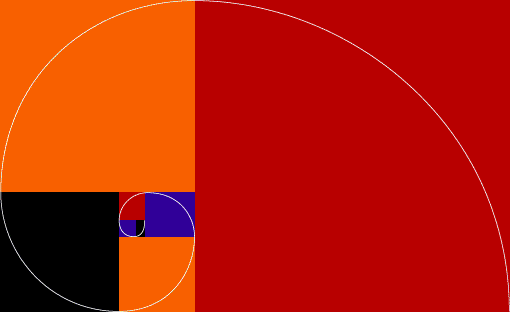


Process

Excellence

Handbook





**Table of Contents**

What This Handbook Is About 3

Introduction: Process Excellence Principles 4

Principle 1: Process Outcomes Create Value 8

Principle 2: Target High-Value Processes 20

Principle 3: Innovate, Don’t Duplicate 29

Principle 4: Excellent Processes Need Excellent Owners 64

Principle 5: You Get What You Measure 74

Appendices

• Appendix I: The *Business Integration Methodology* and Process 87

Excellence Principles

• Appendix II: The Process Maturity Model 89

• Appendix III: Glossary of Process Terms and Techniques 92

Acknowledgments 100

**What This Handbook Is About**

**“Processes are the key organizational theme for companies in the 21st century. Excellence in processes is what’s going to distinguish successful organizations from the also-rans. And capability at helping companies achieve Process Excellence is what’s going to distinguish leading consulting companies from those sweeping up after the elephants.”**

Dr. Michael Hammer at the Andersen Consulting Global Consulting Seminar, 1997

*This handbook is about helping organizations achieve Process Excellence.* It is designed to be used by process professionals who help clients make the transition from traditional, functional approaches to a process-centered approach to work. The handbook provides a framework — the Process Excellence Principles — for developing and implementing innovative processes that set organizations apart in the marketplace.

**Mind-Set, Not Methodology**

*The principles are not step-by-step instructions.* They represent a mind-set that works across methodologies, tools, industries and core business processes. This mind-set will help process professionals make the kind of decisions in their work that will lead to superior processes and Process Excellence.

The Process Excellence Principles provide a common language and foundation for all of Andersen Consulting’s process professionals. Ultimately, the principles will play an important role in the effort to make clients — and Andersen Consulting — more successful in a competitive world.

**How This Handbook Relates to Other**

**Process Competency Materials**

• This handbook replaces the previous *Process Handbook*.

• This handbook is intended to be an adjunct to the Process Excellence Principles course. The handbook goes into greater detail on some topics than the course, but the structure of the handbook closely parallels the course.

• Finally, there are some references in this handbook to materials from other sources, such as the *Business Integration Methodology*. It is possible that some of these references will become obsolete over time as those other materials evolve.

**Introduction: Process Excellence Principles**

**What Is a Process?**

**A *process* is a group of interrelated activities that together create value for the customer.**

The key words are group, value and customer. A process perspective seeks to reintegrate groups of tasks, unlike functional organizations that fragment work into ever-smaller and simpler tasks. A process perspective focuses on value — on business results and outcomes, rather than on activities and tasks. And a process perspective views the customer as the fundamental definer of value, and as the reason that processes exist in the first place.

**Why Processes Are Important**

*In a rapidly changing world, the traditional sources of competitive advantage no longer provide a lasting edge.* New products and new technologies are duplicated quickly. And a highly mobile workforce means that a foundation of good people is increasingly difficult to maintain.

Processes, on the other hand, are a source of *sustainable* competitive advantage. They are difficult to duplicate, and, when well-designed and well-managed, they provide a means for coping with change.

A good product, for example, has a limited life span in the marketplace — but a good product-development process enables a company to create appealing new products over and over again. Similarly, people may come and go, and their skills may vary widely, but well-designed processes can accommodate and compensate for such variations in human resources. At McDonald’s, for example, processes make it possible for a relatively unskilled workforce to provide consistent, valued products and service every day in markets around the globe.

Because processes offer sustainable advantage in a changing world, companies in the future will compete on the basis of *how* they do things; the effectiveness of their processes will be a key competitive differentiator. In short, superior processes will be critical to competitive success.

**The Payoff...**

*Process change has resulted in enormous benefits for a number of companies*. IBM Credit saw throughput in its credit application process increase one hundred-fold. Aetna saw cycle time for claims processing fall from 28 days to four hours. And at Chrysler, innovative supply-chain processes saved more than $400 million.

**...And The Challenge**

*Creating powerful new processes is not easy, however*. Process change is typically complex and far-reaching, and touches every aspect of work — who does it, how it’s done, how it’s measured, how it’s rewarded, who’s in charge. What’s more, it represents revolutionary change, and it’s therefore seen as a threat by people who are comfortable with the status quo.

**What Is Process Excellence?**

Process Excellence is a state in which a company achieves superior business performance from superior processes within an enabling environment.

Superior business performance includes results such as:

• increasing market share

• exceptional profitability

• being perceived as an industry leader

• being able to beat the competition consistently

A superior process:

• maximizes value and eliminates waste

• has a documented design

• is simple yet flexible

• compresses time

• provides real-time feedback

• has clear links to other processes

• is customer-focused and user-friendly

An enabling environment is one in which all the elements of the infrastructure have been realigned to support processes. In an enabling environment, processes are:

• actively owned and managed

• measured

• supported by technology

• performed by people who are trained

in the process

**Process Excellence Principles**

*Andersen Consulting’s approach to process change is based on the concept of Process Excellence — a state in which a company enjoys superior business performance from superior processes within an enabling environment*. Process Excellence is about far more than increasing efficiency. It is about delivering exceptional value, setting a new standard for best practices and even redefining the competitive landscape in an industry.

Working with process expert Dr. Michael Hammer, Andersen Consulting has identified five basic principles that companies have applied to achieve Process Excellence. Like any principles, the Process Excellence Principles (PEP) are brief, memorable statements designed to aid decision making in times of ambiguity. They act as guideposts for process professionals who are designing and implementing new processes.

The five Process Excellence Principles are:

• Process outcomes create value

• Target high-value processes

• Innovate, don’t duplicate

• Excellent processes need excellent owners

• You get what you measure

Each principle reflects a portion of the definition of Process Excellence. Superior business performance depends on understanding what customers need (“Process outcomes create value”) and focusing efforts on processes that will differentiate a company in the marketplace (“Target high-value processes”).



Superior processes tend to break new ground, rather than simply improve existing methods (“Innovate, don’t duplicate”). Such innovation is not the result of luck or chance — it is the result of the conscious, deliberate exploration of possibilities and opportunities, and of asking the right questions.

Superior processes also require an enabling environment in order to thrive. This environment encompasses everything from culture to organizational structure, but of particular importance are the ownership and measurement of the process (“Excellent processes need excellent owners” and “You get what you measure”).

**Putting the Principles to Work**

There are several rules of thumb to remember in using the Process Excellence Principles:

**Apply all the principles.** Achieving Process Excellence requires addressing many dimensions of an organization. Thus, all the Process Excellence Principles must be applied in order to achieve Process Excellence. No principle is more important than the others, and there is no single “magic bullet” for succeeding at process change.

**The principles are robust.** The principles are intentionally brief statements; they are designed to be easy to remember. However, each principle actually represents a number of important underlying concepts. It is important to consider all the facets of each principle.

**The principles are not sequential.** There is no strict sequence for using these principles, and each principle should be considered several times in designing and implementing a process. It is easy to get drawn into the day-to-day details of project work and to forget the big picture. Referring constantly to these principles will reinforce what’s important: outcomes, value, customers.

