches such as those just described strive for a comprehensive view of the organization and all its constituents. Based on well-articulated intentions and/or strategic objectives, performance management simultaneously accommodates several organizational identities as seen through the eyes of various constituents. The Balanced Scorecard, for example, asks explicit questions about how shareholders, customers,
supplier partners, and so forth see the company. These are all versions of the “who are we” question so important to organizational clarity and direction.

Coming to grips with the identity questions required of performance management at a Stage 4 level of maturity demands that the organizational systems represent concrete patterns people can follow as they participate in the implementation and ongoing execution of strategy. The measurement design, itself, is a pattern that shows everyone what is important and where to exert efforts. Many measurement systems include weighting functions so that not all measurements are created equal. Companies using performance management commonly report that just creating agreement on priorities, and getting people aligned is worth the time and expense of implementation.

Perspectives

When an organization with a Stage 3 cost management system wants to move into the realm of formal performance management, the key nonfinancial measurement focuses dictate the organization’s most important operational values and relationships. The strategy-centered Balanced Scorecard methodology gives organizations four measurement perspectives: financial, customer, internal business process, and learning and growth. Implemented variations on the Balanced Scorecard suggest additional or alternative perspectives, such as Employee, Supplier, and Regulatory. These are all efforts to see more comprehensively.

Which perspectives are the right ones? The answer depends on what the organization needs to see to understand and enhance its identity and realize its strategic intentions. Specific contexts, especially in noncorporate organizations, clearly dictate a deviation from the four classic BSC perspectives. Here, Balanced Scorecard proponents create a fifth perspective when they believe that a particular relationship deserves extra management attention. For example, when city governments adopt performance management, some have added a fifth perspective called Community.

However, executive teams must avoid recklessness and carefully consider the risks and benefits of multiple measurement perspectives. Performance management is an exercise in decision making designed to force executive management to choose only those relationships that are most important to business success. Product manufacturers and service providers that maintain competitive performance profiles by means of their efficient, effective processes often create a process-centered performance management architecture. The nonfinancial perspectives of most process-centered performance measurement architectures are generally less constrained than the branded Balanced Scorecard. Specifically, process efficiency and overall organizational success depend on continuous improvement at the activity level in process-intensive businesses (again, see Exhibit 8.1b). The process-centered architecture makes organizational needs and successes visible for the front-line, hands-on, activity-level employee. Employees understand what to do—now—in their daily activities.
Performance Management and Financial Management

In the context of organizational development, before an organization chooses to adopt a formal process, value, or strategy-centered performance management system, it should deploy a mature operationally focused cost management system (Stage 3). Implementation of a decision-quality CMS is not only a necessary developmental step, but also a critical component of any performance measurement system. The Stage 3 CMS makes visible for the first time the network of resources—human, material, financial. In short, when organizations develop and integrate ABM or similar product and customer costing methods to complement financial reporting, operational, and strategic information, cost management information flows in an informative, logical manner. Seeing this broader view of cost/resource flow is required before proceeding to a mature performance management system.

Of course, many organizations attempt to skip steps and leap from a Stage 2 financial management paradigm to a comprehensive Stage 4 performance management design. The result is predictable: The performance management design becomes PR window-dressing, with virtually no real influence within the organization. Why? The development into this level of management maturity depends on how well people have learned new ways of seeing cost and performance in terms of operational resources. Stage 2 cannot relinquish its financial accountability focus. Performance reviews and incentives continue on the old financial-based system, and that is what gets attended to. In addition, just from a cost–benefit viewpoint, organizations that attempt to implement without first learning new ways to see cost and performance spend money on maintaining two systems but pay attention to only one.

No skipping steps. The Stage 3 ABM or other product/customer costing and operational control system becomes the foundation for the entire organization’s resource assignments in all organizational units. This assists everyone to see themselves, their processes, and their activities from operational and financial perspectives, with operations and cost data. Conventional accountants and other financial professionals have carefully and successfully schooled nonfinancial managers to believe in the importance of the information in budgets and in financial statements. However, managers require operational information to run the business. The specific structural design of a Stage 3 cost management system that provides nonfinancial managers with financial and operational information will more than likely suggest the most compatible performance measurement and management methodology, as well as encourage simplification and automation in Stage 2 legacy financial systems.

Performance Management and Self-Organizing Development

Strategies are guesses. Kaplan and Norton state this more diplomatically as “A strategy is a hypothesis.” Processes are approximations at satisfying strategic
intent. Activities are best judgments of what a given process needs to serve the current strategic intent. Certainty? Control? Only in a Stage 2 executive’s dreams. Performance management methods recognize the inherent uncertainty in all human ventures and respect the difficulties accordingly. Acknowledging the intimate relationship between strategic intent and the essential activities that enable it, performance management methods implicitly leave no potential source of information out of the participation loop. Therefore, knowledge and expertise are sought at the local level to address local issues. Local participation is also standard fare in building local measurement sets, again guided by overarching strategic intentions and measurement perspectives. This all sounds like a pretty good stab at a self-organizing system . . . and it is. But there’s more as Chapter 9 shows.

One of the major developmental hurdles for Stage 4 organizations is grasping the importance of coordinated learning. Even BSC practitioners with many years’ experience claim that the “Learning and Growth” perspective remains elusive. This is so because Stage 1 and 2 hierarchical, centralized control systems do not require that people learn and grow, only that they perform assigned tasks accurately. Many organizations that have not reached a Stage 3 maturity level cannot imagine how an entire measurement set could be developed for a learning and growth perspective outside the financial realm. They can’t imagine because they have not learned to see differently. Maturing organizations learn through the measurement of intention, strategic or otherwise, as it formally manifests in processes, activities, and strategy, and they adapt their processes, activities, and strategies based according to what they learn. Developmentally immature organizations must first begin by measuring and learning to manage more fundamental nonfinancial information perspectives related to Stage 3 operations and resource management, where they discover the thrill of multiple solutions. This discovery prepares people for the continual learning and renewal required in Stage 4.

Recall from Chapter 7 the importance of pattern, participation, and performance as the basis of organizational development that links the experiences of the people with the process improvement of the organization. Conscientiously insert this into a deliberately designed performance management system, and an organization is definitely not in the General Ledger State of Kansas anymore. The entire body of organizational information is interconnected, so people can see more, and therefore learn and develop more rapidly. Associations and partnerships become easier to visualize and form. The performance measurement and management patterns that the system creates help leadership in the delicate job of orchestrating appropriate participation. The measurement and management patterns show people where they fit into value creation for identified stakeholders (including themselves); therefore participation should be coordinated based on working relationships. People at all levels begin to know where, when, and how they are expected to contribute to strategic achievement. People at all levels can begin anticipating needs in other functions before they arise or are requested. Suddenly, individuals are part of something more, something bigger than themselves because the measurement and management patterns embedded within the

Quantum Strategy: Release, Reliance, and Reversal

Quantum Strategy: Release, Reliance, and Reversal

Quantum Strategy: Release, Reliance, and Reversal

Quantum Strategy: Release, Reliance, and Reversal
Organizational Intention and Identity in Performance Management

Serious performance management work has crossed the developmental threshold that leaves benchmarking and best practices behind. A mature performance management organization is too busy focusing on the people it deals with every day to become obsessed about what competitors are doing. In short, as it grows through its maturity cycle, the Stage 4 organization creates its own identity, and it checks with few, if any, competitors when it sets its intentions. The Stage 4 approach is far more interested in day-to-day work paradigms of cooperation and alliance than it is with competition. In fact, former competitors may even become strategic allies. All this is an unimaginable mindset before the hard work of Stage 3 cooperation and comparison skills have been learned and successfully practiced.

The development of these coordinating systems also follows a pattern. For example, performance measurement and management has developed in a pattern that parallels ABC/M, although the pace of performance management progress has been accelerated by the comparatively greater availability of supportive software applications. The parallels exhibit three main points of commonality that make good checkpoints when assessing relative maturity between strategic coordinating systems.

1. Development of meaningful categories to capture quantitative information; for example, resource, activity, and cost object constructs in ABC and measurement perspectives in performance measurement and management.
2. Development of management principles to affect changes using quantitative information; for example, activity-based management, and the Balanced Scorecard’s four management processes (described in the next paragraph).
3. Efforts to map strategic intention and/or process execution and to statistically validate findings. For example, ABC/M frequently partners with TQM’s process mapping; and more recent BSC enhancements call for strategic mapping and statistical methods.

All performance measurement and management proponents enjoy demonstrating the obvious value of linking financial and nonfinancial measures. More than other performance management model, the Balanced Scorecard has steadily evolved the ways it integrates measurement perspectives and management processes. The Balanced Scorecard management processes depicted in Exhibit 8.2 provide people with structured management principles and practices that are useful in any performance management approach. The Balanced Scorecard has
been designed to continually focus on ways to achieve faster and better strategic execution.

Paralleling its four measurement perspectives, the Balanced Scorecard directs performance management practices with four formal management processes: translating the vision, communication and linkage, business planning, and feedback and learning. For less than US $25, any motivated management team can read all about BSC measurement and management perspectives in Kaplan and Norton’s 1996 book, *The Balanced Scorecard*, in which they outline what to measure, how to implement, how to manage once its up and running, and how to create rapid strategic renewal. Organizations that choose to manage performance benefit by adapting these four deliberate management processes to the central focus of their performance management system.

In their second book, *The Strategy-Focused Organization*, Kaplan and Norton admit their own learning curve in their preface: “We proposed the Balanced Scorecard as the solution to [the] performance measurement problem. But we learned that adopting companies used the Balanced Scorecard to solve a much more important problem than how to measure performance in the information era. That problem, of which we were frankly unaware when first proposing the Bal-

**Exhibit 8.2. The Four Management Processes of the Balanced Scorecard**

anced Scorecard, was how to implement new strategies. The execution of strategy is the central purpose of *The Strategy-Focused Organization*, using strategic mapping, incentives, and other concrete paradigms.

A second insight emphasized by the BSC founders is the crucial nature of incentives. They identified strong incentive structures as a critical success factor in BSC implementations. “Each of the successful [BSC] organizations linked incentive compensation to the Balanced Scorecard. Most executives opted for a team-based, rather than an individual-based, system for rewarding performance. They used the business unit and division scorecards as the basis for rewards, an approach that stressed the importance of teamwork in executing strategy.”

Just as strategy occupies the position of central focus in the Balanced Scorecard, so process and value provide the focal point for the second and third system types depicted in Exhibit 8.1. Process and value-centered performance management systems have, to date, not been adopted as widely and enthusiastically as the BSC. Causes for this discrepancy are a matter of debate, and the more limited implementations do not suggest that for a given organization, a process or value-centered framework isn’t a better choice. Process and value-centered systems have yet to concisely and commonly codify their underlying management principles and processes, but the four BSC management processes easily translate to process and value terminology, and remain just as valid in a process or value-centered context. In BSC language, “translating the vision” easily becomes “translating the value proposition” or “translating process improvement goals.”

The BSC “communication and linkage” performance management process carries the high-level translation of the central management objective into the common language and vocabulary of the organization regardless of system type. In any performance measurement and management method, this management process activates employee participation from all levels of the organization by deploying frequent, focused communiqués that create opportunities for business units and employees to begin to understand how their local activities fit to the central management objective. In addition to increasing employee consensus and personal engagement in the performance management process, the communication and linkage management process encourages business units and employees to establish connections throughout the organization as they work across functions to align local activities with the central management objective. Business units and employees develop performance objectives for each of the major measurement perspectives (i.e., financial, customer, internal business process, and learning and growth). In the next step, the same people establish goals and begin to design or revise supportive projects and initiatives.

If the executive team seeks to unite all levels of the organization around a central strategic intention, all employees need to be able to understand the intentions in their own personal workplace language. Consensus is a function of common understanding. Consensual understanding of a common organizational objective
creates significant performance synergies, and the productivity of the whole exceeds the apparent sum of its parts.

The work becomes more detailed, local, and customized for each organization as it engages the Balanced Scorecard’s third management process, “business planning.” Even so, the system type affects the vocabulary of the work more than its principles. As a part of the business planning process resource allocation and incentive planning figure prominently. The planning of central intentions and priorities should be synchronized with the annual budgeting process (assuming there still is one) so that business units can actually follow through on their linked accountabilities. The Balanced Scorecard methodology encourages managers to establish short-term financial and nonfinancial milestones during this process, as well.

