CHAPTER 2

A Brief History—How the Enterprise Came to Be Process Oriented

Those who are ignorant of history are condemned to repeat it.
—George Santayana

Learning from the Past

Within less than 20 years, the improvement of enterprise performance through the identification, assessment, and improvement of the enterprise's business processes has become standard practice at organizations all over the world. More than standard practice, it has become a recognized discipline, known less formally as process orientation and more formally as business process management. You can even get a master's degree in it. Now, "process" seems so intrinsic to the management of corporations, government agencies, and other institutions that it's easy to forget that it's still a relatively new field. In fact, for most of the twentieth century, until about 1990, there was virtually no discussion of the concept of business processes. Deming is a notable exception, but his seminal work on quality was largely ignored (except in Japan) for decades. At the dawn of the century, the scientific management revolution[1] began the quest to find the best way to design manufacturing processes, but the focus was on individual tasks, not on improving what we have come to know as an end-to-end business process. This focus on individual tasks remained in place for most of the century, and didn't start to change until the mid-1980s, when references to "cross-functional work" first started to appear widely. Then, in the early 1990s, BPR burst onto the scene with an explosion of interest in business processes. This was accompanied by a massive transfer of wealth from large enterprises to BPR consulting firms, which played no small part in our interest in the field.

And then, almost as quickly as it had arrived, BPR went from "silver bullet" to "pariah" status. By the mid-1990s, apologetic books and articles were common, explaining what had gone wrong and even how misguided the notion of BPR had been. Reengineering fell off the list of hot topics. At many organizations, reengineering went from badge of honor to forbidden term, and consultants moved on to greener pastures (ERP and Y2K,[2] anyone?).

1. By Frederick Taylor and others. See Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (New York: Penguin Books, 1997), for a good story about the dawn of management consulting. Although he is often criticized for a focus on tasks, Taylor clearly understood the principles of end-to-end processes and may have been the first reengineer.
2. As the Year 2000 crisis was popularly known.

Fast forward to the present, and we see another surprising about-face—"business process" is again very much a hot topic, and even the term *reengineering* has been rehabilitated and is serving a useful, albeit fringe, role in business. What brought about this roller coaster ride? How can a concept like "business process" go from silver bullet to pariah to fact of life? To understand this, we first have to recognize that "business process" has taken on a specific meaning—a complete end-to-end set of activities that provide value, through the delivery of a product or service, to the customer of the process. End-to-end means that the process is wide—it crosses organizational and functional boundaries (a critical aspect of most true business processes!), encompassing activities all the way from the triggering event right through to the end result expected by the customer.[3]

So what's the big deal? To take the most common example, wasn't it obvious that there was a Fulfill Order process that began when a customer placed an order, and ended when it was delivered and paid for? How could this simple discovery have been a breakthrough in the organization of work and the cause of a virtual revolution in management thinking? To understand, we need to take a brief, simplified look at the history and forces that led to the reengineering revolution, and what has happened since then. This certainly won't be an exhaustive account, and probably not even a linear account, but that's not our purpose—we just want to help put the current state of affairs in context by illustrating the themes, phases, and trends that got us here. With apologies to Stephen Hawking, author of *A Brief History of Time*, let's start our Brief History of Process by going back to a time before we worried about functions and processes—before the Industrial Revolution.

The Multiskilled Craftsworker

Prior to the Industrial Revolution of the mid-1700s, most products were produced by individuals we'll call craftsworkers—highly skilled people like weavers, blacksmiths, or jewelers who were responsible for all phases of making a complete, finished product. To them, you might say that process and product were the same thing. It was possible to stand at one spot in their workshops and observe the construction of a product in its entirety. In fact, one person often accomplished the entire process—and not just the manufacturing, but the marketing, sales, design, and service as well. Today, a small proportion of workers are directly involved in making the products or delivering the services their companies provide, and those few typically see only a small part of the process. For many products and services today, you would have to visit multiple locations, on two or more continents, to view the complete process of building or providing it, unlike the process that had been visible from one spot in the craftsworker's shop.

The age of the craftsworker was characterized by an expert individual performing most or all of the activities comprising a central production process, and exhibited the following:

3. When discussing business processes, "customer" isn't restricted to its usual interpretation as an external, paying (usually) client of the enterprise. Customer can be any internal or external stakeholder expecting a result from a process.