**PEP and the Business Integration Methodology fit together.** The Process Excellence Principles are referenced in Andersen Consulting’s Business Integration Methodology. The primary difference between the methodology and the principles is that the methodology is “time based” and dictates certain activities to be performed at specific times in a project life cycle; the principles, on the other hand, are pervasive ideas that

are applied throughout the life cycle.

**Keep the PEP Quick Reference Card handy.** It is not possible to remember all the ideas contained within PEP. Keep the PEP Quick Reference Card with you when doing process design, and use the questions as a checklist to ensure you don’t miss anything.

**Note: Process Excellence Requires Business Integration**

No process change will be successful without the right capabilities, culture, incentives or technology to enable the process change, or without being based on a competitive, implementable business strategy. This handbook focuses on those areas most relevant to process professionals. It does not provide details on areas that are not core competencies of the process competency group (e.g., developing compensation plans or building technical architectures). Multidisciplinary teams are required to help companies achieve Process Excellence.

**Principle 1:**

**Process Outcomes Create Value**



**Overview**

*Processes produce outcomes that create value for customers and, ultimately, for the organization and its stakeholders*. Indeed, processes are the primary value creators in an organization, so success depends on the creation of superior processes and the achievement of Process Excellence.

*Process design should begin with the customer’s viewpoint*. An understanding of what the customer truly values should drive the definition of outcomes that the business must produce. Those outcomes should in turn be used to define the organization’s processes.

**“A company that does not focus resolutely on its customers and the processes that produce value for its customers is not long for this world.”**

Dr. Michael Hammer

**Questions**

• Has the organization clearly defined its processes? Have those processes been communicated throughout the organization?

• What do your customers want? Design from the outside in.

• How can you go beyond *anticipating* your customers’ needs to *creating* them?

• How can the organization improve the customer’s processes? Think beyond optimizing only internal processes.

• How can different customer segments be handled differently?

• How can the company make itself “Easy to Do Business With”?

• Has the continuous-improvement process been clearly defined? How does the continuous-improvement process address strategic-level change?

**Question:**

**HAS THE ORGANIZATION CLEARLY DEFINED ITS PROCESSES?**

**HAVE THOSE PROCESSES BEEN COMMUNICATED THROUGHOUT THE ORGANIZATION?**

*The first step in achieving Process Excellence is to identify, document and communicate the organization’s processes.*

**The Horizontal View**

A process transcends traditional functional departments and typically involves tasks performed in several departments.



*Processes are very different from functions*. Functions focus on completing tasks; processes focus on delivering outcomes. Processes cut across functional departments, such as marketing, manufacturing, accounting and so forth. As a result, the traditional focus on functions hides processes — they often are not identified, understood or owned by anyone in the organization. A key distinction: A process produces outcomes that are of value to customers. A function, by itself, does not. For example, the shipping department may be responsible for sending orders to customers, but it can’t do so without the rest of the activities that make up the order fulfillment process, such as manufacturing, transportation and so forth.

*To define processes, start by identifying business outcomes*. Working backward from an outcome (rapid response time, low cost, high quality, etc.), and tracing the steps necessary to produce it, makes it possible to chart the inputs, activities and outcomes that make up a process.

*Understand how processes fit together*. Processes do not operate in isolation; they interact with other processes. It is important to understand these interactions so that changes made to one process don’t adversely affect another process. In addition, when redesigning one process, changes to other, related processes may be necessary or desirable. **Example**: An order-acquisition process that does not consider the availability of stock may lead to poor customer service as well as force higher inventory levels in the Order to Cash process.

**Outcomes vs. Activities**

Processes are outcome- and results-oriented, and therefore go beyond individual activities.

For example, the Order to Cash process starts with an order and results in a customer payment — cash. Invoicing is an activity within the Order to Cash process because the invoice is not the outcome, but rather a means to an end — cash in hand.

*Communicate the process to everyone*. Ensure that people in the organization understand:

• the importance of processes

• what a process is

• how a process operates

• how they fit into a process or processes

• what they can expect life to be like in a process-centered organization

Process concepts and expertise need to be widely shared in order for process performers to work effectively. If people don’t know what a process is or how their actions can affect process outcomes, it is unlikely that the process will perform well.

**The Parts of a Process**

A process is composed of inputs, activities and outcomes that create value for the customer.



Remember that process roles are not always obvious to people. Typically, an employee belongs to one department but participates in many processes. An engineer, for example, might be involved in the product-development process, the fulfill-demand process and the after-sale service process. Because of the traditional functional orientation, however, that engineer may think of himself only as part of engineering, and be relatively blind to his process roles.

*Document the process*. A superior process is well-documented, and that documentation is accessible to all. This allows knowledge about the process to be shared broadly and consistently, and helps guard against the loss of process knowledge when employees leave the company. (For more on documentation, see the “Process Diagramming Standards” Job Aid in the *Business Integration Methodology*.)



**Process vs. Function**

A function is a group of people performing similar tasks. A process encompasses a range of tasks, and multiple departments participate in the creation of a process’s outcome. For example, Product Development is a process — and it is more than R&D. It also involves marketing, manufacturing and other functions. Because they cross traditional functional boundaries, processes are often difficult to “see.”

Frequently encountered processes include:

• Generate Demand, Order Acquisition, Customer Relationship Management

• Fulfill Demand, Order to Cash, Integrated Supply Chain

• Plan and Manage the Enterprise, Manage for Results

**Andersen Consulting’s Four Core Processes**

Andersen Consulting has defined four core processes, each of which encompasses a number of subprocesses. These processes provide the firm with a framework for organizing knowledge capital and communicating best practices across industries. These four core processes are:

• **Develop Products and Services**, which includes all activities that go into converting what the customer wants into a new product or service offering. It might include elements of R&D, manufacturing and marketing.

• **Generate Demand**, which includes marketing activities, such as positioning and assessing market needs; selling activities and the processing of customer orders; and customer-relationship management.

• **Fulfill Demand**, which encompasses the activities that go into meeting customer needs, including manufacturing, distribution, billing and customer service after the sale.

• **Plan and Manage the Enterprise**, which encompasses the support processes that keep an organization running and competitive, such as human resources, information technology, financial management and strategic planning.

**Question:**

**WHAT DO YOUR CUSTOMERS WANT?**

**DESIGN FROM THE OUTSIDE IN.**

*The customer is a key stakeholder. Designing for customer needs is the surest way to stay competitive.*

*Listen closely — and repeatedly — to customers to understand what they value*. Organizations survive and thrive by creating value for customers, but they sometimes lose sight of that fact. Success can breed a belief that “we know what our customers want.” But customers change, and their expectations for speed, quality, cost and convenience are constantly rising. So it’s important to regularly assess what customers value and use that information to shape the design of processes. Process Excellent companies ask, “How else might we deliver this value to our customers? How might we change our processes to deliver more value, or the same value at a lower cost?”

**Four Dimensions of Value**

|  |  |
| --- | --- |
| **Component of Value** | **What a Customer Wants** |
| Time | Fast |
| Quality | Right |
| Cost | Cheap |
| Service | Easy |

\*As defined by Dr. Michael Hammer in the Process Excellence Principles video.

*The customer defines value*. If a customer likes and is willing to pay for something, it has value. If not, it doesn’t. Process Excellence is not just about doing things more efficiently; it’s about creating more value for the customer. (See Chapter 2, “Target High-Value Processes,” for more on value-added activities.)

**Staying in Touch**

There are many innovative ways to listen to the customer:

• Canadian Airlines pays customers to fly with a researcher, who gathers feedback during the trip.

• The Ritz-Carlton hotel chain maintains a database that tracks guests’ preferences — what newspapers they read, their favorite breakfasts and so on.

• In Argentina, Diner’s Club had each of its top 130 executives phone 80 customers to find out why market share was eroding. Diner’s Club used the input to make changes in customer service and now holds the second-largest market share in the country. The more than 10,000 cardholders who were personally telephoned have an attrition rate that is less than half that of regular customers, and their card use is 30% higher.