Finally, the “feedback and learning” process renews and sustains the life of the entire performance management process cycle by using performance measurement information to correct and enhance the central intentions and objectives. More than any other Balanced Scorecard performance management process, this process was designed with executive leadership in mind as they create organizational identity and intention. This step provides them with feedback regarding their strategic, tactical and activity choices, and hopefully, reveals opportunities to learn new ways to do better next time. This process equips managers to learn to anticipate the future far more quickly than ever before.

In these four processes of management guidance, business units and employees work cross-functionally to establish key performance measures to support the organization-level performance objectives. If the organizational culture or its managers lack the maturity to work cross-functionally, performance management will initially prove to be an exercise in frustration. Consensus-building activities create winners and losers. Key measures mean that some things are simply more important than others. Performance measurement creation is an exercise in restraint and discretion. A performance management process calls executives and employees to set and accept ambitious long-term stretch targets to drive continuous improvement. Participation at all levels is welcomed because long-term targets are inherently cross-functional and organization-deep. In the course of the work, parochial and territorial ambitions must blend with the greater vision.

In The Strategy-Focused Organization, Kaplan and Norton recommend five more management principles. These, too, can be applied to other performance management methods and their terminology.25

1. Translate the strategy to operational terms using strategy maps and Balanced Scorecards.
2. Mobilize change through executive leadership and the governance process.
3. Align the organization to the strategy through explicit business unit and shared services synergies, facilitated through corporate guidance.
4. Make strategy a continual process and encourage strategic learning.
5. Make strategy everyone’s everyday job by raising strategic awareness, constructing personal scorecards, and designing balanced paychecks.

Performance Management Capabilities Assessment

All organizations measure and manage performance in some form. All organizations must meet a few basic entrance requirements before joining the growing number that use performance management as the central organization coordination system. Organizations stuck in Stage 2 need not apply. When financial reporting alone drives decision making, nonfinancial operational information is ignored. Spend the money creating an operationally focused cost system that tracks product and customer costs first.

Similarly, executives in Stage 3 organizations who expect that an ERP system installation, complete with a performance management module, will create a ready-made performance management system also need to spend a little money first and read a good book—The Balanced Scorecard Step by Step.26 The how-to description given in this book can give any management team a good blueprint for the hard work behind creating a customized performance management structure. Otherwise, the organization will spend a boatload of money on software that nobody will use because it does not contain the information that they are ready for or that they need.

In short, performance management is a strong, capable method for comprehensive organizational alignment behind clear central intentions fueled by a continuously renewed, openly reported set of balanced financial and nonfinancial measurements that assess the relationships between the organizations and its constituents. Formal performance management is a full-time commitment founded on a genuine respect for operational resource information as an integral part of the organizational cost and performance system.

These strengths are also the systems’ weakness. Too many organizations try to prematurely acquire the power and efficiency of performance management, thinking that all they need to do is come up with an impressive list of measures and then collect measurement data. This is a surefire setup for magnificent failure—one certain to waste valuable resources and demoralize personnel. No skipping steps.

Incentives are critical success factors that must be aligned with all organizational tactics and systems. Whatever the context, incentives must not be designed in a strategic void. Create the strategy, the core processes, or the key value propositions first, then design the incentives—with one exception: executive incentive leadership. Executive incentive leadership must proceed with five important incentive practice insights. First, the priorities that executives openly communicate (with or without explicit incentives or incentive expletives) have a way of immediately focusing employee attention and influencing employee behavior. Second, executives can guide the incentive structure by aligning their own pay schemes with openly communicated priorities and performance targets, and by
publicizing their own results. The classic example of how not to strategically align incentives is executive bonuses based primarily on sales revenue growth that quickly erode the profit imperative. Even worse are executive bonuses paid without any explicit and public performance measures. Executives need to demonstrate that they have some skin in the game by participating equitably in incentive rewards, not dominating them regardless of harm to the organization’s resources and morale.

Third, like performance measurements, executives must assure financial/non-financial balance in incentive design. Rewarding exclusively on financial performance is not recommended, although studies indicate that companies continue to put the heaviest proportional weight on financial outcomes.27 Fourth, employee incentives are an exercise in patience. Kaplan and Norton recommend that executives use caution when constructing incentives and delay linking incentives to newly implemented balanced scorecards. This advice applies to all tactics and systems for three reasons.

1. Initial performance system designs often go through several subsequent iterations as learning and insight accrue. Switching incentives to match performance system changes often causes confusion and even anger.
2. Performance data integrity may be an issue in the first year or more. Compensating on bad data has obvious problems.
3. “Unintended or unexpected consequences” sometimes result from premature incentive implementation.28

Fifth, from a resource management perspective, executives must implement incentive designs deliberately and with clarity about the resources they are committing. Incentives cost something in terms of money, time, and employee goodwill. Putting resources in the wrong place doesn’t just cost money, it frustrates employees and sends them confusing signals. Incentive systems compensate clearly identified stakeholders in ways that align owners and employees at all levels of the organization under a common strategic purpose. Executive greed is not a “common strategic purpose.” Consequently, employees must clearly understand three sets of variables regarding performance and compensatory incentive rewards:

1. The measured performance variables for the job
2. How their behavior affects the measured performance variables
3. How measurement performance variables translate into individual rewards29

Incentives simply fail to enchant or motivate employees when they cannot see a clear cause-and-effect relationship between these variables. The long-term success of strategically aligned incentive systems depends upon creating a clear cause-and-effect line of sight for all employees.
NEW WAYS OF SEEING

Cultivated in the person, integrity is true.
Cultivated in the family, integrity is ample.
Cultivated in the village, integrity lasts long.
Cultivated in the state, integrity is abundant.

—Lao Tzu

Integrity—whole, entire, one. Developing organizations learn to integrate their processes and information systems slowly and gradually because they have so many bits and pieces to sort out as they work their way out of Stage 1. As they learn to see costs as operational resources, people in Stage 2 organizations turn toward the participation imperative as they create new ways to see how processes transform resources into profit. Because of the strength of the profit imperative through Stage 3, hierarchical control structures generate more and more tactics and methods to manage human behavior while capturing new operational resource accounting information that facilitates new organizational learning insights. Eventually, these Stage 3 stand-alone systems must be technically integrated, and the relationship imperative begins to drive organizational change and development. The left and right columns in Exhibit 8.3 summarize respectively the technical and human management work for the Stage 4 organization.

Exhibit 8.3. Stage 4 Cost Management System Development

<table>
<thead>
<tr>
<th>Systems Aspect</th>
<th>Integrated</th>
<th>Strategic Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Quality</td>
<td>• fully linked databases and systems</td>
<td>• apply</td>
</tr>
<tr>
<td>External</td>
<td>• financial reporting systems</td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product/</td>
<td>• integrated ABC/M systems</td>
<td>• applying goals to</td>
</tr>
<tr>
<td>Customer Costs</td>
<td>• full absorption</td>
<td>resource utilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>proactively</td>
</tr>
<tr>
<td>Operational/</td>
<td>• operational and strategic performance management systems</td>
<td>• continuously</td>
</tr>
<tr>
<td>Strategic</td>
<td></td>
<td>coordinate all</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>profit-producing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>activities</td>
</tr>
</tbody>
</table>
On the left side of Exhibit 8.3, where technical systems are depicted, one of the greatest challenges in the transitional phase from Stage 3 to Stage 4 is remembering the people who will use the better decision support information that the integrated technical system can offer. Moving steadily through Stage 3 development, people at all levels of the organization begin to see how operational resource learning resides as much or more in themselves and the processes they create as it does on the computer terminal. The increasingly technical focus of Stage 4 information system implementation can leave people feeling disenfranchised unless they fully participate in ongoing developmental improvements that parallel the technical achievements.

Coordinating systems represent a radically new form of organizational consciousness because they unify understanding of many systems and many perspectives not unlike the difference between the invertebrate and vertebrate nervous systems. The efficiencies of these new coordinative capacities can be so enticing that leadership commonly enforces implementations on unready organizations with people who have not learned how to use the information the system can give them. The centralized brains in vertebrate species can coordinate the activities of the entire organism because all parts of the organism developed simultaneously with the new brain. This takes time. The leg needs to be anatomically prepared to correctly use the new coordinative information for the good of the whole organism. Information system components are no different.

ERP and Balanced Scorecard implementations fail at high rates for a simple reason: People in the organization have not learned how to see what the coordinating systems can really do, so these same people do not know how to prepare themselves to use the new information. The profit imperative pushes the decision, and the made-to-order software packages provide patterns that make performance management seem mechanical. Unfortunately, the software packages do not come with an experience or organizational learning module. The forces that move an organization successfully through the developmental dynamics of Stages 3 and 4 keep people honest about their own readiness for change. The participation imperative establishes a way of working life that increases shared authority. The relationship imperative is the new driving force in the transition to Stage 4 as people see the need to bring stand-alone systems into interrelationship. The self-organizing imperative will not emerge fully until Stage 5, but as an offshoot of the participation and relationship imperatives, people working in a Stage 4 information environment begin to see the organization more organically.

As they do, management processes become even more fluid and interconnected, and the information people need to do their work is increasingly in their heads, their processes, and their work itself. Consequently, roles change dramatically in all employee groups as the organization develops through Stage 4 learning. Management becomes more a matter of administration. All employees learn to address personal and work related competencies. Executive leadership learns to coordinate people and resources to match the needs of organization-wide
Developmental Checkpoint

competencies. Likewise, managers learn to coordinate people and processes to create competencies, and specialists learn to apply resources and time to activity priorities. Throughout, each person takes responsibility for personal competency needs. All employees begin to see their work in terms of competency and responsibility rather than through the more mechanical connotations of the word management.

DEVELOPMENTAL CHECKPOINT

242nd Ferengi Rule of Acquisition: More is good . . . all is better.31

Taken as a whole, performance measurement and management toward articulated objectives is heady work. However, a small set of principles can help organize the effort. First, make sure everyone in the organization speaks the same strategic (or process, or vision, or mission) language. Then apply these principles:

- Indiscriminate, short-term cost cutting destroys value.
- Strategic cost management is the nexus of resources/costs and value creation.
- As cost management methods mature, they are less rigidly structured and more amendable to synergetic blending with complementary methods.
- No skipping steps. Organizations must establish mature operational resource-based costing systems before adopting an advanced performance management system.
- Performance management disciplines executives to achieve consensus and limit the focus of organizational attention to only its most important relationships.
- Incentives of the right kind, at the right place and time, for all employees are essential.

Organizational identity is subject to both enhancement and degradation, as evidenced by the disgrace of corporations like Tyco, Enron, and Worldcom. Imagine your company’s identity and name being synonymous for unethical and criminal behaviors. Calculate how long—if it could be done at all—it would take to reestablish integrity after a product quality scare (Tylenol), or a breach of ethical standards (Arthur Andersen). These are examples of the importance of organization identity and the intentions that identity fosters.

In addition to these characteristics, organizational learning is an important underlying dynamic. This is just another way to say that organizations are alive and human, because an individual or a group of humans participates in self-definition and identity-shaping through learning that in turn leads to growth and development. Feedback is essential to the learning process because learning is about correction as well as correctness. Importantly, feedback is not one-way; it is all-way.
A Note to Leadership

The tactics discussed in Chapters 6 and 7 might be designed and implemented by a competent, experienced manager; however, this is not recommended. Executive participation and commitment lowers implementation risk and accelerates success. So, although some managers and specialists may have successful tactical implementations, the absence of executives is never preferable. In contrast, the coordinating systems in this chapter carry an absolute prohibition against their implementation unless one or more executives have hands-on, consistent participation. The reason for this is the comprehensive nature of the systems, not to mention their expense. More specifically, these tactics intertwine with organization-wide strategic intentions, and therefore, must have the explicit, ongoing presence and participation of executives to ensure coherence. In short, be there or don’t do it. Some of the most critical points of executive involvement include:

- Informed approval of projects and systems: Using tactic selection sense to decide which methods are best suited for identified needs, and to what extent the tactic will be implemented; i.e., not all tactics need to be organization-wide.