- Positives:
  - It was clearly understood who the customer was, what the product or service was, and what needed to be measured—the output of the finished product.
  - The craftsworker, who knew the whole process from beginning to end, was the single point of contact for the customer.
  - Products and services could be customized relatively easily.
  - With a single contact, there could be no miscommunication or handoffs between specialties.
- Negatives:
  - There was very limited output, and scaling up was extremely difficult.
  - The work essentially stopped during the transitions from one task to another, resulting in high overhead.
  - There was no entry-level workforce available, as a new craftsworker required an extended apprenticeship.
  - There was a single point of failure with no backup or synergies.
  - Quality could be erratic, because the individual was not necessarily expert in all aspects of the process.

Many of the negatives (and positives) were swept away with the Industrial Revolution and the advent of factories.

The Advent of the Specialist

In 1776, Adam Smith heralded the Industrial Revolution in *The Wealth of Nations* [1]. James Watt's invention of the steam engine provided power that only a new industrial organization could harness. To be supported by newly available mechanical power, this new organization called for the division of labor into specialized tasks. The simple pin provides a classic example of the power of specialization. Before this advance, pins were made individually by craftsworkers. This made them such expensive luxuries that money for frivolities was called "pin money," since only people with money to squander bought pins. Smith describes in detail how this changed when the manufacture of pins was divided among many workers, each performing a specialized task: "One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires three distinct operations; to put it on is a peculiar business, to whiten the pins another; it is even a trade unto itself to put them into the paper." This specialization allowed a fantastic increase in the number of pins produced, making pins readily available to anyone. Smith notes how 10 men, who, individually, could not make even 20 pins in a day, were collectively able to make 48,000 pins in a day by dividing the labor and specializing.

Popularly, the Industrial Revolution is associated with the arrival of the steam engine, but its real legacy was the division of complex work into simpler tasks. The success of this approach during the age of the factory gave rise to further division

and narrower specialties, leading to the emergence of large organizations structured around functional specialties.

The Rise of Functional Specialties

As the successes arising from the Industrial Revolution took hold, organizations grew and required personnel not just in manufacturing, but in such diverse areas as finance, accounting, legal, human resources, and facilities. More sophisticated products and customers necessitated growth in other areas as well, among them marketing, research and development, engineering, purchasing, stores, logistics, manufacturing planning, and sales. Equally important was the emergence of professional managers to "plan, organize, and control" all those various activities. Since specialization worked spectacularly well in the factories, it seemed likely to apply equally well in the growing field of office work. Consequently, white-collar (professional, technical, and managerial) employment levels rose steeply, with a corresponding decrease in the proportion of employees actually doing the work that produced the product. A cynic might argue that many, if not most, white-collar workers were concerned with increasing the efficiency of the few remaining blue-collar workers, but that misses the point. While the resulting bureaucracy has often been criticized, it was the glue that allowed large organizations to come into existence and thrive.[4]

It is fair to ask how this new breed of professional manager was to manage all of the additional work. Well, for one thing, it's easier to manage people and their activities if they are grouped into specialized fields such as finance, engineering, and manufacturing, each with its own skills, language, tools, and outlook. The strengths of specialization were already well known, so the path of least resistance led to further specialization and the "functionally oriented" organization that dominated most of the twentieth century. While this specialization has been widely condemned, it has certain advantages, and the large enterprises of the twentieth century simply would not have emerged without this style of organization.

Positives of specialization include:

- Vastly increased output and economies of scale, often with a consistent and surprisingly high level of quality;
- Easier management of personnel, as they were doing a specific kind of work ("birds of a feather");
- Development of very high skill levels that were constantly increasing;
- Ability to scale up or down relatively easily (add, subtract, or reassign specialists);
- Building around recognized fields allowing educational institutions to supply entry-level recruits who then have a career path.

4. Although our discussion so far has centered on manufacturing organizations, the same happened in service-providing organizations—banks, insurance companies, hospitals, utilities, government agencies, and so on.

All in all, the functionally oriented organization was a spectacular success, although obviously not without its problems. Otherwise, reengineering would never have had any reason to emerge. Before looking at the downsides, however, we need to clarify a common point of confusion, which is that function and organization are the same thing.

Function and Organization—What's the Difference?