Adapted from Touchstones: Ten New Ideas Revolutionizing Business, by William A. Band

*Listen to lost customers and potential customers as well as current customers*. Information from defecting customers can flag changes in customer tastes and the competitive environment, or a slippage in some aspect of an organization’s value proposition (e.g., quality problems). Potential customers can suggest new sources of value.

*Customers don’t value the product — they value what the product does for them*. “Customers want holes, not drills,” the saying goes. Focus on the outcomes a customer wants, and constantly assess whether there are better ways to produce those outcomes. **Example**: In addition to selling and leasing heavy equipment, Caterpillar is now offering services that help customers with excavations. In other words, the company is selling the result that customers value, not just a product.

**Who Are Our Customers?**

Companies that conduct customer satisfaction surveys tend to poll customers who represent the current norm — the group that makes up the middle of the bell curve. However, the greatest insight usually comes from the small number of leading customers who are more sophisticated and tend to be ahead of trends. If a company does not move fast enough, many of these customers will become ex-customers.



*Maintain high performance in four key dimensions*. From a customer’s perspective, value typically has four components: time, cost, quality and service. Traditionally, a company excels in one of these dimensions — e.g., being the low-cost provider or the leader in customer service. Today, however, customers demand higher levels of performance and value in all four dimensions. Analyze a process in terms of its ability to deliver in all these areas.

**Question:**

**HOW CAN YOU GO BEYOND ANTICIPATING YOUR CUSTOMERS’ NEEDS TO CREATING THEM?**

*Process Excellence is predicated on helping customers redefine value.*

**Talk With the Experts**

When considering the

creation of new products or services, it is wise to consult with a Strategy professional. These types of decisions are typically made during the development of a business strategy.

*Listening to customers is not enough*. Customers don’t always know what they want. So in designing processes, it is important to think not only of what the customer wants today, but also of what the customer may want tomorrow — even before the customer thinks of it. Example: The Sony Walkman was not developed in response to consumer demand. People didn’t know they wanted the product before it appeared, but it found a ready market nevertheless. Similarly, the Chrysler minivan and the CNN news network are products that created markets, rather than responses to existing market offerings.

*Be proactive in the search for new sources of value*. Being proactive means asking questions such as “What would we do if we were starting anew?” It means seeking to create a quantum leap in value, rather than trying to match or outdo the competition at an existing game. Example: FedEx did not create new value by finding ever-cheaper ways of shipping goods. Instead, it turned to speed and reliability of service as new sources of value — and essentially created a new industry.

**Virgin Atlantic Airways**

In 1984, Virgin Atlantic Airways eliminated first-class service. Conventional wisdom said that in order to grow, a carrier must embrace more market segments. But most of the industry’s profit came from business class. So Virgin cut costs by dropping first-class service and channeled the savings into business class.

The airline introduced large, reclining sleeper seats in business class. It offered free transportation to and from the airport. It designed lounges where passengers can have their clothes pressed, take showers, enjoy massages and use state-of-the-art office equipment. This allows busy executives to go directly to meetings without first stopping at their hotels — a tremendous, and new, value for customers.

As a result, Virgin attracted a large share of the industry’s business-class customers, as well as some additional full-economy-fare and former first-class passengers.

**Question:**

**HOW CAN THE ORGANIZATION IMPROVE THE CUSTOMER’S PROCESSES?**

**THINK BEYOND OPTIMIZING ONLY INTERNAL PROCESSES.**

*Change efforts that enhance the customer’s processes have more value-creating potential than those focused on internal operations.*

*Model the customer’s processes as well as your own*. Processes transcend boundaries between organizations, as well as functions. Examine the customer’s processes, along with internal processes, to find opportunities. A company may discover new sources of value by “walking in the customer’s shoes.” **Example**: PC-based home banking provides an interactive, 24-hour interface that lets customers pay bills, transfer funds and apply for loans online. By making customers part of the banking process, banks have freed them from writing checks, mailing bills and making trips to branch offices. Even better: In some respects, banks have merely automated an existing process. A bank could go further by consolidating all bills, which would eliminate the need for the customer to even open an envelope. The bank could then help manage the inflow and outflow of money.

*Organizational boundaries are changing; therefore, so are your customers*. Today’s organizational boundaries are not likely to be the same tomorrow. Companies are constantly finding new ways to create value outside of their traditional areas. **Example**: As the electric utility industry in the United States is deregulated, organizational boundaries are being stretched and squeezed in every direction. Monolithic companies that encompassed generation, transmission and distribution are breaking into separate business units. Electric companies and gas companies — former direct competitors — are partnering to offer customers “total energy solutions” (e.g., Duke Power and Pan Energy in the southeastern United States). Some utilities are pushing into their customers’ terrain by taking over the power-plant operations of large industrial customers. And dozens of utilities have created whole new “energy services” companies that offer everything from facilities management to environmental consulting — activities their customers used to do for themselves.

*Generate improvement possibilities along the entire end-to-end process*. The scope of many processes naturally extends into the customer’s organization; consider drawing the boundaries of a process redesign very broadly. Doing so creates such options as:

• enabling customers to serve themselves (e.g., pay at the pump)

• sharing information on supply and demand (e.g., EDI/Internet systems that avoid stock outs)

• running a nonessential part of the customer’s operation (e.g., managing their inventory)

**Extending the Search**

Opportunities for process improvement exist beyond the boundaries of the internal organization.

Improve

Internal

Processes

Improve

Customer/Company

Interface

Improve

Customer

Processes

• partnering to jointly develop products and services (e.g., preferred supplier agreements)

**Question:**

**HOW CAN DIFFERENT CUSTOMER SEGMENTS BE HANDLED DIFFERENTLY?**

*Don’t treat all customers equally; use variations of processes to enhance both customer service and profitability.*

**Tailored Services at Ryder**

Customers of the Ryder transportation and logistics company are concerned with getting material from one point to another, but each customer has its own particular needs. So, Ryder’s logistics services can be tailored to individual corporate customers.

For example:

• Ryder is building a system in the United States that will transport components from Whirlpool suppliers nationwide to 11 manufacturing facilities. Inbound loads are reconfigured according to the changing needs of Whirlpool’s flexible manufacturing plants, which can quickly convert from producing one appliance model to another. Merging 11 supply systems into one will maximize fleet efficiency and productivity.

• For Northern Telecom, Ryder delivers telephone switching equipment directly to job sites on a Just-in-Time basis. This eliminates intermediate warehousing and reduces the risk of theft or damage.

• For Target Stores in the United States, Ryder operates a quick-replenishment system that eliminates the need for inventory.

• For PepsiCo, Ryder provides vehicles and vehicle-support services in Poland to support the beverage company’s expanding international efforts.

*Design processes that can meet the needs of different customer segments*. As customers enjoy a wider range of choice, they place a higher value on individualized products and services that are tailored to their needs. Superior processes are flexible enough to cater to various groups of customers, even down to a market segment of one.

*Design processes to reflect the profit-ability of different customer segments*. Blind expansion of the customer base can reduce profitability. Target the most profitable segments, and redesign to make unprofitable customers profitable. Process variations make it possible to reach different types of customers cost-effectively. **Example**: A bank might have a personal, private banker to serve high net-worth customers, and use an Internet Web-based application (with relatively low transaction costs) to provide service to lower-profit customer segments.

*Don’t design a process around the most complicated case*. Design processes to handle exceptions, not for exceptions. When designers try to make one process cover every situation, no matter how rare or unusual, the result is usually greatly increased complexity and diminishing returns. Follow the example of the medical profession, and use different processes to handle different kinds of cases: outpatient care for minor conditions such as flu; hospitalization for major medical problems; and emergency care for urgent, life-threatening situations.