- Specific performance measurements for the tactical project, including prorated resource allocations based on processes most in need. Size the project resources to the real needs, not 100 percent implementation, unless only 100 percent quality, uptime, accuracy or other attribute will do.

- Assignment of accountability for the tactic’s success. There is only one place for the responsibility for initiatives of this scope: One or more designated executives.

- Project performance measurements that signal the project should be modified or abandoned.

Revisiting Tactics

Returning to the more tangible domain of the tactics discussed in the previous chapter, one striking characteristic is their relatively specific management focus. Comparatively less mature tactics that support earlier strategic attributes (e.g., rapid, economical) focus on control—controlling people, processes, and even the customer. More mature coordinating systems, such as those addressed in this chapter, begin to see people, processes, and the customer in new ways. As methods help organizations to move their perspective from an exclusive focus on past and production performance, people begin to see ways to coordinate current and future resources, including people. A parallel developmental characteristic of both more mature organizations and more mature tactics is that each is able to simultaneously serve a greater number of strategic attributes.
Interestingly, with each new layer of maturity, the organizational focus becomes more and more preoccupied with people and the choices they make—employees, customers, and shareholders. Stage 4 organizations are built one at a time on the backs of long-term executive commitment. People in leadership positions carry the burden and the privilege of making choices. The question is, what values and maturity level guide those choices?
Chapter 9

Accounting for the Common Wealth

The greatest improvement in the productive powers of labor and the greater part of the skill, dexterity, and judgment with which it is anywhere directed or applied seem to have been the effects of the division of labor.

—Adam Smith

In this first sentence of the first chapter of *The Wealth of Nations*, Adam Smith identifies a quantum leap in human economic efficiency. Management practitioners have steadily worked to develop new ways to see, understand, and apply this insight ever since. In this chapter devoted to a discussion of the most mature stage of human enterprise, the Stage 5 holistic organization learns to continuously adapt and harmonize its own system with the much larger natural and social systems in which it is embedded. Living systems thinking replaces mechanical management with profound consequences on the meaning and practices of the division of labor.

People working within the Stage 5 organization have experienced a common developmental quantum leap in their understanding of cost and performance compared to the world around them. As an index of organizational developmental dynamics, this book has stressed the long, slow, steady nature of learning and change that occurs between the realization of new, integrated cognitive developmental milestones. Mirroring the findings of developmentalists whose studies focus on the individual, leading paleontologists note that rather than moving in a gradual continuously upward vector, the development and evolution of human social structures manifest long stretches of relative equilibrium, or lack of any apparent major change, punctuated by sudden, dramatic branching or bifurcation points where new forms appear on the periphery of a preceding paradigm. As living systems in development, organizations manifest this same form of sudden quantum change. Nothing seems to happen in the interval between milestones while people learn new ways to see. When nothing seems to happen, many people throughout the organization become discouraged, and immature imperatives often abort the learning processes that lead to developmental breakthroughs. Stage 5 awareness and practice depend on the capacity of the people within the organization to see themselves and their work as part of a web of interrelated systems. Systems thinking is a prerequisite for Stage 5 development, and with it, the space of all possibilities opens.
Other dramatic differences emerge in the characterization of Stage 5 organizations. Most importantly, Stage 5 people absolutely do not index organizational developmental dynamics with an exclusive focus on cognitive subsystems. Exhibit 9.1 shows three additional developmental subsystems essential to describe the radical departure of the Stage 5 organization from its predecessors. The three convergent developmental subsystems are moral, needs, and self-identity (also referenced in Exhibit 1.1). These three subsystems have been active throughout the organization’s development; however, in Stage 5, conscious and deliberate attention is required. This is so because although subsystems evolve together, they do not necessarily do so in synchrony. Individuals and organizations are as mature as their least mature subsystem. The normal and healthy process of developmental integration, requires that subsystems coevolve at close to the same rate.

The moral developmental subsystem characterizes individuals and organizations in their relationship with all other entities and social groups. In the Stage 5 enterprise, the moral subsystem contributes guidance and governance aspects. The needs developmental subsystem characterizes the forces that drive people within the enterprise to embrace or resist moral imperatives. The self-identity developmental subsystem characterizes how the people and the enterprise see their relationships with those around them. To live as a Stage 5 organization means finding ways to teach people to see from the most mature vantage point in each of these subsystems.

### Exhibit 9.1. Subsystems of Human Development

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Moral</th>
<th>Needs</th>
<th>Self-Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>sensorimotor</td>
<td>punishment &amp; obedience</td>
<td>survival</td>
<td>symbiotic</td>
</tr>
<tr>
<td>preoperational</td>
<td>instrumental hedonism</td>
<td>safety</td>
<td>self-protection</td>
</tr>
<tr>
<td>concrete operational</td>
<td>law &amp; order</td>
<td>membership</td>
<td>conformity</td>
</tr>
<tr>
<td>formal</td>
<td>universalism</td>
<td>self-esteem</td>
<td>conscientious</td>
</tr>
</tbody>
</table>
Before moving to a discussion of Stage 5 cognitive approaches to cost and performance, each of these additional Stage 5 developmental subsystems must be carefully characterized. Without their support, Stage 5 cognitive development is simply not possible because Stage 5 moral conduct, human needs fulfillment, and relationship perspectives precede the cognitive milestone capacities that establish the foundation on which cognitive development takes place.

MORAL IMPLICATIONS OF ORGANIZATIONAL DEVELOPMENT

The social-welfare project must neither be simply continued along the same lines nor be broken off, but must be pursued at a higher level of reflection. The intention is to tame the capitalist economic system, that is, to “restructure” it socially and ecologically in such a way that the deployment of administrative power can be simultaneously brought under control. From the standpoint of effectiveness, this means training the administration to employ mild forms of indirect steering; from the standpoint of legitimacy, it means linking the administration to communicative power and immunizing it better against illegitimate power.

—Jurgen Habermas

One of the greatest challenges of cultural study is seeing its most important assumptions. A culture’s most important assumptions are those established facts-of-life that have become so embedded in the thoughts and actions of the culture’s people that members simply cannot see any alternatives.

The stages of development within the moral subsystem in Exhibit 9.1 demonstrate one of the most subtle paradigms in any extant human culture: the hierarchy. Each chapter of this book has emphasized the unique organizational attempts to control in different developmental stages. As organizations develop greater levels of operational and information maturity, hierarchy and centralization actually impede further development.

Because earlier developmental states in the moral subsystem rely on externally enforced control structures, people in the Stage 5 organization must carefully characterize their history of moral development as an organization in terms of voluntary, personal work responsibilities. To achieve the universal perspective, the highest in the moral subsystem, people in the Stage 5 organization look for residual artificial control and authority used during the preceding stages of moral development in the organization. Before Stage 5, power within the organization manifests through mechanisms and patterns of dominance and control. Each employee can be ranked in terms of a chain of dominance with respect to one another, and rank order means hierarchy. Pre-Stage 5 organizations rationalize their dominance-based hierarchies with the logic of the Scientific Management paradigm where a few smart people know, and many dumb people do what they are told.
Recognizing the Needs of the People

The dominance-based hierarchy is a barrier to holistic development, and must be systematically and deliberately dismantled to clear the way for Stage 5. Organizations entering the holistic stage develop a radical solution to this developmental dilemma. They conscientiously design and then manifest strength and force in terms of work-related personal responsibility (see Exhibit 9.2). Borrowing from living systems parallels that inherently acknowledge the importance of information and of each system member, each person gets to know and all people perform according to their responsibilities within a partnership culture that does not rank order different functional parts of its humanity and diversity in terms of inferiority or superiority.

In fact, Stage 5 organizations pay more attention to the information generated by activities of the specialist employee group than any other Stage. In the partnership culture, everyone relies on someone else, and is someone else’s customer. Just as democracy represents the most mature form of human governance, the moral universalism of Stage 5 organizations places the responsibilities of discipline and self-governance on the shoulders of each individual employee, not a system-wide policing force. Division of labor expands to include the distribution of authority to the only place authority rightly belongs—over the self. Remember that the quantum shift to democracy caused a worldwide historic revolution when it was first introduced into the modern world.

RECOGNIZING THE NEEDS OF THE PEOPLE

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

—From the Declaration of Independence

Exhibit 9.2. Organizational Learning Group Relationships

<table>
<thead>
<tr>
<th>Role</th>
<th>Work Focus</th>
<th>Management Responsibility</th>
<th>Productive Accountability</th>
<th>Primary Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist</td>
<td>Activity</td>
<td>Productivity</td>
<td>Quality</td>
<td>Customers</td>
</tr>
<tr>
<td>Executive</td>
<td>Strategy</td>
<td>Direction</td>
<td>Precision</td>
<td>All Stakeholders</td>
</tr>
<tr>
<td>Manager</td>
<td>Process</td>
<td>Resources</td>
<td>Accuracy</td>
<td>All Employees</td>
</tr>
</tbody>
</table>
One word, appearing twice, makes this declaration truly revolutionary. Happiness. The people who penned this statement knew through experience that the governance of a collection of individuals must recognize the pursuit of happiness as self-evident. People need the freedom to pursue this universal right, and Abraham Maslow, the psychologist who originated a hierarchy of needs as the developmental system in Exhibit 9.1, applied his insights to the organization at the end of his career. Hierarchical, rank-ordered systems of organizational dominance fail because they underestimate the trajectory of human needs in more mature stages of organizational development. When a particular need on the Maslow hierarchy has been satisfied, it no longer drives (or motivates) the choices people make for themselves. In a work context, employees who enjoy stable, well-paying jobs no longer respond to material incentives. They expect the workplace to provide an environment for self-actualization where they can experience a sense of accomplishment and personal growth. In short, this new human need motivates employee behaviors and choices at this higher level of individual maturity. The pursuit of happiness depends upon an environment that creates a sense of safety, membership, and personal growth. Hierarchies threaten each of these needs, and in the process, obstruct organizational development.

Since Stage 5 organizations are founded on a universal moral discipline structure of unranked personal responsibilities, self-actualization naturally becomes the driving force that allows employees to embrace their work as a source of accomplishment and a manifestation of personal growth. Simultaneously, they contribute to the common good of the organization. The most mature Stage 5 establishments explicitly lead the way beyond organization borders through a constant concern for the well being of the entire human community, and they actively embrace community citizenship as a consistent value.

Coordinated learning expands its meaning during growth in Stage 5. Since the Stage 5 enterprise acknowledges all employees for how they perform and what they know, people naturally want to learn more ways to improve their work performance. In short, the desire to improve work outcomes becomes a matter of personal success and fulfillment. Imagine the flagging behavioral influence of the profit imperative in such an environment where profits emerge naturally from personal and group work excellence.

Adam Smith’s division of labor insight takes on a second revolutionary development in the Stage 5 organization. The division of labor includes the redistribution of authority, and something more. The self-actualization drive—the highest stage of the human needs developmental subsystem—creates a culture of deliberate diversity where the organizational environment encourages each person to co-participate in individual and organizational development. In fact, in the Stage 5 enterprise, individual and organization development becomes truly interdependent.
IDENTITY RELATIONSHIPS FOR THE DEVELOPING ORGANIZATION

It is the web of relationships that determines the character of the enterprise, its capabilities, and its capacity to learn and grow. I believe it is valid to view this web of relationships as “more real” than most management metrics because it comes closer to shaping whether the system as a whole functions well or poorly.

—Peter Senge

Just as the word happiness in the Declaration of Independence characterizes the essential element of fulfilling human needs in the workplace, the implications of the word relationship determine the maturity of one’s identity. And it is the range, depth, and quality of one’s web of relationships that determine the breadth of personal perspective. The more mature the mindset, the greater the number of simultaneous perspectives it can hold. As individuals and organizations negotiate the challenges of the four self-identity stages in the last column of Exhibit 9.1, they do so in reference to how they see themselves relative to their primary relationship in the last column of Exhibit 9.2. In each stage, the primary relationship expands. For example, specialist employees in Stage 5 organizations learn to see fellow employees as customers as they receive and take material, services, and information from one another. This larger sense of self carries greater responsibilities that go with the magnified view. In systems thinking terms, the least local action is considered in terms of its systemwide implications because people are able to see themselves as part of a series of ever-larger systems. The broader the primary relationship, the more possible impacts there are, and in concert, the fewer the acceptable actions under a universal perspective. Thus moral and identity development, in tandem, continually expand interdependency and clarify the boundaries of acceptable behavior.