The distinction between function and organization can be subtle. Take a moment to think about the functions of your company—what are the specialties that make up the whole? You would probably list the major divisions or departments comprising the higher reaches of your organizational chart. The functions of an organization are usually so similar to the structure of the organization that most people think organization and function are synonymous, with the manufacturing function being carried out by the manufacturing organization, the logistics function carried out by the logistics organization, the customer care function carried out by the customer service organization, and so on. However, as noted, function and organization are actually different concepts. An organization is a mechanism for grouping people and other resources to achieve a common purpose. The purpose could be to provide not only a function, but also to support a particular customer segment or product line or geography, or even to carry out a complete process. A function, on the other hand, is a specialized field of endeavor involving work of a similar nature, employing particular skills and knowledge. They're often treated interchangeably because it's so common for major organizational units to be defined along functional lines. These definitions provide an important clue to the central problem with organizations based on functional specialties—what *was* the common purpose that these functional organizations sought to achieve? Not surprisingly, it turns out that common purpose was to provide a function, which can be quite a different orientation than to provide some end product or service.

Losing the Process in the Functions

In general, workers and departments in a healthy organization do the best they can to contribute to the organization's success, so they optimize the work they do. But optimizing the individual parts does not optimize the whole. For one thing, if you can't see the whole, you might inadvertently be damaging the end result when optimizing a piece of the process. What's good for sales might not be best for the entire company. Immediate considerations, such as getting the order, might conflict with financial considerations, such as "collect all necessary information to cost and bill the transaction." Consider the steps of the process to fill an order for a customized widget, illustrated in Figure 2.1.

Take Order should collect all the information to make, ship, and collect payment for the widget, even if it slows down taking the order. If manufacturing must be tracked in sufficient detail to bill costs to the customer and to analyze the process for improvement, wouldn't that also introduce delays? While the billing and ship-

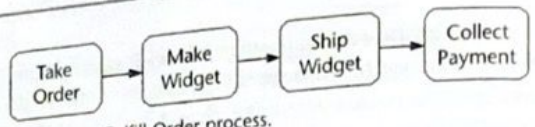

Figure 2.1 Main steps in the Fulfill Order process.

ping functions might prefer to batch transactions for efficiency, that might not be best for the customer or the enterprise. So the limited perspective of each part might lose us the opportunity to improve the whole. We'll explore this phenomenon much more closely later on, beginning in Chapter 3.

In many cases, the measurements underpinning the reward system further exacerbate this situation. A manufacturing function trying to maximize equipment utilization by minimizing setup or changeover time might schedule production runs in a way that meets these targets. The problem is that the schedule might not take into account the dollar value or profitability of the order, the importance of the customer, or any number of other factors that are ultimately just as, or more, important than equipment utilization.

To summarize, while specialization yielded huge efficiency gains, it introduced problems as well. Many have been documented, but they are usually variations of the following:

- The overall process became so fragmented that it was no longer visible and thus couldn't be measured or improved. Remember, the process was always there, it was just hidden by a focus on functions and specialties. No one could see the big (end-to-end) picture, and narrow specialization often led to inadvertent narrow-mindedness. The terminology introduced with business process reengineering to describe functional departments—the *functional silo* or *functional stovepipe*—graphically conveys an image of a vertical structure that you can't see into or out of.
- Activities and methods optimized the function to the detriment of the overall process and the customer. The common purpose driving organizational units (divisions, departments, and so on) became inwardly focused. If they were doing well, it was assumed that so was the entire enterprise. Similarly, "customer" became such a distant concept as to be irrelevant to many groups.
- There was a lack of communication, and sometimes there was even outright conflict, between functions, and these cross-functional disputes were difficult to resolve, typically requiring executive involvement.
- As a work item or transaction winds its way through the fragmented process, the handoffs between specialized individuals and groups cause delay, errors, expense, and frustration. Two common examples that made the function more efficient but had a negative impact on the overall process:
  1. For the function to handle a specific work item as efficiently as possible, it was common to batch several items up before work was started so that many similar pieces of work could be done at once.
  2. To further improve processing efficiency, the item was transformed in some way—for instance, by translating, formatting, and reentering data into another system.

