
The Power of Process

As taught in basic operations courses, the work efforts in any enterprise can be organized into processes—step-by-step ordered tasks that collectively perform a job. Ideally, value is created as processes are executed, but this is not always the case. On an enterprise level, the recipe is fairly straightforward: an enterprise obtains inputs, converts them through the performance of processes, and produces outputs such as finished goods, services, or information. When successful, the outputs appeal to consumers, who purchase the product/service. Because processes are the foundational construct of value creation, the way they are designed, organized, managed, and executed translates directly into an enterprise's performance. If leaders and managers want to elevate the performance of their enterprise, processes are the appropriate starting point because not only are processes the drivers of value creation today, but they also represent an enterprise's capability to produce value in the future. The importance of processes cannot be overstated. But what really are processes?

DEFINITION OF PROCESS

A host of differing opinions exist as to the correct definition of *process* and what constitutes a process. In the book, *The Agenda*, the late Michael Hammer¹ identifies processes as an organized group of related activities that work together to transform one or more inputs into outputs that are of value to a customer. But there are competing definitions as well. Peter Keen argues in his book, *The Process Edge*² that Hammer's definition is overly restrictive and that a process may in fact not have obvious inputs and outputs. Keen defines a process as having four criteria—it is recurrent; it affects some aspect of organizational capabilities; it can be accomplished in different ways that make a difference to the contribution it generates in terms of cost, value, service, or quality; and it involves coordination. And the debate rages. Nearly every consultant, academic, and business theorist conversant with the concept of process has an opinion.

As a field practitioner elbow deep in process-improvement efforts on a daily basis, I see that the definitions advocated by Hammer and Keen are unnecessarily limiting and overemphasize “clean” processes that are immediately visible and require minimal abstraction to understand. Their definitions contradict what I see in the real world. Across industries, most process are unclear, unmanaged, unorganized, and—all too often—valueless. Only in the most sterile of settings do processes consist of an organized group of activities that work together. A sizable proportion of processes are ad hoc in nature, lack any planned design, and all too frequently move in opposition to an enterprise's stated goals. Further, you would be hard pressed to find value in many processes—especially those created to comply with government and regulatory agency mandates. And to stipulate that to be labeled a process, a group of activities must be recurrent or require coordination is a view from a purely theoretical perspective. Customization and oversight processes are

rarely recurrent, but they are integral elements of value creation. Having slandered the popular definitions sufficiently, I suggest a far simpler definition for process: *processes are activities that use inputs to produce outputs.*

To further clarify this statement, process inputs can be anything—raw materials, capital, employee time, equipment usage, methods, tools, or knowledge—anything. Likewise, outputs can be anything—a finished good, a document, knowledge, a service, a decision, or even the lack of a decision or finished good. Processes do not necessarily create value for an external customer or even an internal customer—in many cases they accomplish little or nothing, and at their worst, they destroy value.

THE ROLES PROCESSES PLAY

Although most frequently cited as a tool to organize work efforts, processes play a far greater role in the development and management of an enterprise. Processes serve six primary roles:

- *Guidelines for the daily execution of work.* The specific activities that workers complete on a routine basis to build products, services, and information. Processes are a necessity for consistent execution.
- *A framework for continual improvement.* A holistic view of the interconnected and interdependent activities that together encompass the work performed across an enterprise. Processes allow leaders to see how the pieces fit together and to plan improvements with consideration of their impact on the greater system.
- *A foundation on which to create and track metrics.* Identification of the increments of work to enable measurement and reporting.

- *Tools for training.* Documentation of the sequential work steps to deliver an output; this documentation is used to educate workers and enable consistent execution.
- *Clarity for overall operational understanding.* A common language to describe operations and how the interactions occur between different divisions, departments, and other segmentations of an enterprise.
- *Mechanisms for adjusting and driving strategy.* The blueprint to clarify how a competitive strategy is actualized. Processes are the embodiment of a competitive market strategy.