Stage 5 organizations encourage their people to make every decision in this context. For example, a Stage 5 company would never have a conflict between short-term earnings goals and long-term corporate health. In the first place, the Stage 5 understanding recognizes that short-term measures like EPS and share price are results that cannot be directly managed or manipulated without breaching moral responsibilities to those in the primary relationship circle. More fundamentally, such short-term goals, although reported, simply do not matter in the short term to Stage 5 standards. Only long-term, overall, interconnected human and financial health guides decision making. Practices such as smoothing earnings and sacrificing employee well being for the short term are viewed as immoral and destructive to organization identity.

Every history of any culture on the planet has its example of the dangers of adherence to conformity in the third stage of the self-identity developmental subsystem in Exhibit 9.1. In the modern Western consciousness, the group-think behavior of Nazi Germany stands as one of the most accessible examples of how
good-hearted persons behave differently when dominated and directed by authoritative organizational imperatives that depend upon human conformity. The conscientious self-identity sees beyond the conformist mindset, and therefore, must—to be true to the more mature identity—break from the current conformist pattern when some other part of the whole is threatened.

In a radical departure from conventional management thinking, Stage 5 enterprises have so released the reins of hierarchical authority that they actually operate through the wisdom and insights of the noncoerced individual. These organizations understand that their success depends upon the morally self-disciplined, self-actualizing employee who will conscientiously follow his and her heart rather than the apparent group imperatives. Paradoxically, the primary relationship in Stage 5 becomes spiritual in the sense that the responsibility implications of the moral subsystem and the individual actualization dynamics of the needs subsystem create self-identity imperatives that cannot responsibly act out of harmony with any greater living system. Employees in Stage 5 tacitly understand that in their primary relationship with themselves, they are simultaneously directly responsible for all of the myriad living systems in which they find themselves embedded.

Demonstrating his intimate understanding of the principles of identity development in primary relationship, Benjamin Franklin, who signed the Declaration of Independence, coined the following aphorism: “For want of the nail, the shoe was lost. For want of the shoe, the horse was lost. For want of the horse, the rider was lost. For want of the rider, the battle was lost.” For those who believe that releasing the reins of control will lead to certain chaos, think of what it must have been like to stand at the threshold of a new republic whose governance was placed in the hands of everyday people. Benjamin Franklin and his peers seemed to be able to see in new ways that confound and seem all but inaccessible to all but a few of today’s greatest leaders. What could the founders of the United States see that most leaders today do not? They saw the wisdom of individual human hearts working together conscientiously to build a better way to meet one another’s needs rather than merely profit at the expense of others through authoritarian rule.

Why was profiteering not an option in that era? Simply because in a vast, and somewhat intimidating, new country, the life-sustaining importance of interdependence was well understood. Since then, Western technological progress has, for better or worse, tamed the wilderness, and left some of us with the illusion that independence is the optimal choice. Independence is a fiction. Similarly, immature leaders today loudly quote Adam Smith’s “economic sense,” when in truth, they have missed Smith’s entire premise built on respect for individual energy, for the necessity of interdependence, and for local action that benefits the common wealth.
Stage 5 Cognitive Development: The Self-Organizing Imperative

STAGE 5 COGNITIVE DEVELOPMENT: THE SELF-ORGANIZING IMPERATIVE

... [m]odern management accounting has actually hindered companies. It has prevented them from seeing the adverse consequences of practices designed to impose order. Because companies are inherently self-ordering systems, such accounting practices are injurious to them. Among those practices, none is more pernicious than that of using financial targets to drive work—the defining feature of managing by results.

—H. Thomas Johnson and Anders Bröms

The meaning and understanding of autopoiesis develops according to a new imperative in the Stage 5 organization.

autopoiesis—a network of processes of production (transformation and destruction) which (a) maintain their defining organization throughout a history of environmental perturbation and structural change and (b) regenerate their own components in the course of their operation.

People in the Stage 4 organization understand autopoietic processes in terms of the ways that strategic planning cycles maintain organizational identity and functionality. The relationship imperative is never compromised. Organizational rules and roles create effective relationship patterns across functions and employee levels. People in Stage 5 organizations understand autopoiesis in terms of the ways that fellow employees self-organize their activities around a network of intelligent productive processes that mirror the ways that living systems store information—in the processes and individuals themselves.

Financial targets can be injurious to organizational health from the Stage 5 self-organizing imperative. Repeatedly, the point has been made that financial targets are results of preceding activities. Therefore, these targets fall outside the wealth and resources of the self-organizing imperative. When financial imperatives substitute for self-organizing principles of life, liberty, and the pursuit of happiness, a toxin floods the system causing malaise, and left unchecked, eventual death. The years 2001 and 2002 provide numerous cases proving the point, starting with Enron’s implosion. The trail of exposures that followed (and continues at this writing) indicates a disease of epidemic proportions. This kind of subcultural embarrassment and pain can provide a catalyst for development, for pushing through to see a new and better way. We shall see what we shall see, but something else is obviously missing in addition to the failure of financial targets to successfully organize human work.

The self-organizing imperative that drives Stage 5 behavior is the second missing element—missing, because few are mature enough to recognize and apply it in an environment dominated by the profit imperative. In essence, this
self-organizing imperative means that only an interdependent organizational identity is sustainable over the long term—an identity that not only sees itself in terms of interrelationships but one that allows its people the freedom and authority to help the organization develop on the local level of personal activity.

No business professional needs statistically validated studies to prove that with all the available strategies and tactics, current management practices are still missing something important. We all know the missing element. The answer to the question: ”At what cost?” The cost in question is measured in human life, liberty and happiness. J.W. Marriott said it in a more classically business-like manner when he noted, “The concept of making employees feel really good about themselves seems to be missing from many companies’ philosophies. Take care of Marriott people and they will take care of Marriott guests.” In spite of insights like these, most organizations continue to employ dissatisfied people.

It is easy to spot dissatisfied people because people predictably display their dissatisfaction. The manifestations of the dissatisfied organization are a little harder to ascertain because they manifest in the web of interrelationships between processes and activities, and their common primary relationship to organizational intention and identity. Without the relationship and self-organizing imperatives, people cannot see how actions in a system—mechanical and human—impact each other. Stage 5 organizations do most of their developmental work at this juncture of humans and mechanical systems. They encourage intentional learning experiences and relationships between people, processes, and activities in a way that allows people to enhance performance as the opportunity arises. In this developmental context, improvement happens when the chance arises not as the result of uninspiring results-based targeting practices.

In summary, two of the most significant barriers to Stage 5 breakthroughs are (1) the use of financial targets within operational processes, and (2) failure to let go of the reins of control (i.e., release) that allows the self-organizing imperative (i.e., rely) to develop. From the important role that information plays in the performance of Stage 4 organizations, this naturally begs two questions: (1) What information is better than financial targets and measures? (2) How can control be moved from centralized information structures into the hands of working people?

If these concepts all sound too abstract—perhaps worthy but unattainable—return to the practical tactics and systems used in Stages 1 through 4 for some reassurance. All of the technical accounting systems, tactics, and coordinating systems discussed in this book are by-products of organizational development within the stages of the cognitive subsystem. Organizations all run on information processing; that is why cognitive stages formed the most obvious developmental trajectory. Tactics and systems manifest according to the ability of people to synthesize information about relationships between costs, resources, operations, and strategy within the dynamics of an ever-changing economic system.

In turn, an organization’s cognitive stage of development is clearly determined by its moral framework, needs fulfillment, and self-identity maturity levels. When organizations (or individuals) operate at immature stages of moral, needs
fulfillment, and identity development, they impose artificial, rigid management control systems that impede the further development of both the organization and the individuals that compose it.

**Produce to Order**

In their book, *Profit Beyond Measure*, H. Thomas Johnson and Anders Bröms go to the heart of real-time work and actualized people in the Stage 5 organization. They detail the systems used by Stage 5 organizations and provide an alternative to the human, material, and ecological waste inherent in pre–Stage 5 management by results. The alternative: *Management by means*. Management by means depends upon living systems principles, and consequently, such management systems allow morally mature people to self-order themselves and their organization. Artificially imposed control systems seem childish in this context. An example of the Johnson/Bröms research showing Stage 5 management-by-means includes a concept called “production to order.” Produce-to-order processes introduce the ways that the work-as-order directs the workforce and its processes at every stage of transformation on the way to the final customer.

*Produce-to-order systems* use flow in another radical departure from technical control systems used by Stages 1 through 4 that create batches for efficiency, and inventory as a form of reserve as they create products for customers. In the produce-to-order system, the external customer order and product in production are the only signals for work. Employees and their order-initiated, process-directed work are the information system in the Stage 5 organization. Information flow even establishes the context for performance, high quality, and minimal waste.

When managing product/service line variety as a strategic attribute, organizations in Stages 1 through 4 that cannot see beyond cost control imperatives frequently use economies of scale to solve the problems of complexity that variety brings to cost and performance management. In the Stage 5 organization where everyone is someone else’s customer, material and service flow is intimately linked with the flow of customer information—internal and external customers. Variety and customization are natural attributes of the work. Inside the Stage 5 organization, this flow of information and materials/services allows everyone to be the customer and everyone to serve the customer. In this broader definition, customer information—not process or labor routings or job order data—creates and directs the smooth, even flow of materials and services.

Customer information is the only relevant point of self-reference for the production process. In contrast, the accounting convention of numbering job orders is a layer of data that just gets in the way of serving the customer. Information engages human consciousness either through intention or through the habits of attention that stem from cultural or social imperatives. When focused information flows evenly from person to person, the produce-to-order system gives each person an opportunity to participate, govern, improve, and self-actualize.
Systems in the human body provide a clarifying analogy for produce-to-order systems. The life span of a human red blood cell is about 123 days. Therefore, the circulatory system must replace red blood cells on a maintenance basis. Call this the body’s standing order for red blood cells. Above and beyond maintenance production, a young child must make new cells to meet the oxygenation needs of new growth. In this case, the circulatory system must add new cells on a development basis. When injury and bleeding occur, the body issues an entirely different kind of order, above and beyond sustenance or development needs, and large quantities of red blood cells are delivered as quickly as possible according to a “special order” priority. In this living systems example, the body places an order for each kind of red cell production need through a different physiologic order mechanism. Only when new conditions arise (i.e., bleeding) does the body signal special order fulfillment. Special order production would be lethal even in the healthiest adult who was not rapidly losing blood on an ongoing basis. The special order for cells drives the fulfillment. Similarly, in Stage 5 produce-to-order systems, nothing happens—no work is done—outside the order placement/order-fulfillment feedback loop. Contrast this dynamic to the inefficiencies of building to forecast demand or to budgeted sales in Stage 2 and even 3.

More Self-Organizing Practicalities

Standardization and modularization are a large part of the reason that Stage 5 organizations can give up dependence on cost management data in operations, although they continue to monitor accounting information that reflects the overall financial health of the enterprise. Stage 5 organizations constantly work to standardize and modularize all levels of production and service activities from parts to teams and thereby integrate variety while containing costs.

Another analogy to physical and living systems helps clarify the incredible diversity of standardization and modularization practices. To date, in the entire universe with its innumerable molecular forms, everything is built from different combinations of the same 118 elements on the periodic chart. The properties of all carbon atoms are standardized. Of the one hundred and eighteen, only five of these elements compose the four base pair molecular proteins in the nucleic acids that compose the human DNA that directs the production of innumerable unique persons. In other words, a limited repertoire of components enables vast design diversity. The rearrangement of different levels of standard parts, designed into interconnectable modules results in different forms, all not only recognizably human, but all recognizable one from the other; in short, unique.

In essence, this describes design and innovation in Stage 5 practices. The DNA orders up a human being, and the design orders up a car, but the specifications of that person, and assuming enough options, the car, are virtually unique. Think templates for self-replication that maintains a fixed identity over time—human being, car—that can continue to replicate and improve—babies, more cars from the self-replicating process template. So, the rearrangement of some basic
building blocks creates immense variety when embedded in a compatible process that is capable of learning. Under what Johnson and Bröms call design-to-order conditions, the “molecule” is the interchangeable manufactured module, composed of standardized elements also known as parts. Usually designs do not require fundamental changes—a bicycle instead of a car—for standardization and modularization to create satisfying diversity.