As none of this is intended to imply that these problems were the product of some deliberate malfeasance, we'll take a moment to address a couple of important points:

1. In practice, we avoid the use of the term *functional silo* because it has such negative connotations. There's nothing inherently wrong with a functionally based organization, and using the term can alienate the people who manage or work within them. As we'll start to explore in Chapter 3, it's arguably the best way to organize resources.
2. The people that were optimizing their functions at the expense of the overall process were not lazy, stupid, malicious, or anything of the sort. As previously noted, everyone in a healthy organization is typically doing their best, usually within in the constraints of a structure they had no part in designing.

What was becoming apparent by the mid-1980s, however, and is still happening in many enterprises, was that over two centuries the pendulum had swung too far from generalization toward specialization. This led, not surprisingly, to a reaction, which was, of course, business process reengineering. Just as the age of the craftsworker gave rise to the age of the factory, the rise of functional specialties led to the reengineering revolution.

Enter Reengineering: 1990–1993

The insight of reengineering, profound at the time, was that by identifying, making visible, understanding, rethinking, and then radically redesigning *end-to-end* business processes, they could be dramatically improved. The process-centered organization would focus on the whole and see accumulated inefficiencies and irrationalities eliminated. Measurement would shift from individual tasks, such as checking the most forms or stamping the greatest number of fenders, to the achievement of value, such as the acquisition of a desirable new customer or the timely delivery of a high-quality product or service. The innovative use of information technology was a crucial factor, but so was rethinking the flow of work, the measurements that motivated performance, the underlying policies of the enterprise, and other enabling (or disabling!) factors.

The "shot heard 'round the world" of the reengineering revolution was the late Michael Hammer's article, "Reengineering Work: Don't Automate, Obliterate" [2]. Hammer introduced BPR and called it "undoing the Industrial Revolution," because it undid overspecialization and reunified tasks into coherent, visible processes. Actually, reengineering was well under way before the term was coined by Hammer and then promoted by newly minted BPR consulting organizations. For example:

- The auto industry was using concurrent engineering and team-based assembly well before BPR burst onto the stage.
- Financial services organizations had learned to completely transform excruciatingly sequential and fragmented processes such as granting a loan along lines we'd later describe as "end-to-end business processes."

- Deming had for many years stressed that "everyone doing their best is not the answer; rather, the system must be changed." In other words, understand and improve your business processes.
- By the mid-1980s, Michael Porter had introduced *value chains*, and Tom Peters, famous for coauthoring "In Search of Excellence," had predicted that the coming decade would see a focus on *cross-functional work*.

Michael Hammer, though, performed the invaluable service of identifying the approach, describing it, and, possibly most important, giving it a great name—*business process reengineering*. That name instantly appealed to the frustrated engineer in many of us. The credit given to Hammer seems to drive some observers crazy, because they feel that Porter, Deming, Rummler and Brache, and others deserve wider recognition for their contributions in the area. This is true, but it was Hammer who moved the concept of "reengineering end-to-end cross-functional business processes" into the limelight. After that, the improved performance of some early adopters drove home the point that process orientation was the way to go.

It's hard to convey, almost 20 years later, the impact this had. The concept of looking at end-to-end processes made so much sense—it was so "intuitively obvious"—and there was so much shared frustration from working *in* or *with* the oft-cited functional silos that BPR just *had* to take off. And take off it did. Reengineering took the management world by storm in a way no trend before it had. And in that rapid rise were the beginnings of its downfall a few short years later.

Exit Reengineering: 1994–1995

By the mid-1990s, so many organizations were claiming to be "doing BPR" that a 1995 "Devil's Dictionary" in *Fortune* magazine defined reengineering as "the principal slogan of the '90s, used to describe any and all corporate strategies." And therein lay the root cause of BPR's demise—it became a buzzword, subject to misuse, as buzzwords always are. Consider some statements we actually heard at the time:

- "I *reengineered* my department by putting our forms on an imaging-based workflow system."
- "We *reengineered* our customer service operation by laying off 30 percent of the staff."
- "Our logistics process was *reengineered* by outsourcing it to a low-cost provider."

Reengineering became a euphemism for the thoughtless application of IT, for slash-and-burn downsizing, restructuring, and outsourcing. Reengineer went from something you *do*, to something that's done *to* you, as in "I was reengineered out of my job."