Inside each and every enterprise, processes fulfill these roles regardless of the extent they are understood or managed. In many cases, one or more of the specific process roles are ignored or neglected, inhibiting current performance and the development of future capabilities. When intelligently designed, managed, and executed, processes present a pathway to prosperity—delivering organizational clarity and exacting alignment with an enterprise’s mission.

TYPES OF PROCESSES

The universe of processes spans far and wide. Some processes are performed daily (e.g., sales, manufacturing, and distribution processes), whereas others are executed on an annual basis (e.g., year-end financial closeouts or strategic planning). They vary in complexity from simple processes (e.g., distribution of a report) to extremely complicated processes spanning departments and organizational boundaries (e.g., new-product development for a military aircraft). And the value they deliver spans the spectrum from value destroyers to revolutionary game changers.

Inside the walls of all enterprise are groups of processes that share similar labels across the business world, although they are rarely identical matches in their design or execution. The similarities across businesses stem from the sharing of knowledge and tools across organizational boundaries precipitated by employee movement from organization to organization, the commonality of business vernacular in academic and business presentations, widely used software packages, and governmental agency terminology. Some examples of common processes include customer acquisition, credit processing, order acquisition, order fulfillment, employee training, and many others.

Consistent with Adam Smith's theory on the specialization of labor, processes performed by specialized workers are often lumped together in departments. For example, processes focused on attracting, hiring, training, and displacing employees fall into a human-resources bucket. Likewise, processes to manage working capital, raise investment funds, and allocate capital are found in a finance function. These functional groupings map to the conventional organizational chart. In the past decade, reengineering and other improvement methodologies have focused on managing end-to-end processes, and this, in turn, has led to the grouping of interconnected processes into end-to-end processes. *Order to cash*, *hire to retire*, and *concept to design* are examples of end-to-end processes.

Although these labels for processes are useful for identifying common processes, another categorization speaks to the value a process delivers. The processes that create the outputs for end consumers are undoubtedly the most important in any enterprise. As a testament to their importance, this collective group of processes is commonly referred to as the *core value chain*. Each process or activity linked together in the core value chain delivers a part of a finished product or service. But the core value chain does not operate in isolation. Like any living organism, it metaphorically requires food, water, security, and

shelter to survive. In a business environment, food, water, safety, and shelter equate to the capital, human resources, facilities, machinery, management, information technology (IT), and all other supporting contributors enabling the core value chain to operate. In a continually operating enterprise, these enabling processes are nearly as important as the core value chain itself. This delineation of processes provides a meaningful segmentation into two categories—primary processes and secondary processes.

- *Primary processes* are the activities/processes that constitute the core value chain. A typical value chain begins with the receipt of raw materials/inputs and ends with the delivery of a product/service to a consumer. As with many overused business terms, the value chain is defined inconsistently. To simplify, the primary processes are where the hands-on work is completed to build the end product/service. Today, value-chain processes receive the lion's share of attention and are designed, documented, managed, evaluated, and improved at a much greater frequency than other processes.
- *Secondary processes* include all the processes supporting the value chain. Although these processes rarely contribute directly to the production of an end product/service, they are integral to the ongoing execution of the value chain. Without them, people are not available to perform the work, there is no money to pay for raw materials, and there are no facilities to house manufacturing. But secondary processes do more than just simply feed the production engine, they include the leadership structures to monitor operations and make strategic adjustments. Based on their unique contribution, secondary processes can be further segmented into support processes and governing processes.
- ▲ *Support processes* include all the work effort essential to keeping the value chain functioning. Support processes

make the value chain repeatable, scalable, and adaptable. They include processes to create customer demand, finance operations, source raw materials, hire and retain employees, and provide all the necessities of an ongoing concern. They provide the fuel for the core value chain, including capital, human resources, tools, equipment, facilities, and raw materials. From an organizational perspective, supporting processes are usually located in functional departments such as human resources, finance, marketing, and IT.