In summary, process-to-order principles guide how the work system produces requirements, in conventional terms, order fulfillment. No standard costs or other accounting targets are used because all the necessary information is provided within the work and process. Because “particular relationships unite company and customer,” design-to-order conditions faithfully direct what the work system is expected to produce, that is, what customer order specifications are fulfilled.

In Profit Beyond Measure, Johnson and Bröms describe the legendary Toyota Production System, particularly the Motor Manufacturing business in Georgetown, Kentucky. Judging from the description, there is a high level of release and reliance practice going on there as described in Chapter 8. At this production site, nothing is produced in advance of order receipt, with the exception of metal stamping. Then work begins, based solely on the information residing in the order that accompanies material moving through the manufacturing process. The material-plus-order combination self-contain all necessary information for the next conversion step. Approaches such as kaizen and the andon cord help create necessary conditions for rapid production, and error detection and correction. Insights gained from solving process “anomalies” are immediately incorporated into the work process. The entire system is self-regulating and the specifics of the order provide a constant self-referencing point for all work. And what about the participation imperative? Johnson and Bröms record that “each person embodies—is a fractal of—the pattern of the whole production system. Therefore, each person is able to respond autonomously, and contribute capably to a customer’s needs.”

Release and Reliance

While the Stage 4 organization has learned to decentralize work and to disseminate decision-making authority to the local arena, management at this development level continues to use mechanical, numerical means of enforcing direction that flows from the top down. For example, the Balanced Scorecard, as a relatively mature system, regularly cascades numerical targets and performance measures from executive-level strategic metrics throughout the organization. One of the BSC’s hallmark achievements is its requirement for enterprise-wide participation in creation of metrics at each level. Still, the common directional flow is from the top of the hierarchy, down. Decisions are made at the top, and executed below. Control dynamics and information may be more visible, but it has not been released. The BSC seems to suggest that management is willing to
receive information on how to improve performance metrics, but remains unwilling to release control and rely on people to self-organize and self-regulate.

The fundamental difference in the Stage 5 outlook is that the organization trusts self-organization, and consequently releases control to the people and the work that are the only repositories for organizational learning that can actually improve products and services. Leadership deliberately seeks out lessons from living systems for ways to naturalize and humanize mechanical processes, both in production, and in procedures aimed at coordinating human beings.

**DEVELOPMENT IMPLICATIONS: LEARNING PARTNERSHIPS VERSUS DOMINATION PATTERNS**

*Despite all the time, money, and enthusiasm that executives pour into corporate change programs, the stark reality is that few companies ever succeed in genuinely reinventing themselves. That’s because the people working at those companies more often than not fail at transformational learning—they rarely get to the point where they are eagerly challenging deeply held assumptions about a company’s strategies and processes and, in response, thinking and acting in fundamentally altered ways. Rather, most people just end up doing the same old things in superficially tweaked ways—practices that fall far short of the transformational learning that most organizational experts agree is key to competing in the twenty-first century.*

—Edgar H. Schein, Sloan Fellows Professor of Management Emeritus

The exploration of individual and organizational capabilities does not end. The more curious members of the human species test boundaries and investigate the unknown as easily as others breathe and sleep. Learning and development cannot be separated. But habituated human behavior patterns and cultures that obstruct learning and development die slow deaths rather than evolve into something more. So it is with the current predominant organizational design pattern: the hierarchy with its pattern of domination. The future of cost and performance management development holds more opportunities as hierarchical structures and domination dynamics yield to partnership relationships and self-organizing dynamics. As systems embedded within a series of much larger systems, self-interested hierarchies with short-term vision that employ destructive practices over the long term will disturb the integrity of the larger systems in which they reside, perhaps permanently.

**Developmental Damages and Accountability for Externalized Costs**

Market theory specifies that producers bear the full costs of each product and internalize those costs into the selling price. This suggests the notion that costs
can be externalized. Externalized costs are those elements of full cost that are transferred to others not involved in the sales transaction. William Christopher puts externalized costs into the bigger picture of Stage 5 insights.

Businesses run on cash balances. The universe, however, runs on energy balances that would be presumptive to express in dollar terms except in analyzing some industrial processes. When we get to externalized costs, what would be a listing of these? An example might be the tobacco industry fines for the dollar cost of health care for users of their product. But externalized costs will likely be mainly costs not measurable in $$$.

A timber company clear cutting an area of forest looks at the cost of access, cutting, transporting, and conversion of logs into lumber and marketable products vs. prospective revenue—all measurable in $$$.

The timber company doesn’t calculate a value for the loss of the CO₂ sink, erosion and water table consequences, wildlife impact, the loss of herbs and other plants with medicinal or food values, or even the potential recreational value of that forest. These “externalized” costs just don’t get considered. Nor does a coal-fired power plant calculate any “costs” of air pollution on the environment and the health of down-wind residents.¹⁵

This passage speaks to the dangers involved when organizations address the profit imperative from immature moral and hierarchical self-identity perspectives. Lessons from the trail of corporate governance scandals suggest that solutions to managing the long-term costs of growth lie in learning to manage the patterned behavior of the system within larger systems as an ecology of business rather than trying to manage the behavior of a few unscrupulous individuals. If most organizations fall in the Stage 1 and 2 levels of development as suggested by an overwhelming body of information, Exhibit 9.1 suggests a developmental danger in terms of their most probable moral stage of development—instrumental hedonism, a motivation for many stories dominating current business news.

Most organizations simply do not possess the maturity to make the changes consistent with the long-term well being of the larger living and cultural systems in which they conduct their affairs. Those fewer but more mature organizations have learned the developmental lessons of the rules and roles cognitive stage and the law and order moral stage. The more mature organizations must model responsible action by advocating and enacting a new mandatory system of business ecology reporting—especially on exteriorized costs—where publicly available operational and resource reports identify organizational behaviors and malfeasance. Business ecology reporting should stand right along with the conventional financial information on the balance sheet and income statement.

For example, in the punishment and obedience moral framework of the Stage 1 budget allocation process, mature responsible reporting will reveal when people spend their budget allocations down to zero on unnecessary purchases and services just to keep their allocation amount at the same level in the next year’s budget cycle. “Spend it or lose it” will no longer be the rule. Similarly, a public operational resource accounting structure that responsibly addresses the larger business
ecosystem will identify and report the details of Stage 2-type attempts to evade responsibility through fictitious instruments (e.g., the now infamous Special Purpose Entity). Only mature Stage 4 and 5 organizations can lead the way to more responsible, public organizational performance reporting.

Learning responsibility begins as organizations account for externalized cost and when our system of checks and balances holds them accountable. Accounting for cost has become a professional skill for creating value in the short and long term. Accounting for cost has always been a profession that focuses on the ethical conduct of local activities. In a world of global enterprise, those who track and report cost and performance must be authorized to keep us all honest through their intimate knowledge of local resource-use and spending behaviors.

THE STAGE 5 ANSWERS ALWAYS INCLUDE “AND”

The terms profit-conscious professional and conscientious citizen are not mutually exclusive. In fact, these roles are critically interdependent. Living up to both means staying informed, remaining alert, and conducting local activities with an eye on short- and long-term outcomes. Recent events make it startlingly clear that the objective is not short-term financial gain. When all the layers of the onion are peeled away, surely one prime directive remains: carry out short-term actions that also assure the long-term well-being of the organization, the people in it, and the community where it resides because they are all interconnected.

What would organizations look like if their activities were guided by a balanced set of health and life quality performance measures that complement the directives of the profit imperative with the insights of the participation, relationship, and self-organizing imperatives? Methodologies like the Balanced Scorecard prove that it is not an either–or choice. What additional information would it take to make informed resource management decisions that also account for the good of the human community and the rest of the planet? Do we understand which are ends and which are means to our species’ healthy continuation? Do we truly comprehend what our end will be if we continue to use current means? If the primary leadership responsibility is guiding and ensuring health and longevity, what are the implications for the wise management of limited resources? This balanced measurement set would not confuse currency with other measures of value, misunderstand the means and ends of business activities, or lose sight of the importance of local groups as they support global success.

Any person old enough to remember the details of the day-to-day business routines of only 15 years ago can feel the intensifying pace of world and organizational change. The question that remains is: How will each of us be part of the change to come so that we protect the larger systems that support the activities we engage to make a profit and address our personal and organizational development needs?
125th Ferengi Rule of Acquisition:
You can’t make a deal if you’re dead.16

At the organization level, call to mind the principles of patterns and the participation imperative discussed in Chapter 7. The work of leaders in Stage 5 concerns the development and cultivation of behavior patterns consistent with the universalism perspective. Behaviors—contributive or destructive—are based on logical repetitions of normative behavior patterns. Dignity for all, or just some? Integrity some of the time, or all of the time? Of course, Stage 5 moral behavior requires respect, dignity, and integrity from all, for all, all the time. Another important reminder for leadership moving the organization in a Stage 5 developmental direction: People closely watch the behavior patterns of management; therefore, leaders must exemplify the attributes and values they wish to create. Create and cultivate Stage 5 conditions and parallel qualities are far more likely to self-perpetuate and become the universal norm.

Truth be known, in Stage 5 the words, executive and leader, have completely different meanings than they do in Stages 1 through 4, because every person is a leader within a particular domain, and is trusted to act like one. Each group of people has its own primary interdependent relationships to manage, and every activity is a management realm. Importantly, these realms and domains are all overlapping mandalas of common concerns. Those in executive-type positions are responsible for supporting the overall health of organizational competencies, and for overseeing the correct appropriation of resources. People in manager-type positions forgo surveillance and monitoring; rather, they are on hand to assure that front-line specialists get what they need to do their work, and to rapidly implement progressive practices brought to light by anyone at any level.

EXEMPLARY INFORMATION, VITAL RELATIONSHIPS
For a moment, imagine yourself on the Wall Street trading floor in the trading pit as a large institutional investor. What is the single most important resource as you make your decisions about stocks and other equity trades? Of course, the answer is information. It must be financial information, since financial gain is what you’re after. But wait. If financial targets are lagging indicators, might there not be a better source of information for investment decision making? Although this may not be the average investment analyst’s train of logic, it is widely known that investors are increasingly looking to nonfinancial indicators to judge future financial success. The exact indicators with the most accurate predictive capabilities remain unlearned, and for good reason. Just as living systems have infinite diversity, so do organizational success indicators because it isn’t the indicators
themselves, but the systems they are part of that provide the essential information leading to financial, or any other type of performance.

The most essential organizational information for all Stage 5 employee levels resides either in the work or in the worker because they are the essential elements of the self-organizing dynamic. Without these fundamental elements, the organization produces nothing. Here lives success or failure. The worker is, of course, the person doing the work, the specialist, whose needs in Stage 5 are attended to by managers, who in turn are supported by executives. That's the pattern. The work is the processes and the particular activities people choose to perform to accomplish desired outputs and outcomes. A human being directed to complete uniform, predetermined tasks does not choose. Likewise, because the person has no choice options, everything depends on the fitness of the process. Only where a person can choose do systems become intelligent. Such intelligent choices manifest as, for example, nearly instantaneous decisions to improve an activity, or to stop a process that is producing defective items. And what of the lessons from these choices? Processes cannot learn, but people can invest their learning into the processes and thereby into the organization. This is real time, no committees, no surveillance work and learning. Here people can innovate and invent. Here people can participate in sophisticated processes and immediately absorb what they observe and experience, learn to apply better methods, and in so doing enhance themselves. This is why conventional management accounting will soon become meaningless in organizations: Because it is—and always has been—people doing the work, not the concept called “cost” behaving.