**Question:**

**HOW CAN THE COMPANY MAKE ITSELF “EASY TO DO BUSINESS WITH”?**

*A key opportunity for improvement is the customer-company interface.*

*Design processes to make things easier for the customer*. As competition on price and quality gets tougher, “ease of doing business” becomes a more important differentiator. Typical approaches for becoming “easier to do business with” include:

• providing a single point of contact

• handling transactions completely in one event (one call, one visit, etc.)

• increasing convenience (providing extended hours, allowing customers to do business by phone instead of in person, making house calls/deliveries, etc.)

• simplifying — eliminating or reducing paperwork

• delivering products when promised

*Look for ways to minimize the costs an organization imposes on its customers*. Consider financial costs and other burdens that the organization may be placing on customers. **Example**: For years, a large greeting-card manufacturer refused to take back unsold cards, leaving retailers stuck with poor sellers. When competitors started taking market share, the manufacturer realized that this internal focus made the company “hard to do business with.” It agreed to take back unsold cards and developed techniques for winnowing out poor sellers before they got to the stores. That made the company a lot easier to do business with and helped repair strained relationships with retailers.

**Make It Easy for the Customer**

To buy a car, consumers usually research types of vehicles, visit dealers, negotiate price, call banks about loans, call insurance companies about policies and so on. Auto Net Canada created an alliance with CIBC, Canada’s leading provider of electronic banking services, and CIBC General Insurance Co. The three companies will offer an interactive service that allows consumers to search for new and used cars by year, make, model, price and geographic location — all via the Internet. At the same time, the customer will be able to apply for an auto loan from CIBC and get quotes and coverage with CIBC insurance. Auto Net’s process vastly simplifies life for customers, while providing the outcome they desire.



**Question:**

**HAS THE CONTINUOUS-IMPROVEMENT PROCESS BEEN CLEARLY DEFINED?**

**HOW DOES THE CONTINUOUS-IMPROVEMENT PROCESS ADDRESS STRATEGIC-LEVEL CHANGE?**

*As the saying goes, it’s not over until it’s over — and process change is never “over.”*

*In a changing environment, a process that is not improving is decaying*. Few processes are perfect, so it’s important to continually monitor and analyze process performance with an eye toward making improvements. And a process that is meeting performance targets today can be outmoded by tomorrow.

*Develop explicit processes for identifying and implementing process improvements*. Continuous improvement does not just happen. It is a process in its own right, and it is a critical responsibility of every Process Owner. (See Chapter 4, “Excellent Processes Need Excellent Owners.”)

*Monitor factors that may drive strategic-level change*. These factors include:

• a significant change in a competitor’s operating model

• a decision to pursue a new strategy

• a technological breakthrough

Such change may require processes to be revamped from the ground up. Process Excellent companies have robust processes for scanning the environment, resetting strategy in response to changing conditions and radically altering processes to support that new strategy.

**Process Excellence and Continuous Improvement**

Continuous process improvement (CPI) and more radical change initiatives (R) fit together over time. First, the process is enhanced (CPI) until its useful lifetime is over, at which point it is redesigned (R). Then, enhancement is resumed and the entire cycle starts again. This means that redesigning is not a once-in-a-lifetime endeavor. As business circumstances change in major ways, so too must process designs — meaning that all process designs must include an approach for continuous improvement.



*Involve a broad set of eyes and ears to monitor the environment for changes*. The ability to recognize the need for strategic-level change cannot be confined to a small inner circle of executives. Feedback and input from frontline employees who deal with customers can provide early warning of changes in the marketplace.

*Process improvement is never “done*.” It is not unusual for people involved in process change to ask “When will we have the final (that is, unchanging) process in operation so that things will settle down?” The answer is “Never.” Because conditions constantly change, processes must keep changing as well. The ongoing improvement of processes must be an integral part of the company’s operations.

**Summary**

**Principle 1: Process Outcomes Create Value**

• Process thinking means focusing on outcomes rather than tasks — on producing “a result of value to the customer.” There may be many innovative approaches to producing value.

• Value can be defined as what the customer cares about and will pay for. It goes beyond traditional financial measures such as revenue, profit, ROI and EVA.

• Processes, no matter how innovative and finely tuned, need to continually improve — sometimes changing incrementally, and sometimes changing radically.

**Principle 2:**

**Target High-Value Processes**

**Overview**

*Because an organization’s financial and human resources are limited, and because risk is inherent in complex change, companies must target the processes that have the potential to create the greatest value.* The goal is to get the right process right.

**The Questions to Consider in Targeting High-value Processes Include:**

• Which process or processes create the greatest stakeholder value and represent the greatest opportunity for improvement? Which processes are critical to strategic alignment? Target these processes.

• What is the process’s VT/ET (value-adding time divided by elapsed time)? Analyze processes in terms of value added, non-value added and waste.

• How does the targeted process affect other processes? Ensure that there is a holistic view of processes.

• Is the magnitude of the change proportional to the benefit?

• Does the organization have the capacity to change at the planned pace?

**The Targeting Matrix**

This matrix helps in targeting the most valuable process. More strategic processes — that is, processes that directly drive a competitive advantage — should be given higher priority. So too should processes that present a greater opportunity for improvement.

• Target — invest the highest level of resources in critical areas with high opportunity for improvement.

• Improve — apply continuous-improvement and streamlining approaches for critical areas that are performing well.

• Outsource — have someone else perform processes that are not critical and where there is high opportunity for improvement.

• Ignore — invest minimally in areas that are not critical and are performing well.



**Question:**

**WHICH PROCESS OR PROCESSES CREATE THE GREATEST STAKEHOLDER VALUE AND REPRESENT THE GREATEST OPPORTUNITY FOR IMPROVEMENT? WHICH PROCESSES ARE CRITICAL TO STRATEGIC ALIGNMENT? TARGET THESE PROCESSES.**

*When determining where to focus efforts, consider both strategic importance and opportunity for improvement.*

**Three Categories of Processes**

**Core** processes are those that directly convert inputs into outputs that are of value to customers. The Order Fulfillment core process, for example, takes orders from customers and turns them into delivered goods. These processes are typically more strategic in nature. However, not all core processes are created equal. Some are more important for strategic differentiation.

**Enabling** processes support other processes, typically by supplying indirect inputs. Human resources management, financial management, and IT support are examples of enabling processes. These processes are typically more tactical in nature.

**Governance** processes direct or tune both core and enabling processes, ensuring that they stay correctly focused. Governance processes produce strategic decisions, based on inputs such as competitive intelligence.

*Focusing on the wrong process can be fatal*. **Example**: A major U.S. insurance company was noted for its pioneering efforts in reengineering, having extensively redesigned the process of issuing new policies. However, to perfect that process, the company had to divert human and technological resources from its investment-management process. It ultimately failed to manage critical risks in its real-estate investment portfolio (a different process), and ended up in receivership.

*Determine which processes are critical for strategic alignment*. Understand the company’s core competencies, sources of competitive differentiation and strategic direction. The choice of strategy will often shape the choice of process to target. **Example**: The four insurance companies profiled on page 32 have developed superior processes in different areas to support four different strategic approaches to creating value in the market. (**Note**: This discussion is not about developing a business strategy; it is about operationalizing strategy.)

*In addition to strategic importance of a process, consider the size of the improvement opportunity*. Look for processes where dramatic improvement in efficiency and/or effectiveness can be made. Efficiency focuses on cost-cutting and operational improvements, such as reduced cycle time. Effectiveness focuses on growth potential (e.g., designing a process to reach a new market segment) and customer service (e.g., designing a process to offer more value to existing customers). Identify and evaluate both kinds of opportunities prior to deciding which processes to target.