- ▲ *Governing processes* provide the directional rules and oversight to manage not only the core value chain but also the supporting processes. Governing processes include strategic planning, workforce management, supervision, engineering standards, quality assurance, audit, risk management, legal, and program/project management. These types of processes provide the guiderails for an enterprise, managing the daily operations within the confines of a predefined structure.

As I will explore later, the type/role of a process is a prime determinant in how it fits into an overall process-management approach. But before we cross that bridge, it is important to understand the life cycle of processes—how they are created, how they change over time, how they eventually become obsolete, and what can be done to make them work better.

PROCESS ORIGINATION AND LIFE CYCLE

By definition, an enterprise consists of the full gamut of processes that allow it to operate as a viable concern. In even the simplest enterprise, processes will number in the hundreds; in major enterprises, thousands.

For a moment, let us reexamine my definition of a process—processes are activities that use inputs to create outputs. This definition does not imply in any manner that most processes are meticulously designed or flawlessly executed. In fact, quite often the opposite is true. Of the multitude of processes in any enterprise, the vast majority are never methodically designed to specific requirements. I call these processes *heritage processes*.

Heritage Processes

Heritage processes are the squatters of the process world. With an unknown origin, they have seemingly been in operation since time began. If there was a plan for their design, it predates institutional memory, and the rationale for the design is long forgotten. Heritage processes are exemplified by the tale of the family Thanksgiving turkey recipe in which the grandmother's directions include the curious step of cutting off the front and rear of the turkey prior to inserting it in the oven. Years later, when questioned about her rationale, the grandmother responds that the step was necessary to fit the turkey in her small oven. For everyone else following the recipe since that time, the step was pure waste, yet executed fastidiously over the years. Heritage processes persist for exactly the same reason—no one bothers to question the rationale behind their design. However being unplanned does not change their importance, heritage processes may well be critical to an output's delivery. On rare occasions, the core value chain may itself be a heritage process. So why do heritage processes continue to exist?

Most employees are well intentioned and perform their duties in a manner that is consistent with their understanding of the job and that minimizes their personal discomfort. In some instances (especially in manufacturing roles), employees receive specific training on the processes and procedures they are to follow. With the passage of time, their performance is heavily influenced by reinforcement

mechanisms, including supervisory feedback and observations of their coworkers. Other times, there is a gap when specific instruction is not given. Lacking awareness of how their role fits into the grander scheme, workers mimic their coworkers or invent their own simplified ad hoc processes. And unfortunately, a good number of processes fall into the gap where they are invented by a worker or manager and are accepted as the de facto standard. Lacking formal design, these processes may operate in conflict with leadership's intentions.

Once in place, the heritage processes take root. Although leaders often expect workers to address any deficiencies and investigate opportunities in their work processes, this is rarely what happens. Most workers operate with a limited perspective of how their work fits into the larger picture. They lack the skills, authority, and in many cases the motivation to step outside the confines of their daily role and take on additional work and responsibility. Short of an outright leadership demand, workers continue doing what they have always done—and that includes executing heritage processes. As one might guess, an abundance of heritage processes indicates that strategic adjustments and operational-improvement activities are not being undertaken. And many contemporary enterprises are deluged with heritage processes.

Planned Design Processes

On the other end of the process continuum are the processes designed specifically to meet a business requirement. Someone meticulously planned the performer's steps, the specific inputs, and the attributes of the output. Intent pervades the design—even in instances when it is misdirected or erroneous. Successfully designed processes are the result of experienced process creators who aligned all the aspects of a process to fulfill a specific goal. Once the process is in operation, routines and supporting processes monitor and control the process,

vastly escalating the probability that the process will consistently deliver the intended results.

Just Poorly Designed Processes

Unfortunately, artfully designed processes are not the prevailing construct today. Based on my observations, the responsibility for process creation or adjustment is often delegated to workers and their managers. In most instances, these individuals lack process training, and their view of the full end-to-end process is limited at best and nonexistent in most cases. Individuals tend to focus on the segment of the end-to-end process that exists in their sphere of responsibility, and do so with minimal interaction and coordination with others. As might be expected, the process fails to deliver as intended or does so inefficiently. Eventually, deficiencies in critical processes become so apparent that they demand the attention of leadership.