The essential information resides in people and in the work they do. If this is true, then the relationship imperative follows; namely, intelligence emerges from people in relationship with—participating in—work processes and activities. Only living, vital, adaptable people and systems, in relationship, can sustain and enhance work and its products. The answer to organizational growth, regression, and death is here in these developmental dynamics. The repository is so obvious most have overlooked it, and substituted mathematical formulas and abstract models of control. Subsequently, the skills of reading, cultivating, and understanding people in relationship to their work await further development.
Appendix A

The Basic Components and Terminology of a Traditional Income Statement

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>Also known as . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Sales, but not income</td>
</tr>
<tr>
<td>Deductions from Revenue</td>
<td>Credits, Allowances, Discounts</td>
</tr>
<tr>
<td>Net Revenue</td>
<td>Net Sales</td>
</tr>
<tr>
<td>Cost of Goods Sold (COGS)</td>
<td>Cost of Sales, Cost of Goods Purchased</td>
</tr>
<tr>
<td>Material</td>
<td>Raw material, Direct material</td>
</tr>
<tr>
<td>Labor</td>
<td>Direct labor</td>
</tr>
<tr>
<td>Overhead</td>
<td>Indirect manufacturing costs</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>Contribution Margin</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>Sales, General &amp; Administrative (SG&amp;A)</td>
</tr>
<tr>
<td>Sales and Marketing</td>
<td>May be broken down to functions</td>
</tr>
<tr>
<td>General &amp; Administrative</td>
<td></td>
</tr>
<tr>
<td>Net Income Before Tax (NIBT)</td>
<td>Net Profit Before Tax</td>
</tr>
<tr>
<td>Tax</td>
<td>Many colorful expletives</td>
</tr>
<tr>
<td>Net Income After Tax (NIAT)</td>
<td>Net Profit, Income</td>
</tr>
</tbody>
</table>
## A Simplified Traditional Balance Sheet Format

### THE BALANCE SHEET EQUATION:
Assets = Liabilities + Owners’ Equities

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>Also known as . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td><strong>Short-term Assets</strong></td>
</tr>
<tr>
<td>Cash</td>
<td>Short-term investments</td>
</tr>
<tr>
<td>Temporary Investments</td>
<td>Sales receivable, A/R</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>Subcategories: Raw materials,</td>
</tr>
<tr>
<td></td>
<td>work-in-process, finished goods</td>
</tr>
<tr>
<td>Inventories</td>
<td></td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td></td>
</tr>
<tr>
<td>Maturing portion-Long-term Loans</td>
<td>Current debt (e.g., bank loans and</td>
</tr>
<tr>
<td></td>
<td>mortgages; i.e., due &lt; one year)</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td></td>
</tr>
<tr>
<td><strong>Long-term Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>Fixed assets, Property Plant &amp;</td>
</tr>
<tr>
<td></td>
<td>Equipment (PP&amp;E)</td>
</tr>
<tr>
<td>Land</td>
<td></td>
</tr>
<tr>
<td>Machinery &amp; Equipment</td>
<td></td>
</tr>
<tr>
<td>(Less depreciation on above categories)</td>
<td></td>
</tr>
<tr>
<td>Loans and Mortgages Receivable</td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td></td>
</tr>
</tbody>
</table>
LIABILITIES

Current Liabilities
- Accounts Payable
- Wages & Salaries
- Debt-Current Portion

Long-term Liabilities
- Loans Payable
- Mortgages Payable

Total Liabilities

Also known as...

A/P
Payroll, Benefits
Maturing Debt, Current Debt

OWNERS’ EQUITIES

Paid-in capital
Additional paid-in capital
Retained Earnings

STOCKHOLDER’S EQUITY,
NET WORTH

Stock at par value, stated value
Capital surplus
Earned surplus, based on income/loss
Appendix C

Analysis with a Purpose

Every analysis needs a decision-support purpose. Each analysis takes resources away from other activities, and usually more time than the requestor expects. So, curiosity and random exploration are not good enough reasons to spend those resources. Analysts need to be absolutely clear what they are expected to deliver. Therefore, two questions need to be asked:

1. What is the purpose of this analysis? The answer to this question comes through the synthesis of answers to four more fundamental questions:
   • How will the analysis be used?
   • What decisions will be made with the analysis results?
   • What problem is the analysis trying to shed light on, or solve?
   • Is the purpose of the investigation worth using valuable resources?

2. What are the best tools to perform the analysis based on its purpose?
   • Which disciplines are likely to understand this situation best?
   • Are financial factors most important?
   • How can cross-functional views and multiple variables be included?
   • Where has this question been asked before that we might find data?
   • When was the last time our analytics were reviewed for currency?

Conventional cost accounting frameworks do not typically ask such questions. Accountants want to be known for their timely and accurate reporting capabilities. Therefore, because conventional analytics are readily available for all the concerns in Chapters 2 through 4, a time-constrained accountant within a conventional system may fall quickly to work using a traditional analytical method before fully understanding how the analysis will be used.

For example, a manufacturing executive may ask a cost accountant for a product mix analysis (i.e., how many of which products should we build to optimize resources)? The traditional operations/cost accounting tool for this analysis is linear programming (LP); however, if the accountant does not know the executive’s analysis objectives, linear programming may be exactly the wrong tool to use. If the executive actually wants to promote the elimination of one or two products that are difficult to build and that often cause unfavorable manufacturing variances, the accountant using the LP without proper context to analyze a profitable production mix will look like a bonehead. The executive’s true agenda (valid or
not) is cloaked in a “product mix” analysis, for which a product profitability analysis is more appropriate—an analysis where the negative variances are disaggregated and charged to products directly and not just reported in lump sum on the income statement.

Like information technology specialists, experienced accountants often find that executives are not sure what they really want, even when they behave otherwise. Wanting to appear “in control” and knowledgeable, this kind of executive asks for a type of accounting analysis that seems like the right one based on academic coursework, current reading, or even on personal experience. For their part, endeavoring to supply good service and avoid the discomfort of questioning superiors, accountants may be tempted to perform the work as requested without exploring the context and purpose. After all, accounting is a support function and accountants are trained to comply with information requests. Both the executive and the accountant would be better served by engaging in an open dialogue.
Activity-based costing uses a specific language, with terms designed to communicate its distinctive cost management perspectives, and this appendix defines some of the most important ABC terminology based on the most current version of the Consortium for Advanced Manufacturing–International (CAM-I) Glossary of Activity-based Management, version 3.0.1

All the ABC/M cost management terms characterized in this appendix should be considered within the context of the classic expenditure flow from the G/L to ABC reports:

\[
\text{G/L Accounts} \rightarrow \text{Resources} \rightarrow \text{Resource Cost Pools} \rightarrow \text{Activities} \rightarrow \text{Activity Cost Pools} \rightarrow \text{Cost Objects} \rightarrow \text{ABC Reports}
\]

Activity  Work performed by people, equipment, technologies, or facilities. Activities are usually described by the “action-verb-adjective-noun” grammar convention. Activities may occur in a linked sequence and activity-to-activity assignments may exist.

Activity-based costing (ABC)  A methodology that measures the cost and performance of cost objects, activities, and resources. Resource costs are assigned to activities based on their use of those resources, and activity costs are assigned to cost objects based on the cost objects’ proportional use of those activities. Activity-based costing incorporates causal relationships between cost objects and activities and between activities and resources. Resources fuel activities and activities enable cost objects. Viewed from output back to input, cost objects consume activities and activities consume resources.

Activity-based management (ABM)  A discipline focusing on the management of activities within business processes as the route to continuously improve both the value received by customers and the profit earned in providing that value. ABM uses activity-based cost information and performance measurements to influence management action. (See Activity-based costing.) In its original applications, ABC simply gave better visibility to

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product and customer costs. ABC quickly evolved into ABC/M, activity-based costing and management, where ABC is the technical cost reporting model, and ABM focuses on the specific management actions and initiatives undertaken to alter cost structure.

Activity driver  The best single quantitative measure of the frequency and intensity of the demands placed on an activity by cost objects or other activities. It is used to assign activity costs to cost objects or to other activities. Activity drivers link resources to activity cost objects. Activity descriptions may be specified in more detail by using activity attribute labels that further characterize each activity for cost structure analyses purposes.

Attributes  A label used to provide additional classification or information about a resource, activity, or cost object. Used for focusing attention and may be subjective. Examples are a characteristic, a score or grade of product or activity, or groupings of these items, and performance measures. “Value-added” and “non–value-added” (i.e., waste) were among the first distinguishing attributes. Attributes can be related to time, performance, location, and variability, as well as any other objective or subjective descriptor that aids in cost structure insights and improvements.

Cost driver  Any situation or event that causes a change in the consumption of a resource, or influences quality or cycle time. An activity may have multiple cost drivers. Cost drivers do not necessarily need to be quantified; however, they strongly influence the selection and magnitude of resource drivers and activity drivers.

Cost object  Any product, service, customer, contract, project, process, or other work unit for which a separate cost measurement is desired.

Cost pool  A logical grouping of resources or activities aggregated to simplify the assignment of resources to activities or activities to cost objects. Elements within a group may be aggregated or disaggregated depending on the informational and accuracy requirements of the use of the data. A modifier may be appended to further describe the group of costs (i.e., activity cost pool), defined as a logical grouping of resources or activities aggregated to simplify the assignment of resources to activities or activities to cost objects. Elements within a group may be aggregated or disaggregated depending on the informational and accuracy requirements of the use of the data. A modifier may be appended to further describe the group of costs (i.e., activity cost pool).

Resources  Economic elements applied or used in the performance of activities or to directly support cost objects. They include people, materials, supplies, equipment, technologies, and facilities. Resources, usually represented in dollars, move through the dynamics of the ABC model based on a cause-effect logic. Cost pools are essential conduits for moving costs from resources, the starting point of the ABC accounting method, to activities and on to cost objects. Cost object analysis is one of the primary reporting outputs
Appendix D  ABM Concepts and Terms

of ABC work. Cost objects, typically products and customers, are the targets of ABC analysis, the reasons for ABC implementation, and the subjects of ABC management.

Resource driver The best single quantitative measure of the frequency and intensity of demands placed on a resource by other resources, activities, or cost objects. It is used to assign resource costs to activities, and cost objects, or to other resources. Resource drivers move resources from resource pools to activities. Resource drivers are the most reliable and accurate measure of how often and how much a demand is made on a resource by activities or other resources. A resource driver is used to assign resource costs to activities, and cost objects, or to other resources.
Appendix E

Recommended Reading

Reading for All Developmental Stages


Reading for Stages 1 and 2 Developmental Learning


**Reading for Stage 3 Developmental Learning**


The entire Fall 2001 issue of *MIT Sloan Management Review* focuses on various life cycle perspectives, and includes articles on technology life cycles, outsourcing choices based on an organization’s place in its life cycle, and even CEO selection to fit the company’s place in its own life cycle.


A series of articles by Anton van der Merwe and David E. Keys, published in the last half of 2001 in Volume 15 of the *Journal of Cost Management*.

Appendix E  Recommended Reading

Reading for Stage 4 Developmental Learning


Reading for Stage 5 Developmental Learning


Appendix E  Recommended Reading


Glossary


**Absorption costing** A product-costing method that assigns all manufacturing costs (direct and indirect) to the units produced. Also called full absorption costing, this method proportions costs to inventories and to COGS. Although service organizations do not practice formal absorption accounting, most build into their cost/pricing structures that accommodate indirect/overhead expenses.

**Accountability** A noun that derives its meaning from another noun, account: a narrative or record of events. Therefore, accountable entities are liable to being called to account or answer for specific actions. Synonyms include the word responsibility.

**Accounting system** As used in this book, accounting system refers to the combination of the financial and cost accounting systems used by any organization to monitor and report performance, usually in term of financial results. Cost accounting systems and financial accounting systems will be specifically called out where appropriate in the text.

**Activity** Work performed by people, equipment, technologies or facilities. Activities are usually described by the “action-verb-adjective-noun” grammar convention. Activities may occur in a linked sequence and activity-to-activity assignments may exist.

**Activity driver** The best single quantitative measure of the frequency and intensity of the demands placed on an activity by cost objects or other activities. It is used to assign activity costs to cost objects or to other activities.

**Activity-based costing** (ABC) A methodology that measures the cost and performance of cost objects, activities, and resources. Cost objects consume activities and activities consume resources. Resource costs are assigned to activities based on their use of those resources, and activity costs are reassigned to cost objects (outputs) based on the cost objects’ proportional use of those activities. Activity-based costing incorporates causal relationships between cost objects and activities and between activities and resources.