*Target high-opportunity processes; improve processes that are performing well*. Target processes that are both strategic and where there is high opportunity for improvement (in terms of efficiency and/or effectiveness). Processes that are strategic and performing well should continue to be enhanced through continuous improvement. **Even better**: If strategic processes are performing well, look for ways to extend them. That is, apply the lessons learned from these processes to other internal processes. Or, market these core capabilities externally. **Example**: Goodyear used its expertise in managing tire inventories to run the tire warehouses of one of its major customers, Navistar.

*Limit the effort devoted to processes that do not directly enable the strategic objectives of the company*. As a rule of thumb, outsource activities that have a large opportunity for improvement but are not core competencies of the company. (See the “Reassign” section in Chapter 3, “Innovate, Don’t Duplicate.”) For tactical processes that are performing well, invest only enough effort to ensure that they continue to perform well.

*Don’t underestimate the importance of tactical processes*. Sometimes, addressing an enabling process is the most important thing a company can do. **Example**: Fast-growing high-tech companies often have difficulty finding enough technical talent to fill all their positions. Similarly, at Andersen Consulting, soaring demand for services has tremendously increased the need for qualified consultants. In both cases, the experienced-hire and capability-development processes have become critically important.

**Targeting Traps**

**Playing it safe**. Some companies try to “dip their toes in the water” by improving a process that is “safe.” The problem with this approach is that even if the process change is wildly successful, no one will notice because everyone considers the process unimportant and not indicative of what would happen if a “real” process were redesigned.

**The squeaky wheel gets the grease**. Some companies target a process based on the time-honored dictum “the squeaky wheel gets the grease.” That is, they simply charge ahead in the belief that if a great many people are complaining about a process, it must be worth fixing — without stopping to consider what the real benefits will be.

**Which Processes Create the Greatest Stakeholder Value?**

The question of whether a process is strategic depends on the specific company’s strategy. These four insurance companies are essentially in the same business, but they focus on different processes to achieve competitive advantage.

• **UNUM Insurance**, the industry leader in disability insurance, differentiates itself through its ability to assess and price risk. The company boasts that it can distinguish the difference in risk between left-handed and right-handed New Jersey doctors who drive Volvos. **Focus**: underwriting.

• **Progressive Insurance** has used claims processing to become one of the most profitable firms in the industry. Its claims adjusters operate from vans equipped with cellular communications links and computer workstations. Driving around their assigned territories, these agents may arrive at an accident scene before the police. Claims are often processed on the spot — and at times, checks can even be issued at the accident site. **Focus**: claims fulfillment.

• **State Farm** emphasizes the State Farm brand, relying on an exclusive and extensive network of agents and State Farm offices — geographic coverage that is reflected in the company’s motto, “State Farm Is There.” The company focuses on its marketing processes to differentiate itself from the pack; pricing is kept simple and is done by category, because State Farm has enough customer volume to spread risk across a large population. **Focus**: distribution network.

• **USAA** is viewed as an industry leader in customer service, and it has made the customer-contact process its principal asset. The company prides itself on being easier to deal with than the competition’s field agents. It is the world’s largest user of toll-free telephone numbers, because customer service is handled primarily over the phone. Customers can typically get answers to insurance questions and access services though one simple call. **Focus**: customer service.

*What is tactical to one company may be strategic to another*. **Example**: Payroll is secondary at most companies, but it is strategic to companies such as Paychex and ADP that make their living processing payrolls for other companies.

**Question:**

**WHAT IS THE PROCESS’S VT/ET (VALUE-ADDING TIME DIVIDED BY ELAPSED TIME)? ANALYZE PROCESSES IN TERMS OF VALUE ADDED, NON-VALUE ADDED AND WASTE.**

*When determining the opportunity for improvement, consider queue times (VT/ET) and “density” of work. Strive for a VT/ET of 1.*

**“There is a definition that I like: Waste is anything the customer won’t pay for.... If you look at waste from that perspective, you find that the opportunity for process improvement is infinite.”**

Robert Eaton

Chrysler Corp. Chairman

*Use VT/ET to gauge the size of opportunity in terms of queue times and handoffs*. In this formula, value-adding time (VT) represents the time that actually goes into performing a task. Elapsed time (ET) represents the time that passes between the beginning and end of the task. Ideally VT/ET should equal 1 — there should be no “wait time” in the process. In reality, VT/ET is usually far less. **Example**: When Aetna analyzed its insurance policy application process, it found that its VT was 26 minutes, while its ET was 28 days — a VT/ET of .0006.

*The VT/ET ratio helps prioritize process-improvement efforts and creates a sense of urgency around the change*. During the redesign of a process, VT/ET can be calculated for both the old and new approaches. If the new ratio is closer to 1, it suggests that the redesign is on the right track.

**Three Types of Work**

There are three basic types of work, described by Dr. Michael Hammer in the PEP video:

**Value-adding work**, or work for which the customer is willing to pay. This includes:

• designing a product

• assembling a product

• shipping a product

**Non–value-adding work**, which creates no value for the customer but is required because it enables the value-adding work. This includes:

• reporting

• checking

• supervising

• controlling

• reviewing

**Waste**, or work that neither adds nor enables value. This includes:

• rework due to errors

• redundant activities

• producing reports no one reads

*There are three kinds of work: value-added, non–value-added and waste*. Processes with large amounts of waste and non–value-added work are candidates for improvement. Aim to increase the “density” of work — that is, the proportion of value-added activities within the overall mix. (See “Three Types of Work” and “Activity Value Analysis,” opposite.)

**Activity Value Analysis**

Activity Value Analysis is frequently used to identify which activities create the greatest value, which are unnecessary and which can be enhanced in order to create more value. This information reveals the greatest opportunities for improvement and helps target the areas of the organization where change will have the greatest impact on the overall business. (See the “Activity Value Analysis” Job Aid in the Business Integration Methodology.)

**Question:**

**HOW DOES THE TARGETED PROCESS AFFECT OTHER PROCESSES?**

**ENSURE THAT THERE IS A HOLISTIC VIEW OF PROCESSES.**

*Integration is critical to avoid going from “functional silos” to “process tunnels.”*

**The Process Paradox**

Optimizing part of a system often results in suboptimization of the whole. A recent study of reengineering projects found that if a process was redesigned in isolation, benefits to the organization as a whole were as follows:

• 50% of the time — no change

• 25% of the time — overall improvement

• 25% of the time — overall degradation

*Processes don’t operate in isolation*. Be careful not to optimize one process at the expense of others. **Example**: For a telecommunications company, billing is the most expensive activity. One telecommunications company attempted to reduce its billing costs by shortening the messages on customer bills, thus using less paper. Customers, confused by the cryptic messages they saw, flooded the company’s call center with questions. Billing costs fell, but overall costs rose.

*Keep in mind the big picture of all the processes*. The benefits of improving one process may be lost if other processes remain unchanged. **Example**: An electronics manufacturer redesigned its production process so that it could turn out finished goods in four hours (its competitors took weeks). But because other critical processes (shipping, order entry, etc.) had not been redesigned and integrated, new products just sat in the warehouse. There was no net benefit to the company or its customers.

*Integrate early and often*. Identify key interdependencies or “integration points” with other processes early in a process-improvement effort, and factor them into redesign efforts. For example, if the Develop Products and Services process is improved and shortened, a likely integration point with the Generate Demand process might be the time frame and approach for preparing salespeople to sell new products. Form an integration team whose charter is to address interdependencies, and stay abreast of changes as process redesigns evolve.

**Question:**

**IS THE MAGNITUDE OF THE CHANGE PROPORTIONAL TO THE BENEFIT?**

*There are three categories of process change: Streamlining, Business Process Reengineering and Strategic Engineering*. These three types fall along a continuum, with risk and investment — as well as reward — increasing as the change effort becomes more strategic. The appropriate type of change depends on the scope and nature of the process initiative. (See “The Change Spectrum,” below.)