Once a process shortcoming is identified, leaders take one of several paths. If the defect is perceived to be the result of poor execution, the process performers may be replaced. On occasion, this solution holds water, and performance improves. An equally likely solution is to identify automation as the solution to poor performance and press forward with a costly and ill-advised IT solution. If you automate junk, you still have junk. It is a well-chronicled fact that the overwhelming majority of IT initiatives today fail to produce an iota of value over cost.

These corrective approaches usually miss the mark because the underlying cause is not execution. William Edwards Deming was a professor, statistician, author, and consultant who won acclaim for his work in developing innovative processes. During his early career, Deming stated that process performance was 80 percent dependent on the design of the process and 20 percent due to execution of the process. At the twilight of his career, he apologetically retracted this statement. He spoke of the grievous untruth he perpetuated. In fact,

the design of work was 96 percent accountable for failures, and the slice attributable to execution was only 4 percent.

Despite the “everyone can design processes” belief that is widespread these days, there is an art to process design. It is a skill born of hands-on experience with processes across functions, companies, and industries. Unfortunately, process-improvement skills and experiences are rarely recognized or appreciated. Every day in enterprises, individuals are asked to launch new functions and business lines, yet they lack the requisite process design skills. Not surprisingly, the results fail to meet expectations. It is flawed logic to ask inexperienced workers to design good processes. Experienced process designers are needed. But getting the appropriate process designer is only a part of the battle.

There are a host of reasons why processes are poorly designed—bad requirements, inadequate resources, and an ambiguous scope, to name a few. Additionally, a common culprit worthy of mention is the availability of information. At the time a process is created, details may be lacking in terms of inputs, outputs, or even what exactly the customer wants. In the absence of reliable information, guesses are made. If lady luck smiles and the guesses hit the mark, a good design is possible. More often than not, though, the process is inadequate to the task. Ambiguity is an enemy of process design. A good process design approach accounts for the unavailability of pertinent information.

Even when expert process developers are engaged and the process is fastidiously designed to meet all known requirements, the process still may perform suboptimally. An increasingly common culprit is the influence of external forces on the process’s design. *Power-play processes* and *technology-fit processes* are the result of such circumstances.

Processes created in the shadow of political pressure are power-play processes. During their design, a leader or group becomes

aware of the ongoing design effort and engages the designers to voice his or her opinion. Their intentions are not overtly nefarious, but they push to influence the design of the process—most frequently to protect individuals on their team or functions residing in their sphere of control. In many cases, the adjustments they promote are not supported by the business case. If they win, the result is a design encumbered with unnecessary steps, additional costs, or performed by the wrong individual. Examples include additional approval checkpoints to provide for additional monitoring of the process's execution or the handoff of work to another department. But perhaps most discouraging, power-play processes are rarely reexamined after their launch because of the political tug-of-war played during their formation and a general reluctance to rehash the design.

Equally disadvantageous is the technology-fit process. Technology-fit processes result from jamming a business process into a rigid technology solution. Today's leaders tend to equate efficiency with the extent of a process's automation (and then ironically call out IT as the scapegoat after the automated process fails to meet their lofty goals). In the name of expediency, the process is squeezed into the software with minimal or no customization. In many cases, the resulting process can only be executed with manual workarounds. Large-scale technology implementations including enterprise resource planning (ERP) systems propagate technology-fit processes. And in a similar fashion, IT groups are often asked to customize software to exact process requirements. This customization is not only expensive and time-consuming, but it also essentially locks the process into the existing design and destroys any ability for adjustment in the future. Although promises are made to address such shortcomings, cost and competing priorities push the IT department's attention elsewhere. Thus, like the power-play process, technology-fit processes frequently suffer from a lack of ongoing review and adjustment. In hypercompetitive markets,

poorly designed processes create a strategic vulnerability because flexibility and adaptability are compromised.