On top of outright misuse of the term, the principles at the heart of true reengineering proved to be difficult to implement and widely misunderstood. This isn't all that surprising, given that we now know how complex it can be. Most of the

literature and education that began appearing after Hammer's article didn't really describe *how* to work with business processes. Instead, it breathlessly explained the theory and recirculated the popular case studies, all the while ignoring the motivational, human resource, and other factors that, as we'll see, are so important. In many cases, advice was given that was just plain bad. The classic example—"don't worry about analyzing the as-is process, because you're just going to abandon it anyway." Another common problem (which Hammer had explicitly warned against!)[5] was "reengineering" something that wasn't actually a process. It's astounding how many reengineering efforts applied to a "business process" that, strangely, exactly fit within the boundaries of a department or function. Of course, this only exacerbated the problems of isolation and specialization.

The Wonder Years: 1996–2000

On the heels of the reengineering backlash, the mid- to late 1990s saw focus on information technology to an extent that caused us to wonder just *what* everyone could have been thinking (hence the term *the wonder years*). Attention shifted from the silver bullet of reengineering processes through IT to IT itself as a silver bullet. "Process" as a discipline fell by the wayside, along with other skills and practices. Some of the IT topics getting the most attention and money included the following:

- All things Internet-related, such as *e*-business, *e*-commerce, *e*-procurement, and *e*-recruiting, to name but a few. We've somewhat uncharitably referred to this as the "*e*-whatever" phenomenon—take any struggling project, put "*e*-" in front of its name, and suddenly it's revived.
- Y2K remediation, with which, unlike some post-2000 commentators, we have no problem. At many organizations, we saw these efforts head off serious problems. Of course, the fact that the problems then failed to occur was grist for the cynic's mill. Our interest, for this discussion, is that it did divert a lot of time and resources, and the avenue chosen by many firms was to implement an ERP package, as per the next point.
- ERP applications from providers like SAP, Oracle, and PeopleSoft (before its acquisition by Oracle). ERP was the name given to families of very large, commercial software packages intended to integrate mainstream business data and functions (e.g., sales, human resources, finance, and manufacturing) across the enterprise, which likely has a familiar ring to it.

Unfortunately, many of these initiatives weren't any more successful than the previous BPR initiatives, such as the following:

- A manufacturer's e-business project receives a chilly reception from its intended beneficiaries—clients who would use the facility to submit design

5. Hammer was on record as saying "Reengineering a department is an oxymoron." The upshot was that reengineering efforts worked out much less well than hoped, and within a few short years of the ascendancy of BPR, reports of high-profile failures spread. There was shock in reengineering circles when articles appeared [3] citing a failure rate among BPR projects of 70 to 80 percent! BPR began fading from the consciousness of the enterprise, and interest shifted to other bright and shiny objects.

validation requests. The process required substantially more effort on the manufacturer's part than anticipated and didn't fit well with its development process.

- At an engineering firm specializing in oil exploration, an expensive intranet-based program combines best practices from the disciplines of data management and knowledge management, but the firm finds the results unused.
- A beer distributor decides that typical development practices such as business analysis and systems architecture were anachronistic and trusts the development of a major new distribution application to a hot-shot Web design company. When we were called in to look at the unfolding disaster, we were stunned to find that the developers thought they were going to prototype their way to a successful implementation across a complex supply chain and that they really (really!) didn't know what a database was.
- The costs of an ERP implementation at a global retailer spiral ever-upward, with configuration becoming increasingly complex; the results are met with hostility by the primary users, and no net benefit is realized.

A common denominator in all of these examples was that they failed in large part because they didn't adequately take "business process" into account, a realization that was soon to take hold.

Business Process Rides Again!: 2000–Present

Readers of the first edition of this book might wonder at this point if we've engaged in a little revisionist history. In that edition our timeline went directly from "Exit Reengineering: 1994–1995" to "The Reengineering Aftermath: 1996–Present," in which we offered the rosy view that we'd seen the merging of continuous improvement and reengineering into what we called *process management*. But what about "the wonder years"? Well, we wrote our process history in 1999, and, in hindsight, we were a little optimistic about that post-1995 period. Being heads-down at organizations that had embraced a process perspective, we weren't paying a lot of attention to some of the "wonder years" hysteria or IT disasters unfolding throughout the economy. The dot-com meltdown of 2000 and the subsequent economic contraction were followed by a flood of analysts' reports and "true confessions" articles about what had really been going on, which led us to look at the preceding years more critically.