**Activity-based management** (ABM) A discipline focusing on the management of activities within business processes as the route to continuously improve both the value received by customers and the profit earned in providing that value. ABM uses activity-based cost information and performance measurements to influence management action. (See Activity-based costing.)
**Allocation**  A process to systematically spread a cost that works by charging discrete items of revenue or cost to one or more objects, activities, processes, operations, or products in accordance with attendant cost responsibilities, benefits received or other identifiable means of measuring application or consumption. Assignment and allocation carry decidedly different meanings.

**Asset**  A tangible item (e.g., cash, a factory) or intangible item (e.g., brand, patent) of value to an organization that is intended to be used for current or future benefit; unexpired cost.

**Assumption**  A premise or statement often accepted unconsciously without proof as a basis for a line of reasoning or course of action, either because it seems applicable, self-evident or because its implications appear to justify further exploration.

**Attributes**  A label used to provide additional classification or information about a resource, activity, or cost object. Used for focusing attention and may be subjective. Examples are a characteristic, a score or grade of product or activity, or groupings of these items, and performance measures.

**Backflush accounting**  A manufacturing inventory accounting method that records product labor, material, and overhead costs at the time that the product is shipped to the customer, thereby effectively eliminating conventional inventory accounts. This method can only be used in an advanced manufacturing environment where inventory levels are near zero, and from an accounting perspective, immaterial.

**Bottleneck**  From the Theory of Constraints, a bottleneck is a system constraint that hinders throughput optimization, which in turn impacts profit. Put another way, a single constraint that limits an entire system (see Throughput).

**Break-even analysis**  A particular form of cost–volume–profit (CVP) calculation where total revenue equals total expenditures; that is, net income equals zero. Put simply, no loss, but no profit either.

**Breakeven point**  In terms of an organization’s profit or loss, breakeven is the volume point where revenue-minus-expenditures equals zero; (i.e., no loss, but also no profit). The breakeven point can be calculated but is best thought of as a “rule of thumb” performance marker rather than a measurement to be managed closely.

**Budget**  A financial plan for the generation and allocation of financial resources or any estimate of forecast costs or revenues. The two main types of budgets are capital (usually high-dollar, long-term, and project-related), and operating (usually divided by function: manufacturing, sales, administration, and so forth).

**Capacity**  Performance ability given specified conditions and constraints of equipment, space, personnel, and techniques.

**Theoretical Capacity**  Maximum possible output (i.e., 100%)
Glossary

**Practical Capacity** Theoretical capacity adjusted for expected conditions: training of new hires, equipment downtime, vacations, sick leave, and so on. (i.e., usually calculated at about 80 to 85 percent of theoretical)

**Actual Capacity** Real output achieved (i.e., productive time realized as a portion of theoretical)

**Capital budgeting** The process of making long-term investment decisions.

**Chart of accounts** A system of classifying accounts in terms of asset, liability, equity, revenue, cost, and expense categories. The classification process assigns each account with an account number and name. General ledger systems and conventional budgets are organized according to a chart of accounts, an organized list of all accounts used to record financial transactions.

**Comparability** The use of identical, or very similar, accounting protocols and calculations to enable same-basis analysis between two or more accounting periods. Examples include inventory methods, depreciation calculations.

**Consumption ratio** The proportion of a resource (usually overhead components) consumed by an operations output—usually a product/service.

**Contribution margin** An income statement calculation of profit at an intermediate point based on coverage of variable costs. The calculation is:

\[ \text{Net sales revenue} - \text{All variable expenses} = \text{Contribution margin} \]

Use of the term *contribution* suggests how the margin remaining after variable costs are covered can then be used to cover fixed expenses. If dollars remain after both variable and fixed costs are covered the organization has a profit.

**Control** A process that comprehensively sets performance boundaries (i.e., control limits), determines tolerance for deviation from a performance boundary, tracks actual performance, and provides accurate performance feedback for decision-making.

**Cost** An outflow of a resource, whether in cash, as a payable, a rendered service, or as a trade or barter, that is consciously made with expectation of benefit to the organization: goods, property, or services acquired. Both costs and expenses are expenditures. This book uses the word expenditure to identify an organization’s total outflow of assets in all forms. Chapter 2 further clarifies important distinctions between cost, expense, and expenditure. In the standard income statement of a for-profit firm, costs typically refer to the categories of material, labor, and overhead appearing above the income statement’s gross margin line (revenue minus cost). Expenditures typically called operating expenses are displayed below the gross margin line. On the income statement, the material, labor, and overhead items are called cost of goods sold (COGS). Operating expenses consist of monetary or asset outlays for
general, administrative, selling, marketing, and other functions deemed to be indirectly related to production. Operating expenses are commonly abbreviated as SG&A for sales, general and administrative.

**Cost accounting** The accounting profession is divided into two major branches: (1) financial and (2) management (or managerial) accounting. The latter is synonymous with cost accounting. The term *management* refers to the comparatively internal focus of the cost accounting field as compared with the external focus of financial accounting. The word *traditional*, when used to describe cost accounting methods, refers to the standard practices that are taught in basic management accounting courses and practiced in most North American firms. The standard practices include cost systems and procedures, methods of determining costs, points of cost accountability, forecasts, cost comparisons (e.g., standard cost systems), and budgets (operational, project, and capital). The purpose of cost accounting is to assist in the wise and prudent stewardship of overall organizational resources.

**Cost behavior** The way in which a cost changes over time in relation to changes in the level of an activity or in relation to the specific application of a resource/cost.

**Cost center** A responsibility center whose management is held accountable only for costs; also called responsibility costing.

**Cost-cutting** A deliberate reduction of resources carried out with insufficient knowledge of process implications, and with disregard for strategic consequences. Cost-cutting is typically used to achieve short-term financial objectives.

**Cost driver** Any situation or event that causes a change in the consumption of a resource, or influences quality or cycle time. An activity may have multiple cost drivers. Cost drivers do not necessarily need to be quantified; however, they strongly influence the selection and magnitude of resource drivers and activity drivers.

**Cost management** The use of cost accounting systems and methods to guide current and future operations toward specified objectives; the analysis and interpretation of cost data is critical to the decision-making process.

**Cost management system (CMS)** An expenditure information architecture that tracks, monitors, reports, and provides decision-quality information and insights. A CMS is less constrained by exacting professional standards and reporting formats than financial accounting; therefore, a CMS can and should be customized to match an organization’s internal environment and specific cost structures.

**Cost object** Any product, service, customer, contract, project, process, or other work unit for which a separate cost measurement is desired.

**Cost of goods manufactured** This income statement calculation is expressed as the cost of all production completed during the current period. The
accounting calculation gets considerably more involved and is not as straightforward as it looks because it involves units started in a prior period and completed in the current period.

**Cost of goods sold**  Also known as *cost of sales*, this income statement calculation is expressed as the cost of all production completed during the current period plus the finished goods inventory at the beginning of the current time period minus the finished goods inventory at the end of the period.

**Cost of growth**  Unrecoverable expenditures made by any organization to perpetuate its increasing financial wealth.

**Cost pool**  A logical grouping of Resources or Activities aggregated to simplify the assignment of resources to activities or activities to cost objects. Elements within a group may be aggregated or disaggregated depending on the informational and accuracy requirements of the use of the data. A modifier may be appended to further describe the group of costs (i.e., activity cost pool).

**Cost types**  A categorical set of characteristics and assumptions used by an accounting system to structure and communicate the ways that the organization consumes its resources. Management accountants create cost types in an attempt to understand the nature and behavior of different resources. Cost types are designations given to categories of resource expenditures. They are based on assumptions about the ways that resources are consumed in relation to the activities to which they are applied. They are also based on the purposes for which the resources are used. Some traditional cost types include:

- **Fixed**  Costs assumed not to vary with production/service unit volume
- **Variable**  Costs assumed to vary with production/service unit volume
- **Semi-fixed/variable, also called step-fixed/variable**  Costs that vary at incremental volume levels
- **Direct** and **indirect costs**  Direct and indirect costs define one another. A direct cost is the cost of any good or service that supports and can be attributed to the actual creation of product or service output. Any other costs incurred in the output process are considered to be indirect. In manufacturing, direct costs of product production include labor, material, and overhead costs that vary with the volume produced. Control-oriented cost management approaches use direct cost as the only cost type. In these systems, all costs can be attributed to some output or intermediate service. Indirect costs cannot easily be linked to specific product/service units, and therefore, must be allocated to production/services based on a selected cost driver.

**Discretionary and nondiscretionary**  Discretionary costs are those costs that can be varied at the option of a responsibility center or functional manager. All managers encounter activities where there is no clear relationship between the amount they spend and the benefits they expect to gain. Nondiscretionary cost is a no-choice cost type. Nondiscretionary costs must be spent; the manager has no choice—either in theory or in practice.
Budgeted and actual These cost types can only be understood in the context of the budget as planning and control system. Budgeted costs are part of a larger blueprint for action. Budgets set fiscal boundaries; actual costs show real spending performance.

Controllable and noncontrollable Controllable costs have attributes in common with variable and discretionary costs. Controllable costs vary with efficiency, volume, and management decision alternatives. Cost management systems use this cost type designation to measure and control the behavior of particular levels of management authority. Noncontrollable costs cannot be influenced at the local level of authority. Even accountants have trouble distinguishing noncontrollable from nondiscretionary costs.

Standard and current-actual Standard costs are forecasts of probable actual costs under projected conditions that are fixed and frozen at the beginning of a fiscal year. As information becomes obvious about purchase price increases or decreases during the fiscal year, a cost category within a standard cost system called current-actual costs is updated. In effect, the current-actual cost becomes the operational standard cost, although for comparability purposes, financial statements continue to use the standard costs, fixed at the beginning of the fiscal year.

Sunk Sunk costs are water under the bridge. They are historical costs that can neither be revised nor recovered. Consequently, they are not relevant to current decisions for increasing or decreasing profit levels except as they are wisely utilized.

Current time period The spans of time, usually a month, quarter, or year covered by an accounting report.

Estimated Useful Life (EUL) The length of time that a long-term asset is expected to be in service. Financial accounting systems typically assign assets within a few broad categories such as 3-year, 10-year, and 30-year. The categories do not necessarily reflect the actual useful life of the asset. EUL is a financial not a managerial concept.

Expenditure See Cost.

Expense See Cost.

Externalized cost Those elements of full cost that are transferred to others not involved in the sales transaction.

Incentive Etymologically stemming from the word incantation, any item that incites action and aligns the behavior of individual employees with broad organizational intentions.

Investment center A responsibility center whose management is held accountable for income (i.e., revenues and costs), as well as for investments.

Just-in-time production A set of lean manufacturing practices used primarily in repetitive manufacturing processes that work to minimize waste by (1) creating
efficient flow processes through linked work centers, and (2) eliminating any activity that adds cost without adding value. As materials move through the assembly process across work cell, the right part can be found in the right place and the right time.

**Kanban**  Japanese word meaning card or visible record; popular pull-system method in just-in-time manufacturing systems where one or two cards attached to small batches provide a visible signal across different work teams authorizing subassembly movement and production activities coordinated by a material requirements planning (MRP) or other schedule-based production system.

**Operations**  Organizational activities. From *opus*—work; often thought of as the counterparts of financial transactions in that “operations” activities lead to financial transactions (e.g., the purchase of material, billing for services).

**Opportunity cost**  When one investment alternative is chosen over another, the hypothetical calculation of potential benefit of and/or return on the foregone investment, usually expressed as estimated profit/income.

**Overhead**  Manufacturing expenditure items that cannot be directly assigned to units of production using cause–effect logic; therefore, these expenditures are allocated using a predetermined formula. In service organizations, direct costs tend to be human resource intensive. Unless a service activity carries an assigned cost or has been allocated to a business subunit, overhead becomes an equivalent term for absorption costing in many service sector organizations.

**Pareto Principle**  80 percent of all problems are generated by 20 percent of all causes; thus, management must discover and attend to the “20 percent” causes.

**Predetermined overhead rate**  An allocation formula used for assigning indirect expenditure items to units of production/service. The calculation is done prospectively based on the annual estimated/budgeted overhead expenditures divided by the annual estimated level of production (i.e., production units).

**Price**  A relative concept dependent on time, market, cost, competition, government regulations, and type of customer (e.g., trade, wholesale, cash). In essence, price is the monetary value asked for a product or service. Typically, in accounting, price is the amount received for a sale or the amount paid for materials and services. Transfer pricing is a method of recording sales within an organizational entity, usually from one responsibility center to another. Such prices should be set to benefit the entire organization, but profit center motivations often make this difficult.