Regardless of how a process comes into existence or is adjusted over time, its intent is to deliver a benefit or fulfill a business need. The consistency and degree to which the benefit is delivered are indicative of a process's performance.

PROCESS PERFORMANCE

How well a process performs depends on the perspective of the stakeholder. In short, different folks want different things. In the for-profit world, the customer's perspective supersedes that of all other stakeholders. Without sales, a company fails. We know that a customer's purchasing decision is driven by his or her perception that the product or service meets or exceeds his or her expectations. While shopping, the customer considers many aspects of the product/service before making a purchasing decision, including

- *Right product or service.* The product/service is offered with attributes and functions that appeal to the consumer's wants and desires.
- *Right time.* The product/service is available when the consumer wants it.
- *Right place.* The product/service is available at a location that is convenient for the customer.
- *Right price.* The product/service is priced at a value at which the consumer is willing to forego alternative uses of his or her money.
- *Ease of interaction.* The product/service is offered in a manner that is pleasurable or with a minimum of discomfort to the consumer (including time to delivery, customer service, product replacement, tendering options, and servicing).

Sales and loyalty grow when the product/service consistently meets or exceeds the customer's expectations. Hence customer satisfaction is a preeminent aim of the for-profit enterprise. Although the customer is the kingmaker, additional considerations factor in when designing a process to produce a product/service. Aside from satisfying the customer, the next priority is the generation of a financial gain (or profit) from the sale. Whereas the customer's willingness to buy is paramount to capturing sales, managing production costs—both tangible and intangible—and generating a profit are imperative to an enterprise's continuance. Successful enterprises accomplish both—satisfying the customer and simultaneously profiting from this relationship. Although sales and profit get lumped together, they are discrete focuses for a leadership team. Sales are generated when customers agree to pay for a product or service. Profits result when the cost of providing this sale is less than what the customer paid. Together, metrics on sales and profit headline discussions of enterprise performance—and, correspondingly, process performance.

This brings us to the next delineation of process performance. Without a doubt, satisfying customers is job one for an enterprise, but other performance factors are also important—especially when gauging an enterprise's ability to deliver financial returns. The following is a list of the process performance factors that are important to all enterprises. All these factors (and more) are reflections of the design and operation of its processes.

- *Cost.* The full expense to produce, sell, and distribute a product or service.
- *Flexibility.* The capability of a process to adjust to the consumer's preferences.
- *Scalability.* The ability of a process to adjust the volume of outputs to match consumer demand.
- *Compliance.* The conformity of a process to environmental and regulatory requirements as well as societal expectations.

- *Sustainability*. The amount and availability of resources, such as raw materials, used in producing and disposing of process outputs. Sustainability costs and impacts include the full life cycle of the product/service from resource harvesting to the eventual disposal of the obsolete or exhausted product.
- *Safety/risk*. The potential that execution of a process will result in harm to an individual or property. Safety prevention and issue resolution both drive costs.

Collectively, the list of customer-valued attributes mentioned previously and the preceding list determine whether a process is operating effectively and efficiently. Measuring process performance, whether via qualitative or quantitative metrics, provides visibility to issues and uncovers opportunities to adjust existing processes or design new processes to satisfy the customer and to drive financial results. Once target performance metrics are established, someone can be appointed to improve the process. Process improvement is both an art and a science—and a field that has grown and changed considerably over the past two decades.

PROCESS IMPROVEMENT

Processes exist whether they are recognized, managed, or paid the scantest iota of attention by the powers that be. Many managers recognize their importance and develop guidelines for their execution. In this way, they set the stage for consistent execution and monitoring to identify when the train is sliding off the tracks. Such guidelines take many names, including *procedures*, *standard practices*, or *operational guidelines*. Although guidelines can be effective in monitoring a process to ensure that it operates as intended, the output of a process depends more on the actual design of the process.