A consequence of the "dot-bomb" bust was that money was no longer falling from the skies, and many companies suddenly had to pay intense attention to expenditures. Some individuals found that "after years of being asked to do more with *more*, [they were] being asked in a serious way to do more with less," as Richard Hunter, a research fellow at Gartner, Inc., so aptly put it. Boards of directors started asking about previous expenditures, and a common avenue of inquiry was "What was the return on investment for our ERP implementation?" Bear in mind that these projects had price tags that extended into the tens and even hundreds of millions of dollars! Perhaps these execs had been listening to John Parkinson, VP and chief technologist at Cap Gemini Ernst & Young. In an April 2003 Fast Company article he said, "Between 1997 and 2000, the North American economy bought 40% more technology than it needed. It wasn't entirely irrational, but it wasn't all that smart either." He continued: "I believe the $300 billion we spent on ERP systems was the biggest waste of money in the last century."

Much of the executive curiosity about ROI was driven by our old friend Michael Hammer, who concluded in a significant and widely publicized study that implementations of a certain large ERP application fell into either the "winners" or "losers" category. That is, the enterprise either did really well, or not very well at all, with little middle ground. What accounted for the difference? Of course, it seems self-serving, but it turned out that the winners treated their ERP implementation as primarily a business process improvement undertaking, supported in part by new technology but with due attention to the other important factors. The losers, on the other hand, treated it primarily as a technology undertaking, without regard for the all-important business process issues. Observations such as this one spread and, together with regulatory developments like Sarbanes-Oxley and BASEL II, highlighted the need for organizations to understand and control their business processes. As Ed Yourdon, the longtime IT leader and commentator pointed out at a conference around this time, "You process folks just got a whole new lease on life." Figure 2.2 summarizes the path process orientation has taken.

From Fad to Business as Usual

Process orientation is part of the organizational landscape, and part of the reason for this is that best practices and a balanced perspective with some middle ground have emerged—the focus on business processes is less faddish and more reasoned

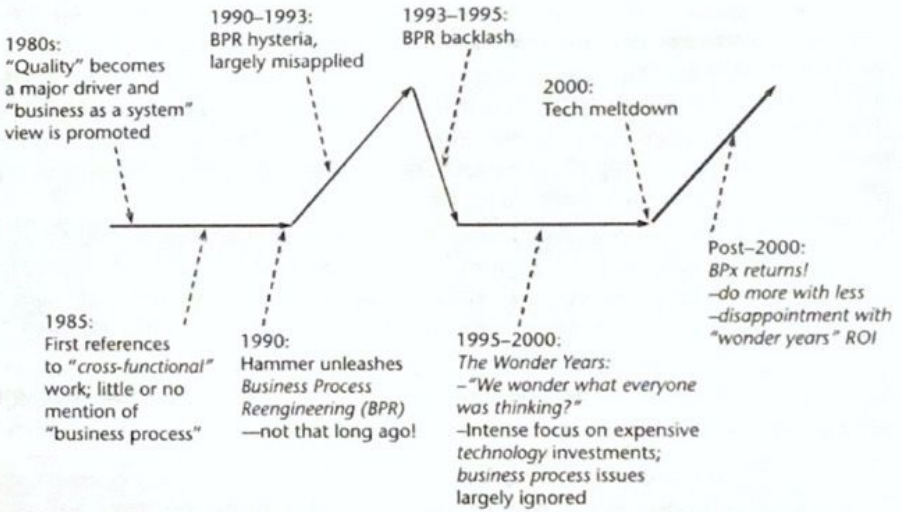

Figure 2.2 The rise and fall and rise again of continuous process improvement.

and pragmatic than it was in the reengineering era. Rather than proclaiming that they are "doing reengineering," organizations understand that dealing with their business processes is normal behavior. We'll now touch on some of the evidence that "process is normal" but please (please!) bear in mind that this is by no means intended to be a compete survey of "the state of business process"—it's just a quick overview of the current environment with some references for readers interested in following up on specific topics.

Process-Oriented Products

Products and services are available in a growing number of process-oriented areas, such as the following:

- Supply chain management (SCM) and reverse SCM for dealing with returns;
- Customer relationship management (CRM);
- Product lifecycle management (PLM).