**The Change Spectrum**

**Streamlining** primarily addresses incremental improvement through strategies such as Just-In-Time (JIT), Total Quality Management (TQM) and the straight automation of existing processes. It is effective in achieving localized improvements in narrowly defined areas and tends to involve relatively low-cost, low-risk projects. Streamlining techniques can deliver tremendous value, but there are limits to doing the same thing better.

**Business Process Reengineering** (BPR) is the fundamental reexamination, redesign and implementation of a business process or processes. It goes beyond departmental or functional streamlining to rethink the way the business operates. It typically means starting with a clean sheet of paper and looking for ways to maximize the value-creation potential of entire end-to-end processes.

**Strategic Engineering** involves fundamentally changing the manner in which the company does business. It may involve shifting the organization’s overall objectives; rethinking why the organization is in business; transforming the entire value network; and “redefining the rules of the game” for an industry.

**Note**: Market forces often drive the need for more radical levels of change. However, most companies have a limited capacity to change that presses in the opposite direction, toward more incremental, less painful kinds of change. These two competing factors must be considered and balanced in a change effort.

****

**Tips/Traps**

A common mistake is to shoot for the moon in magnitude of change and benefits, but fail to commit to the necessary scope, resources and risks. The result of this approach is usually disappointment and cynicism within the organization regarding future change efforts. **Example**: A U.S. utility sought $26 million in cost reductions related to its corrective maintenance process, but declared out-of-bounds any significant changes in technology, organization or compensation. The company managed to squeeze out a mere $1 million in savings.

*Use a portfolio of change strategies*. Companies sometimes develop an attachment to one change approach (TQM, reengineering, etc.) and try to apply it to every situation. Don’t fall into the “I have a hammer, so everything looks like a nail” syndrome. At times, several different approaches may be needed. **Example**: A company that sells clothes by catalog might target a core process such as Order Fulfillment for reengineering. At the same time, it might outsource a tactical/enabling process such as Help Desk Support for IT users, and streamline the process by which customers return merchandise. No one approach is appropriate for all processes.

**What’s the Right Level of Change?**

The following chart can help determine which level of change is most appropriate.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Level of Change** |  |  |
| **Assessment Criteria** | **Streamlining** | **Business Process**  **Reengineering** | **Strategic Engineering** |
| **Magnitude of Change** | incremental | quantum leap | reinvention |
| **Scope of Change** | function/subprocess | core process | enterprise-wide/  extended value chain |
| **Organization's Capacity to Change** | low | high | very high\* |
| **Risk** | low to moderate | high | high to very high |
| **Value-Creation Potential** | low | high | very high |

\* In some situations, it is better to start fresh (i.e., create a new business unit or division) than to try to change the existing culture.

**Question:**

**DOES THE ORGANIZATION HAVE THE CAPACITY TO CHANGE AT THE PLANNED PACE?**

*You can reengineer processes, but you cannot reengineer people. Recognize that people have a finite capacity to change.*

*Companies vary in their capacity to change*. Plans for process improvement must be tailored to each company’s circumstances. Timing, approach, participants and other factors may differ depending on a company’s culture and history. The best process designs may fail if the effort exceeds the amount of change a company can handle.

**The S-curve: How Organizations Build Change Capacity**

Companies build capacity to change in an S-curve, gathering momentum over time and then leaping to a higher level of performance. As they move up this S-curve, they move through three stages:

• **Leadership-driven capacity**, which is based on the focus, tenacity and leadership of an individual; this is primarily a top-down approach used to drive a specific change effort. Leadership capacity is a prerequisite for Process Excellence.

• **Process-driven capacity**, in which the responsibility for driving change no longer rests solely with the leader. The company typically has mechanisms in place in the areas of performance measures, employee competencies, organizational structure and communication that allow employees to not only implement change, but also drive it. Process Excellence helps create process-driven capacity.

• **Organic capacity**, in which change is built-in; it is often driven from the bottom of the organization, and employees see it as part of their jobs. Companies with this kind of capacity embrace learning; rely on self-defined, team-based performance measures; and focus on developing change competencies in employees. Process Excellence is a prerequisite for the organic-capacity stage.

**Tip**: An understanding of the organization’s capacity to change is critical to all change efforts, so be sure to contact a person trained in this area — typically, a Change Management professional.

*Don’t push blindly for big change*. Assess how much change has occurred, how recently it has occurred and how successful it has been. Successful change efforts tend to make the organization receptive to more change. Conversely, a company that has recently been through a traumatic and disappointing change effort is a poor candidate for another round of major change.

*Capacity to change evolves over time — assess it on a regular basis*. A company can build — or lose — its capacity to change. By reexamining that capacity from time to time, process professionals can make sure that change efforts stay in sync with capacity.

*If change capacity is low, think about “quick hits.”* Small but visible successes that don’t take a lot of time and resources can build momentum for broader change.



**Summary**

**Principle 2: Target High-value Processes**

In targeting which processes to change, companies should:

• Evaluate processes based on their strategic importance and the size of the improvement opportunity.

• Keep in mind the big picture. Evaluate how a selected process fits with other processes and within the business as a whole.

• Assess the organization’s capacity to change. Select a change approach (streamlining, reengineering, etc.) that matches the level of expected benefit and people’s tolerance for change.

Principle 3:

Innovate, Don’t Duplicate

**Overview**

*In a rapidly changing world, innovation is becoming a key differentiator*. Process innovation is about generating, evaluating and implementing creative solutions that enable Process Excellence.

Below are seven heuristics that can be used to generate process innovation options. (A heuristic, according to Webster, is an aid to learning, discovery or problem solving by experimental and especially trial-and-error methods — in other words, a rule of thumb.)

These heuristics — also known as the Seven Rs — represent seven dimensions or elements of a process that can be changed.

**Rethink** (why) — the rationale and assumptions behind processes and their outcomes

**Reconfigure** (what) — the activities involved

**Reassign** (who) — the process performers

**Resequence** (when) — the timing and sequencing of work

**Relocate** (where) — location and physical infrastructure

**Reduce** (how much) — the frequency of activities

**Retool** (how) — the technologies and competencies that enable work to be done

**When generating ideas:**

• always consider three or more options — this raises the likelihood of developing a truly innovative solution. Don’t jump too quickly to “the answer.”

• think and rather than or — good ideas are seldom mutually exclusive.

• separate idea generation from idea evaluation. Sometimes the most outlandish idea turns out to be right. To avoid eliminating such ideas prematurely, ban any judging of ideas in the early stages of idea creation. Give people time to ponder, to imagine, to get used to an idea.

By using these heuristics, process designers can discover new approaches and create new processes. In practice, a change made to one dimension of a process will typically affect several others. **Example**: If work is *reassigned* to a supplier, the work may also be *relocated* to the supplier’s place of business. In addition, the process might be *retooled* with new technologies to link the organization and the supplier. For each heuristic, there are a number of questions designed to encourage fresh approaches and prompt perspectives.

Note: Unlike the questions in the other chapters of this handbook, the questions for each heuristic are **not** a comprehensive list or a “quality assurance” checklist. They are intended to demonstrate ways that a process designer might consider and examine a process in order to improve it. In practice, process professionals will undoubtedly find additional questions and perspectives that help identify improvement opportunities.

**The Seven Heuristics**

While there is no guaranteed formula for creativity, there are approaches and techniques that can be used to design and implement new and better processes. These approaches are embodied in the following seven heuristics and their associated questions.

**RETHINK (Why)**

• What is the root cause of the problem?

• What are the reasons for doing it this way?

• What are the assumptions or rules underlying the current model? Are they true?

Do they have to be true?

• Is this process valuable enough to continue?