This leads to an important question: Who has the content knowledge, experience, and abilities to design processes that are appropriate to the business needs of an enterprise? In most environments, there are a limited number of individuals equipped to the task. In order to address known deficiencies and competitive opportunities, individuals who are unprepared for the assignment are asked to build or improve parts of the organization. As might be expected, their designs often fail to be paragons of efficiency.

Still other enterprises have opted to institute more universal approaches to process management instead of leaving it to individual managers. One retailer sanctioned a super process group to identify process opportunities and assist managers in redesigning their work streams not only to deliver higher caliber outputs but also to operate more efficiently. A sizable number of manufacturing companies adopted the Six Sigma methodology to attack the proliferation of defects in their production processes. One massive financial institution delivered process coursework to its line-level managers and set them loose to drive efficiency across back-office operations. But even in these examples where a large-scale approach to process management was employed, a sizable number of processes continued to reside off the radar screen. These unloved processes include planning, administration, and management processes and other secondary processes often bloated with costs resulting from perpetual neglect. Here lies a major opportunity for cost savings and efficiency gains—and quite possibly the creation of a strategic advantage.

Processes and how they are understood and managed are undoubtedly a significant determinant of success. Processes are the mechanism of value creation. How well the processes are designed and executed translates directly into the quality, functionality, and cost of the finished product. Enterprises that consistently achieve success in their marketplaces do so because their processes are honed to repeatedly produce goods and services of a higher quality and/

or a lower cost than the competition. Sustained performance and competitive advantage are directly correlated with the facility of an enterprise to manage processes across organizational boundaries and through the introduction of improvements to continually refine these production processes.

That said, all processes are not equal in importance. Some processes are critical to an enterprise's success, and without them, a market plunge is inevitable. Processes at the other end of the spectrum are thoroughly wasteful—an expenditure of resources without any discernible gain. To complicate things further, a process's importance may change over time. Today's market differentiator may become tomorrow's norm. Whereas processes are birthed to fill a need, over time, they naturally evolve to accommodate new conditions, new purposes, and new performers. In other words, process evolution does not always occur deliberately. Just as often, performers adjust the steps of a process to make their lives easier. Work is personal to its performer, and employees will find shortcuts unless ongoing reinforcement is there to direct them otherwise. But process evolution aside, ensuring alignment between the desired output and what is actually delivered requires an occasional tune-up to the underlying value-creation engine.

When building products and services, the final output is a factor of both the input(s) and the transformation process(es) followed by the performer. To adjust the final output, there are but two courses of action: (1) change the inputs to the process, and (2) change the process itself. Both approaches have the potential to substantially alter the final output. The choice of which approach to use depends on the scale of the desired change.

The first option is easy to comprehend—acquire different inputs. Switching suppliers and adjusting the specifications of the inputs with a supplier are alternative courses of action. Although substituting inputs may affect the quality, features, or cost of the item, this

option is limited in its ability to truly transform an output into something entirely new or with substantially different features. Imagine a shirt. Whereas new fabrics may be used to improve the quality, the shirt is still a shirt. Although input substitution is still a viable and valuable approach, it depends on external business partners and therefore is limited in its ability to be enacted immediately.

The second option—changing the process—brings substantially greater change potential because it harnesses the capabilities of the entire enterprise, including marketing, engineering, and research and development. Returning to the shirt example, the production process might be reengineered to produce other clothing components such as coats or pants. By adjusting existing processes or creating new ones, an enterprise can redesign, reconfigure, reengineer, or rebrand offerings and create an entirely new line of products/services. Processes are the fundamental building blocks of value creation. For this reason, process improvement is the transformative power of an enterprise. It follows that the ability of an enterprise to innovate requires a deep understanding of processes and their capabilities. Although few leaders today think about processes when discussing strategy, all the adjustments in products and services occur at a process level. The challenge is to identify which processes to tinker with and the appropriate adjustments to make.