Note that each of these is an example of what we'll later define as a "process area," a named collection of interrelated business processes. A quick Web search will uncover a wealth of information on these and other areas.

Process Frameworks

Vendor-neutral bodies have made available a number of process frameworks that provide a variety of resources, including standard process descriptions and terminology, benchmarks, and best practices. The best-known are probably the following:

- ITIL—The Information Technology Infrastructure Library, which was originally developed under the leadership of the U.K.'s Office of Government Commerce (OGC) but is now used globally as a baseline for IT service management. See http://www.itil.co.uk or www.itsmf.org.
- SCOR—The supply-chain operations reference model provides a rich framework, covering plan, source, make, deliver, and return process types. See also the design-chain operations reference (DCOR) model from the same organization, covering plan, research, design, integrate, and amend process types. See http://www.supply-chain.org.
- APQC process classification framework—quoting from it, "the APQC Process Classification Framework℠ (PCF) serves as a high-level, industry-neutral enterprise model that allows organizations to see their activities from a cross-industry process viewpoint." See http://www.apqc.org, then "Frameworks and Models."
- VRM—The value-chain reference model. See www.value-chain.org, then select "VRM."

Tom Davenport, in a *Harvard Business Review* article [4], has observed that the standardization and benchmarking of certain business processes will accelerate. Standard process definitions and performance measures will in turn allow businesses to choose more objectively among alternate business process outsourcing service providers. And this, as the title implies, will lead to the commoditization of outsourced business processes, which surely demonstrates how much process orientation is part of the landscape.

Less Polarization

Currently, we see much less tension between perspectives previously at odds with one another:

1. Process and function;
2. Continuous improvement and radical redesign;
3. Systems development and process reengineering.

Let's take a look, in turn, at the rapprochement that's occurred in each of these.

Process and function: In the rush to embrace the new, writers and consultants often fail to take note of the benefits of whatever they want to leave behind. This was certainly true during the heyday of reengineering, when there was a steady stream of commentary about the flaws of functional orientation and the virtues of process orientation. However, if functional orientation did not have some benefits, it would not have prevailed for most of the twentieth century. The benefits became evident, belatedly, at some companies that took process orientation to the extreme of implementing organization structures based on processes rather than functional specialties. It seemed like a great idea at the time, but, in most cases, didn't work out very well. The new structures were hard to manage and inefficient in sharing skilled resources. Worst of all, skill levels in functional specialties declined. More recently, there is general awareness that functional specialties are a great way to develop high levels of skill in a pool of resources that can be used efficiently across multiple processes. The processes, of course, must be designed to flow smoothly through the functions and focus effort around the end result.

Continuous improvement and radical redesign: Continuous process improvement (CPI), and its cousin total quality management (TQM), are outgrowths of Deming's work, especially in Japan, where the term *kaizen* originates. Kaizen [5] is the concept of continuous improvement, its central tenet being that you must continuously improve your processes to keep a quality product in production. When reengineering first emerged, there was considerable tension between the reengineering and kaizen (or CPI or TQM) communities. The reengineers wondered why their kaizen-oriented counterparts were improving processes that ought to have been scrapped. Those who espoused kaizen found the reengineers to be rash and destructive, often throwing out the baby with the bathwater. Eventually, the two were brought together under the milder terms *process orientation* or *process management*, with the recognition that reengineering a process is done once (or periodically), and improving it (kaizen) goes on forever (see Figure 2.3). Kaizen and BPR have become less state of the art and more standard practice, even though the terms are not used as widely as they once were. In recent years, the "official" term has become business process management (BPM), which is the subject of numerous books, service offerings, conferences, and courses. A quick Web search will reveal

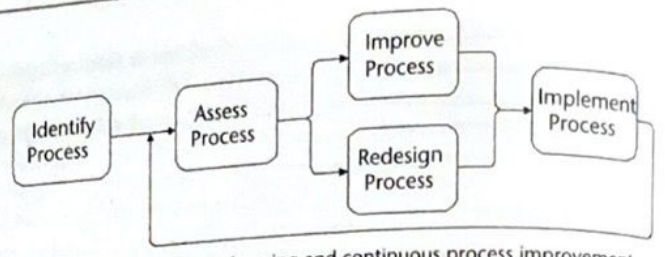

Figure 2.3 Merging of process reengineering and continuous process improvement.

many sources of information, or you could go directly to the always excellent www.bptrends.com, www.bpminstitute.org, or www.bpm.com. When supported by an appropriate business process management system (BPMS), BPM extends to controlling the execution of processes and the active monitoring of and intervention in executing processes. As noted earlier, this is a book on process modeling and analysis, not BPM or BPMS, so we won't try to explain the field. There are many other books available, and a visit to either of the aforementioned Web sites or Amazon.com will uncover them.