**RECONFIGURE (What)**

• How can the entire activity be eliminated?

• How can common activities be consolidated?

• How can reconciliation be reduced by putting quality at the source?

• How can information sharing with suppliers and customers improve the process?

• How can intermediaries and non–value-adding work be eliminated?

• How can best practices from other industries be borrowed and improved upon?

**REASSIGN (Who)**

• How can existing activities and decisions be moved to a different organization?

• How can the activity be outsourced?

• How can the customer perform this activity?

• How can the organization perform an activity that the customer is currently

performing?

• How can cross-training integrate and compress tasks?

• How can suppliers/partners perform this activity?

**RESEQUENCE (When)**

• How can predicting increase efficiency?

• How can postponement increase flexibility?

• How can the number of interconnections and dependencies be minimized?

• How can parallelism reduce time?

**RELOCATE (Where)**

• How can the activity be moved closer to the customer or supplier to improve

effectiveness?

• How can the activity be moved closer to related activities to improve

communication?

• How can we decrease cycle time by reducing travel time and distance?

• How can geographically virtual organizations be created?

**REDUCE (How Much)**

• How can the frequency of the activity be reduced or increased?

• How can critical resources be used more effectively?

• How would less information or fewer controls simplify and improve efficiency?

• How would more information enable greater effectiveness?

**RETOOL (How)**

• How can technology transform the process?

• How can the activity be automated?

• How can assets or competencies be leveraged to create competitive advantage?

• How can up-skilling, down-skilling or multi-skilling improve the process?

**An Example of Applying The Seven Rs**

What follows is an example of how the Seven Rs might be used to redesign the process of eating a meal at a restaurant. The process has been modeled using a simplified version of the process “swim lane” diagrams from the *Business Integration Methodology*. These diagrams show the workflow banded by the organization that is performing the activity.



In the typical “sit down” restaurant, the customer goes in, sits down and orders a meal. The order is taken and prepared in the kitchen. The food is then served, eaten and paid for. After the customer leaves, someone cleans the table. In most of the examples that follow, multiple heuristics are often applied to generate the new solution. However, the aspects being changed by the specific heuristic in question will be highlighted.

In the following sections, we have applied each of the Seven Rs to generate different process flows.

**RETHINK (Why)**

This heuristic looks at underlying assumptions and questions regardless of whether they are true. There are several assumptions typically made about eating in restaurants:

• We assume that people *like* to eat in restaurants.

• We assume that part of the appeal of a restaurant is the desire to be waited on — to have someone else do the work of cooking and serving the food.

• We assume that everyone wants something different, hence the concept of having a menu of choices.

There are undoubtedly other assumptions at work here; these are simply examples of the kinds of assumptions that process professionals might challenge as they seek to redesign the process. Additional assumptions may be surfaced and challenged as other alternatives are generated using the other heuristics.

**RECONFIGURE (What)**

This process might be improved if it were combined with other activities to save time (e.g., How can common activities be consolidated?). For example, many grocery stores today prepare fresh, hot, gourmet meals that people can buy as they shop for groceries. This provides the same outcome as the previous approach — a fresh meal — with greater convenience for the customer. Some stores have also combined video rentals into this process, providing a one-stop shopping experience for food and entertainment.



Usually, customers take the food home, thereby also relocating the work. **Another example of reconfiguration:** Food courts in shopping malls arrange multiple food purveyors around a central seating area, offering many different types of foods in one place.

**REASSIGN (Who)**

Another way to improve the process would be to vary who performs certain activities (e.g., How can the customer perform this activity?). For example, fast-food restaurants often speed up the process, and reduce the number of employees, by enabling customers to serve their own beverages (they get an empty cup when they pay and then fill it themselves) and bus their own tables when they are finished eating. So the new process looks like this:



**RESEQUENCE (When)**



A third approach to improving the restaurant process might involve resequencing the activities (e.g., How can predicting increase efficiency?). For example, a fast-food restaurant cooks the food in *advance* of receiving an actual order (that’s why McDonald’s has all those hamburgers sitting under the warming lights). In essence, these restaurants try to *predict* how many customers will want burgers for lunch today. The process looks like this:

This example also points out the need for process variations. This prediction model is used during peak hours, but a make-to-order process (e.g., How can postponement increase flexibility?) is used during slower periods.

Catering companies take postponement a step further, often delaying the purchase of raw materials until the order is taken. This model ensures that there is no excess inventory and no wasted product, because customer needs are specified accurately up front.

**RELOCATE (Where)**

Sometimes a process can be improved by changing the location where activities are performed (e.g., How can the activity be moved closer to the customer to improve effectiveness?). For example, Domino’s Pizza relocates the eating activity to the customer’s living room by delivering pizza to people’s homes. The customer no longer has to perform the non–value-added steps of getting to and returning from a restaurant.



**Even better:** There are now companies that will come to customers’ homes and cook fresh meals to order in their kitchens — thereby relocating even the cooking step in this process.

**REDUCE (How Much)**



The Reduce heuristic can be used to explore how a change in the frequency of activities — either an increase or a decrease — can lead to process improvement (e.g., How would less information simplify and improve efficiency?). For example, a restaurant that offers an all-you-can-eat buffet for a fixed price actually eliminates the whole activity of ordering — customers simply grab a plate and help themselves. And the payment process is easier too — there is just one price, so the keying of individual food items is unnecessary, and there is less chance for error.

An added bonus is that the customers serve themselves (the Reassign heuristic), eliminating the need to serve the food. In fact, with a salad bar — which is a counter in a grocery store or deli offering a variety of salad ingredients — the customer even prepares his or her own food to order.

**RETOOL (How)**

Finally, no process-redesign effort is complete without considering the possibilities that are opened up by technology (e.g., How can technology transform the process?). For example, a restaurant might carve out a niche by acting as a clearinghouse for other restaurants. That is, a family might dial in to the Internet and browse menus from a host of restaurants. Then they could order a Chinese meal for one person, an Italian meal for another and Mexican for a third. The organization would coordinate those orders, handle payment by means of credit card or electronic funds transfer, and arrange for delivery of the food. In this way, customers could dial one number and essentially have hundreds of restaurants to choose from — a potential new source of customer value.



As these variations of the restaurant process show, applying the Seven Rs helps process professionals generate a number of possible process alternatives.

The remainder of this chapter discusses each of the heuristics in more detail.

**When to Apply The Seven Rs**

The table below summarizes the circumstances in which particular Seven Rs questions might be explored. It may be helpful to scan this list early in a process-improvement effort, find the “apply when” statements that most closely fit the situation, and then use the related questions as a starting point. This does not mean that the other questions should then be ignored — but some questions will be more relevant than others, and this table is designed to help process designers find those relevant questions quickly.