PROCESS-IMPROVEMENT METHODOLOGIES

As enterprises sought to boost their fortunes over the past two decades, processes became a major focus of improvement efforts. A number of process methodologies appeared on the scene and were adopted by academia, consulting groups, business pundits, and innovative leaders. On a somewhat regular basis, new methodologies arrived on the scene and became the darling of the day while

others faded into the background. The most prominent process methodologies over the past decades include such heralded toolsets as Total Quality Management, Process Reengineering, Six Sigma, and Lean. Business literature repeatedly noted that companies using these methodologies were able to reap sizable gains—frequently in the range of 20 to 30 percent increases in productivity. But even when achieving these results, many companies were unable to translate these efficiency gains into increased market share. As a result, the methodologies came under fire and were criticized as being too narrowly focused, too hard to implement, and the wrong medicine at the wrong time. To the contrary, I believe that the fault does not lie solely with the methodologies. Far from it. Many enterprises would be far worse off if they had never launched some form of process-improvement program. What they missed was the full potential of a process focus. These methodologies target the efficiency of processes and neglect to ask the fundamental question of whether a process is delivering the right output. Good process management encompasses far more than examining processes to capture efficiency improvements. It also includes recalibrating process outputs to the all-important customer.

Some of these programs did produce measurable results, including a few that fundamentally altered the norms of an industry. For example, Mutual Benefit Life used Reengineering to make improvements in processing time that fundamentally altered the insurance industry. However, the anticipated financial benefits failed to be realized, and Mutual Benefit Life eventually went bankrupt. There are warnings to be heeded when using any methodology. Misapplying a tool may lead to disastrous outcomes. Solutions can be misapplied or overbuilt. The goal is to avoid these missteps through the correct application of process-improvement tools.

First, methodologies are never intended to replace the thinking and tinkering that needs to occur throughout the analysis,

design, testing, and development of a solution. Many teams operate under the fallacious belief that the approach itself will lead to breakthrough ideas if team members just follow the directions assiduously. Based on this perspective, the methodology and its associated templates are a series of checkboxes leading to that pot of gold. But I will emphatically state that the use of any approach as the singular recipe for innovation is courting failure. Breakthrough innovations are the result of aggressive mental investigations from the beginning of opportunity analysis to the testing of the solution. Methodologies are intended to manage the innovation process—*not* be the innovation process itself.

A second mistake occurs when a methodology is used inappropriately or when an alternative approach fits the situation better. These missteps occur because of a general lack of understanding of the specific methodologies and what each does. When a need is identified, managers select the methodology that is familiar to them—which is not always the correct approach. And sometimes the choice is predetermined through enterprise dictates. A number of enterprises have adopted a single methodology for all their improvement projects; for example, Bank of America and Motorola are Six Sigma shops. The obvious risk is using a tool inappropriately. Always use a screwdriver to fasten a screw and a hammer to pound a nail. Otherwise, the results are almost guaranteed to be suboptimal.

The third challenge—and arguably the most dangerous—is the tendency to use a tool or methodology in a limited area of the enterprise, such as Reengineering a part of a finance department. When this approach is undertaken, the finance processes may well become very efficient. However, many of the costs and other shortfalls simply may be shuffled to other departments. For example, one of my clients opted to push the responsibility for the entry of expense reimbursements out of a finance department and to field personnel. In this new model, customer-facing employees out in the field entered

their expenses into a tracking tool and then e-mailed copies of the receipts to a payables team. Driven by the finance department, this change did result in lower costs in the finance group because several \$20-an-hour payable clerks were laid off. Although the finance payables budget item was reduced, the responsibility simply was shifted to field employees who were compensated at a rate three times higher than a payables clerk. The net effect was a significant increase in overall expense-processing costs, and that was before any impact on sales and customer service was factored in. To mitigate such situations, the design and testing of every cross-functional improvement needs to occur at a system level—accounting for the impact on other parts of the enterprise.