Systems development and process reengineering: Just as BPR proponents were at loggerheads with kaizen aficionados, they also ran into conflict with IT professionals. In many cases, the reengineers clearly felt that the systems people were uncommunicative and insensitive to business issues, while the IT staff was convinced that the BPR consultants had some clever slogans (and nice suits!) but never had, and never would, actually implement anything. Now they're inseparable. In fact, often they are no longer identified as separate "process redesign" or "application development" initiatives. In an effort to improve business operations, both aspects will be combined and referred to simply as "the project." After years of being treated as a support organization, IT is frequently a full partner in developing business strategy and implementing new processes. In fact, we've seen many successful projects originally formulated within IT, probably because their role gives them a view across the organization and they have the necessary analysis skills. (Or, perhaps they were just fed up with stitching together disparate applications and trying to reconcile conflicting goals.) So, the design or redesign of business processes is no longer the exclusive purview of consultants and specialists: everyone is involved. Successful efforts invariably involve a variety of disciplines, including management, performers, consultants, and specialists from IT, human resources, training, facilities, and other areas.

A Predictable Complaint

We know from experience that, at this point, some of our readers may be somewhat annoyed because we've chosen not to make this a book on business process management. Proponents of specific methodologies like Lean or Six Sigma (or Lean Six Sigma, or Lean Six Sigma for Services, or...) might be disappointed that we haven't paid more attention to their preferred approach. Our combined 50-plus years of professional experience have shown us that this is a fact of life whenever named

methodologies are involved. In fact, it seems that when a methodology is named and popularized, you can predict that three things will happen:

1. Some people will become single-minded in the belief that their chosen method is the *one true path*. This group usually includes those with little or no prior experience in the field, and so their first exposure to a documented methodology will be a revelation of sorts. This proves what Alec's mother, Barbara Sharp, told him as a teenager: "The most recent convert is the most zealous."
2. Many people will misapply the method or apply it slavishly, in ways that will make the original creators shudder.
3. If, as a relative layperson, you try to describe or characterize the field, you'll be met with a chorus of criticism that will range from "you didn't get it quite right" to "the field has evolved since then" to "you've missed the point entirely."

We've seen this happen in business with strong approaches like activity-based costing or balanced scorecards and in the IT field with methods such as object-oriented analysis and design or, more recently, with agile or extreme methods. Given these examples, we're a little nervous about even commenting on the most popular of the current methods, but here goes:

- Six Sigma has its roots in continuous improvement and tends to focus at what we'd call the activity, or step, level, bringing to bear a variety of tools and methods that emphasize minimizing variance and defects in the output of that step.
- Lean, or lean manufacturing, has its roots in the Toyota Production System (TPS), which emphasizes looking at significant parts of the entire process with an eye toward the elimination of waste and the maximization of speed and efficiency through "pull" and a smooth flow.

To summarize, you could say that Six Sigma emphasizes individual activities and the consistency of their outputs, while Lean emphasizes the connection between activities and the smooth flow of the end-to-end process. Both are the subject of many books, articles, conferences, courses, and so on, with Lean Six Sigma adding even more. We won't try to augment the wealth of resources already there. If you want to draw comparisons, our method is philosophically closer to Lean's emphasis on flow, and we enjoy the excellent newsletters produced by the Lean Enterprise Institute (www.lean.org). Both Lean and Six Sigma offer a great many techniques that will be valuable additions to your business process toolkit, and vice versa. During recent engagements at manufacturing companies, we have been gratified when internal experts observe that our methods are valuable additions to *their* toolkits, providing an approach for situations where their methods had "hit the wall." One observed: "Your methods are stronger in the psychology of processes, while ours are stronger in the physics," which struck us as an apt distinction.