**Price variance**  The monetary difference between the standard (i.e., list, expected) price and the actual price paid. On the revenue side, the variance is booked as customer credit, allowance, or discount. On the accounts payable side, the price variance is typically a discount based on quantity, condition of
goods, or other factors. The purchase price variance is a conventional calculation in standard costing.

**Process** A series of defined, reproducible steps within which resources are transformed to achieve a particular result that is valued by those the process is designed to serve.

**Profit center** A responsibility center whose management is held accountable only for profit.

**Quality at the source** A method of quality management used in lean manufacturing environments where quality inspection and product rework occur at any point during production, rather than at receipt of goods and sampling after final assembly as in traditional manufacturing environments.

**Resource driver** The best single quantitative measure of the frequency and intensity of demands placed on a resource by other resources, activities, or cost objects. It is used to assign resource costs to activities, and cost objects, or to other resources.

**Resources** Economic elements applied or used in the performance of activities or to directly support cost objects. They include people, materials, supplies, equipment, technologies, and facilities. (See Resource driver, Capacity.)

**Responsibility Management:**

**Cost center** A responsibility center whose management is held accountable only for costs; also called responsibility costing.

**Investment center** A responsibility center whose management is held accountable for income (i.e., revenues and costs) as well as for investments.

**Profit center** A responsibility center whose management is held accountable only for profit.

**Responsibility accounting** The method that seeks to manage costs at the points where they can be controlled by assigning revenues, costs, profit, and sometimes investment accountability to predefined organizational units called responsibility centers (see next term).

**Responsibility center (RC)** A unit within an organization that is held accountable for revenues, costs, (or both) and sometimes for investments. Typically, a budget and limits of authority are set for the RC managers, who then report periodically to a higher authority.

**Six Sigma** A statistical, data-driven, systematic approach to continuous improvement that seeks to achieve a 99.99966% level of quality.

**Standard/Standard cost** A mode of conduct of general application arising from convention or advocated or imposed by higher authority. In cost accounting, a predetermined forecast of what future actual costs should be under projected conditions. Standard costs become the means by which current actual results can be compared and responsibility for deviations from
standard can be identified. A cost prediction based on operational assumptions for material, labor, and related overhead expenditures for manufactured products and for identified fees for services. Predictions are generically understood as projected targets in this definition. Standard costs are usually revised annually. Actual costs are compared with the standard costs as a way of monitoring and controlling performance. Deviation from a standard is called a variance.

Statistical Process Control (SPC)  SPC seeks the chief causes and remedies of process outcome variation within predefined tolerance levels working from the core assumption that variation exists in processes and activities that are designed for repetition.

Strategic Attribute  A quality or characteristic of a person, place, or thing; in a tactical cost management context, advantages that contribute to the profit imperative when applied to a process, product, or service.


Strategy  An intention with defined performance outcomes, that is stated in cause–effect terms (if–then), and executed through operational tactics.

Tactic  A method or device for executing a specific strategic objective.

Throughput  A key Theory of Constraints profitability measure calculated as sales minus raw materials (alternatively, revenue minus totally variable costs). Constraints and throughput both assume that the goal of the majority of organizations is profit. Throughput is the rate at which the system generates money through sales. Assets are defined as all the money the system invests in purchasing things the system intends to sell. Operating expenses are defined as all the money the system spends in turning inventory into throughput. Relative to profit, TOC poses two essential, systematic relationships between operations and financial results:

1. Net profit = Throughput – Operating Expense; [NP = T – OE]
2. Return on Investment = (Throughput – Operating Expense)/Inventory; [ROI = (T – OE)/I]

Variance  A favorable or unfavorable difference between standard and actual costs, or any difference between a planned and actual amount in a financial system. Standard cost variances are concerned with fluctuations in material, labor, and overhead components.
Endnotes

CHAPTER 1


CHAPTER 2


CHAPTER 3


4. Robert S. Kaplan and Robin Cooper, Cost & Effect: Using Integrated Cost Systems to Drive Profitability and Performance (Boston: Harvard Business School Press, 1998) p. 3. In their Introduction, the authors clearly display their opinions of traditional methods in the following quote: “Many companies, recognizing the arbitrary nature of factory overhead allocations in their inventory valuation system, have shifted to direct costing systems for facilitating managerial decisions. Direct costing systems ignore overhead costs entirely in calculating the costs of products, services and customers. They assign only the materials and direct labor costs to individual products. Direct costing methods are fine if the ignored indirect and support costs are a small fraction of total costs, or if, as direct costing advocates claim, they are ‘fixed’ costs. Yet organizations learned that not only were the indirect and support costs not fixed, they were not even variable. For many organizations, these costs are ‘supervariable’; they are increasing at a faster rate than production or sales volume. And direct costing methods can certainly not relate the growing chunk of below-the-line (gross margin) expenses for marketing, selling, distribution, product development, and general administrative support to customers, channels, and divisions.

5. See note 4, p. 13.


CHAPTER 4


5. See note 3.
8. See note 7, p. xx.
9. This list, compiled by the authors, is a synthesis of eleven opinion essays by members of the advisory board for the *Journal of Cost Management* 14, no. 5 (2000).
19. Keep in mind that “appropriate” resources come in a variety of flavors: people, floor space, funding, and even authority. Resource appropriation emerges clearly and appropriately only when management conducts strategic and budget planning as a single process.
22. See note 21.
23. Predicting specific information technology trends is another forecast focus of capital investment. Well known examples include ROI on e-commerce and Internet strategy. The IT function is frequently under the control of the accounting function, especially in smaller firms. Therefore, financial professionals often determine IT-based strategies. Similarly, some businesses also now use environmental capital investment analysis. This relates to environmental “remediation” in terms of clean up—particularly important to petroleum, chemical, construction and real estate sectors. In these studies cost remains a major point of analysis.


CHAPTER 5

4. November 2001, personal communiqué from Dr. Kaplan to the authors.
5. See note 2, p. 195.
7. See note 2, p. 131.
11. For an accessible discussion of this dilemma as it relates to ERP systems, see Eliyahu M. Goldratt, Necessary But Not Sufficient (Great Barrington, MA: North River Press, 2000).
CHAPTER 6


2. Organizational readiness is a key factor in project success or failure. Research is beginning to emerge on reasons for failure and how to mitigate risk. For example, CAM-I’s research on ABCM projects has resulted in a “Readiness Assessment” to help identify and ameliorate risk. For information: www.cam-i.org

3. A multitude of TQM studies are available. The following are representative of research results. For impacts on—

   • Costs decreases, see CONSAD Research Corporation, *Advanced Technology Program Case Study: The Development of Advanced Technologies and Systems for Controlling Dimensional Variation in Automobile Body Manufacturing.* (Gaithersburg, MD: National Institute of Standards and Technology, 1997).


5. Art Schneiderman, a process expert, developed the “Half-Life Method” to realistically characterize how the rate of change in the TQM-related process improvement curve slowed over time. (See, for example, Arthur M. Schneiderman, “The Half-Life Method: Moving Ahead...To the Past,” *Journal of Cost Management* 15, no. 6 (1999): 44.) The Half-Life Method measures the rate of process improvement across the entire life span of an improvement effort. When a process is subjected to a deliberate, disciplined quality improvement effort, the Half-Life method demonstrates that the time it takes to reach completion will close at a constant, predictable rate. For example, “If it takes six months to reduce late shipments from 20% to 10%, it is likely to take another six months to cut the remaining gap in half again (i.e., from 10% to 5%), and six more months to reduce the gap from 5% to 2.5%, and so on.” This framework can help process managers forecast realistic cost savings from many types of quality, improvement, and performance efforts. Mr. Schneiderman cautions that cross-functional processes, and processes containing new or untried technologies can expect lower improvement rates. He bases the Half-Life Method on data collected from over one hundred companies.


9. Eric Noreen, et al., *The Theory of Constraints and Its Implications for Management Accounting* (Great Barrington, MA: North River Press, 1995): p. iii. It is worth noting that Dr. Goldratt’s theories and suggested solutions have been well received (if not always acted on) by the accounting profession.
14. See note 9, pp. 15–16.
15. Cooper and Kaplan’s most recent exposition of ABC theory and practice is *Cost and Effect: Using Integrated Cost Systems to Drive Profitability and Performance* (Boston, MA: Harvard Business School Press, 1998). H. Thomas Johnson also figures prominently in ABC/M’s introduction; he is also known as one of ABC/M’s most constructive critics. A less well known, but important, predecessor was George Staubus, a pioneer thinker, who wrote among other books, *Activity Costing and Input Output Accounting* (Richard D. Irwin, Inc., 1971). In addition, as early as 1983, standard reference books (e.g., *Kohler’s Dictionary for Accountants*) included definitions for activity accounting terms.
18. One of the authors participated in the implementation process.
23. See note 22, p. 38.
24. Some might ask why ABC designs did not include the detailed resource analyses that RCA now exhibits. The reason is simple. In the 1980s, when ABC coalesced into a coherent approach, it was challenging enough just to implement resources-to-activities-to-cost object as a new paradigm for understanding cost and performance, and the insights gained from doing so were significant. At the time, it was a technologically weighty achievement just to translate G/L expenses into activity accounts. But as ABC matured into a widely practiced approach, more insights were bound to emerge simply because it was hard at work and in general use.
CHAPTER 7

4. See, for example:
7. From materials provided at a lecture attended by the authors, given by Michael Hammer, 2 March 1994, Minneapolis, MN.
10. See note 9.
11. See note 9.
320  

Endnotes

17. Robin Cooper, Regine Slagmulder, *Supply Chain Development for the Lean Enterprise: Interorganizational Cost Management* (Portland, OR: Productivity, Inc., 1999): xxii. This volume describes three additional methods to coordinate ICCM efforts: (1) functionality-price-quality trade-offs, (2) interorganizational cost investigations, and (3) concurrent cost management.

18. See note 17, p. xxii.

19. See note 17, p. 2.

20. See note 17, p. 3.


22. See note 21, p. 49.


CHAPTER 8


8. See note 7. In this article, the authors suggest a context for strategic analysis of customers that are (1) high-cost-to-serve, and (2) low-cost-to-serve. As obvious as this seems, few companies analyze this distinction. The point is not to fire all high-cost-to-serve customers, but rather to know who they are so they can be strategically managed. Likewise, business with low-cost-to-serve customers may be enhanced based upon knowledge of their cost structure. Following are the customer profitability profiles:

1. High-cost-to-serve customers
   - Unpredictable order arrivals
   - Customized delivery
   - Frequent changes in delivery requirements
   - Manual processing
   - Large amounts of presales support (marketing, technical, sales resources)
   - Post-sales support (installation, training, warranty, field services)
   - Pay slowly

2. Low-cost-to-serve customers
   - Predictable order arrivals
   - Standardized delivery
   - Few changes in delivery requirements
   - Automated processing
   - Small amounts of presales support
   - Minimal post-sales support
   - Pay promptly

3. Customer profitability profiles:
   - High-cost-to-serve customers: High operating costs, high customer value
   - Low-cost-to-serve customers: Low operating costs, low customer value
2. Low-cost-to-serve customers
   • Order standard products
   • Order large quantities
   • Predictable order arrivals
   • Standard delivery
   • No changes in delivery requirements
   • EDI order entry with zero errors
   • Little to no presales support (standard pricing and ordering)
   • Little to no post-sales support
   • Replenish as produced
   • Pay on time


17. See note 5, pp. 83–84.


21. See note 18, p. 77.


25. See note 5, p. 9.


27. See note 5, pp. 254–255. Note: Balanced Scorecard research showed the following weight ranges for the BSC measurement perspectives: financial 40 percent weight,
customer measures 15 to 20 percent weight, internal business process metrics ∼25 percent weight, and learning and growth metrics 15 to 20 percent weight.


CHAPTER 9


11. The noble gas ununoctium, the 118th element was the most recently discovered element at the time this book was written.

12. See note 9, p. 141.

13. See note 9, p. 168.


15. William K. Christopher, President, Management Innovations Group, from a personal communiqué to the authors, 28 March 2002.

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