PROCESSES AS COMPONENTS OF A SYSTEM

As stated earlier, every enterprise is comprised of a collection of overlapping, interlocking, interdependent processes. The complete set of processes in an enterprise makes up what I call a *process system* (also called *process structure* or *process network*). Inside this system, work products are built and routed through the network to other teams for further processing and then to customers once the product is finished. There is a ripple effect in such a system. A small change in one location may create waves in other areas—sometimes requiring substantial adjustments to counteract any negative impacts. As a general rule, changes to individual components of the system should always be analyzed, designed, and built with consideration of the full impact on the larger end-to-end process. By using the “big picture” perspective to plan changes, the process designers can mitigate issues by accounting for all known interdependencies. When operating at the process-system level, consideration should be given to these basic tenets of process-system adjustment:

- Processes are never singular in existence—they are always a part of an overall system of interconnected and interdependent processes.
- An integrated, holistic view of the process system is necessary to make strategy adjustments or plan efficiency improvements.
- Any initiative begins with a determination and analysis of the processes to adjust and those affected by the improvement to ensure an overall net benefit.
- Metrics to understand the organization's performance must be at the system level and ideally should be focused on the end customer and not internal customers.
- Continual performance adjustments require the management of end-to-end processes and the continual alignment of tangential subsystems and supporting processes.
- Any work on processes must consider and include process interdependencies. Outputs of processes that initially appear to be waste may serve as inputs to downstream processes.
- Changes to cross-functional processes require communication and coordination with affected teams to avoid any negative impacts. This is especially true when deploying a new solution that affects other parts of the enterprise.
- An efficient mechanism to allocate resources across the entire process system is required—or waste will appear in the form of wait times, excess capacity, inventory obsolescence, and underutilized resources.
- Systems work requires iterative testing and analysis because chaos exists in every process system and makes exact forecasting of outcomes challenging, if not impossible.

Improving a system is significantly more complex and difficult than improving an isolated process. The complexity of the system

obscures causal relationships, making forecasts of outcomes inaccurate and misleading. Unfortunately, this discourages many leaders and managers from working at the process-system level. However, moving forward with adjustments without a link between action and reaction makes strategy, innovation, and any improvement effort pure guesswork, and only with the greatest luck will the results align with intent. In a related manner, the relative simplicity of an isolated process lures managers to take the easy road and ignore the larger system. In some instances, the unintended consequences will be significant and cause a large amount of rework. And unfortunately, once burned, leaders acquire an aversion for “risky” innovation efforts—eroding their support for future process endeavors.

The right approach is to understand and embrace the process system. Unintended consequences still may occur, but the risk is manageable. When working on a process, always conduct an end-to-end assessment of the impacts of the improvement. Test the solution in a laboratory environment, and run it through multiple iterations under different test conditions. Pilot the solution, and examine closely how other processes and functions are affected. With these actions, the end result and most of its consequences can be anticipated—allowing for any uncovered detrimental outcomes to be addressed prior to a larger deployment.

Despite a history of launching multitudes of improvement efforts year after year, many enterprises ride a bumpy road when adjusting their offerings and building platforms for future growth. The difficulty stems from many areas: a lack of customer focus throughout the organization, a deluge of reports and metrics that misrepresent the true situation, structures and processes that are misaligned with the strategy and are constantly under repair, and fires raging on a regular basis, stealing leadership’s attention and preventing leaders from methodically planning innovation efforts. In this environment, the big issues are pushed to middle managers for resolution—leading to

the subsequent launch of teams and initiatives. But are the efforts directed at the critical problems or just the immediate ones? Does the enterprise really understand its operations? Does the enterprise even truly have a market strategy, or is it just copying the competition?

In a nutshell, the real problem is that until now, there were no structures or methodologies to address the full scope of challenges confronting leaders. And this is what is needed—a holistic framework on which not only to manage an enterprise but also to react appropriately to changes in customers, competitors, and market conditions. Fortunately, there is now an approach that uses the construct of process to identify, define, and systematically manage adjustments to an enterprise's operations—leveraging toolsets and methodologies already well known to many and pulling them into a cohesive system for running and innovating an enterprise, what I call a *process-based approach*.