|  |  |
| --- | --- |
| **Heuristic/Question** | **Apply When…** |
| **RETHINK** |  |
| What is the root cause of the problem? | * always |
| What are the reasons for doing it this way? | * always |
| What are the assumptions or rules underlying the current model? Are they true? Do they have to be true? | * always |
| Is this process valuable enough to continue? | * always |
| **RECONFIGURE** |  |
| How can this activity be eliminated? | * there are non-value or waste activities * processes have a low value density * value received from activity is minimal (e.g., approving small amounts) |
| How can common activities be consolidated? | * common activities are performed in multiple locations * common activities are performed inconsistently * there are economies of scale (e.g., shared services) |
| How can reconciliation be reduced by putting quality at the source? | * a lot of time is spent reconciling paperwork and correcting errors * there is little accountability for errors |
| How can information sharing with suppliers and customers improve the process? | * demand is uncertain or unpredictable * stock-outs are frequent * inventories are excessive |
| How can intermediaries and non-value-added work be eliminated? | * intermediaries add no value, and just relay goods, services |
| How can best practices from other industries be borrowed and improved upon? | * you are looking for new ideas (i.e., always) |

|  |  |
| --- | --- |
| **Heuristic/Question** | **Apply When…** |
| **REASSIGN** |  |
| How can existing activities and decisions be moved to a different organization? | * different organization has skills or resources you lack * you want different branding * it is too difficult to change previous operating model or culture |
| How can the activity be outsourced? | * you don't perform the activity at world-class levels * it is not your core competency or a critical activity * another organization performs this activity at world-class levels * you have limited resources and want to focus on core competencies |
| How can the customer perform this activity? | * customers want to be empowered to help themselves (self-serve) * certain customer segments are not profitable * costs need to be reduced |
| How can the organization perform an activity that the customer is already performing? | * the customer wants more value/convenience (customer intimacy) * the organization wants to get closer to the customer |
| How can cross-training integrate and compress tasks? | * multiple tasks are needed to produce an outcome * processes are not complex enough to justify a specialist * only 20% of cases or less require special expertise |
| How can suppliers/partners perform this activity? | * the supplier/partner has skills, assets or scale that you lack * the activity is not a core competency * it's an area of the business that may change rapidly in the future; need added flexibility |
| **RESEQUENCE** |  |
| How can predicting increase efficiency? | * accurate information on customer demand is available early * forecasting models have proved reliable * time compression us more critical than accuracy or inventory costs * product/service variations are relatively low |
| How can postponement increase flexibility? | * customers want tailored/customized products or services * inventory-carrying costs are too high * forecasting models have proved inaccurate |
| How can parallelism reduce time? | * there are limited timing dependencies between activities * time compression is critical * there is rework due to late error detection |
| How can the number of interconnections and dependencies be minimized? | * where there are bottlenecks, large queues or frequent handoffs |

|  |  |
| --- | --- |
| **Heuristic/Question** | **Apply When…** |
| **RELOCATE** |  |
| How can the activity be moved closer to the customer or supplier to improve effectiveness? | * distance from the customer or supplier introduced delay, miscommunication or error * customer convenience is critical * customer volume is large enough and transportation lead times or costs are high |
| How can the activity be moved closer to related activities to improve communication? | * activities require a high level of teamwork or collaboration * rework and errors are hard to trace back to the source |
| How can we decrease cycle time by reducing travel time and distance? | * travel is a significant proportion of the process * goods are shipped multiple times (from plant to warehouse to customer) |
| How can geographically virtual organizations be created? | * resources are geographically dispersed, but don't need to be physically nearby to produce an outcome * groupware technologies can be leveraged effectively * costs of doing business may be lower in a different geographical area (e.g., moving call centers to remote areas) |
| **REDUCE** |  |
| How can the frequency of the activity be reduced or increased? | * an activity is non-value added but unavoidable * there is low variation in the process or product * there is high variability and low setup costs/times (e.g., small lot sizes) |
| How would more information enable greater effectiveness? | * higher accuracy is needed * greater segmentation would yield greater marketing effectiveness |
| How would less information or fewer controls simplify and improve efficiency? | * high proportion of costs goes to data collection or controls * value received from information or controls is minimal * absolute accuracy is not necessary |
| How can critical resources be used more effectively? | * utilization of key resources is low * critical resources are performing non-value-added or waste work |
| **RETOOL** |  |
| How can technology transform the process? | * you want to make time, location or performer irrelevant |
| How can the activity be automated? | * the current process is paper-based or manual and cannot be eliminated * activities suffer from errors, inconsistency or reconciliation * greater transaction volumes are needed |
| How can assets or competencies be leveraged to create competitive advantage? | * you have world-class competencies * growth potential in the existing business looks bleak |
| How can up-skilling, down-skilling or multi-skilling improve the process? | * customer satisfaction is low (up-skilling) * multiple specialists are needed to produce an outcome (multi-skilling) * technology can create knowledge workers (down-skilling) |

**The Seven Rs In Detail**

**RETHINK (Why)**

**Questions**

• What is the root cause of the problem?

• What are the reasons for doing it this way?

• What are the assumptions or rules underlying the current model? Are they true? Do they have to be true?

• Is this process valuable enough to continue?

*Rethinking is about surfacing and challenging the rationale and assumptions behind processes and their outcomes*. It asks why things are the way they are, and whether they have to be that way. This heuristic is a little different than the other six because challenging an assumption does not necessarily lead to a solution. However, it does allow for more creative thinking, because once the constraints of an assumption are lifted, the imagination can flow in new directions. The other six heuristics can then be used to generate new process designs that address the surfaced assumption. In addition, asking the questions associated with the other six heuristics will uncover additional assumptions.

This heuristic is a reminder to ask big-picture questions such as:

• **What is the root cause of the problem?** A problem such as poor sales or high inventory has many potential causes. It is essential to understand the root cause of the problem, in order to focus on the real problem and avoid chasing symptoms.

• **What are the reasons for doing it this way?** Often, the exercise of articulating *why* the organization does the things it does quickly reveals reasons that are unknown, not compelling, easily changeable or no longer valid. Or, the reasons may be valid, but not relevant because the desired outcome can be achieved some other way. Once the reasons are articulated, they can be probed and challenged, and either discarded or accepted as explicit constraints to innovation efforts.

• **What are the assumptions or rules underlying the current model?** Sometimes, the most powerful barriers to changing the way work is done are invisible. These are the *implicit* assumptions — about “how we do things around here,” what people value and how people get ahead — that are so ingrained that people are unaware of them. It is important to uncover these rules and assumptions and analyze whether they can be broken — and the possibilities that would be created by doing so.

• **Is this process valuable enough to continue?** How does it contribute to the value the organization provides to customers? Should the process be fixed, or eliminated?

**RETHINK EXAMPLES**

**What Is the Root Cause of the Problem?**

**Example:** An airline had high costs associated with carrying excess parts inventory, which suggested improvements in its inventory-management processes. However, the real problem was the fact that the airline used its own planes to move parts, viewing them as free transportation. As a result, spare parts were often left on the tarmac to make space for revenue-producing freight. The airline compensated for these self-imposed delays by keeping excess inventory on hand. So the best solution would lie in improving the transportation of parts, rather than in streamlining warehouse operations.

**What Are the Reasons for Doing It This Way?**

**Example:** At one U.S. utility, attempts to redesign the corrective maintenance process at nuclear plants were stymied by people who insisted that Nuclear Regulatory Commission (NRC) regulations banned any changes. A review of the actual regulations revealed that the constraints were not nearly so limiting as thought. In addition, the redesign team invited NRC input to ensure that none of the changes would put the company out of compliance.

**What Are the Assumptions or Rules Underlying the Current Model?**

**Example:** IBM Credit found that its credit approval process was too time-consuming because of handoffs between various specialists. Process designers could have tried to make the specialist-to-specialist handoff more efficient. However, the fundamental problem was not the handoffs, but the assumption that all deals had to be handled by specialists. In reality, most of the deals were simple and could be handled by a single generalist. So the handoffs between specialists were eliminated.

**Is This Process Valuable Enough to Continue?**

**Example:** At one bank, the desire to maintain a high level of control led to four copies of cashier’s checks being sent to four different locations. The bank realized that amount of activity added little in the way of real control or reduction of risk.

**Getting to the Heart of the Problem**

A Process Excellence maxim is treat the disease, not the symptoms. There are several common symptoms that correspond to underlying process diseases.

**Symptom:** Extensive information exchange, data redundancy, rekeying.

**Disease:** Arbitrary fragmentation of a natural process.

**Treatment:** Share data among organizational units, and/or reintegrate tasks into a process.

**Symptom:** Complexity, exceptions and special cases.

**Disease:** “Accumulation onto a simple base,” in which a process starts out being simple, but grows more complex due to new variations.

**Treatment:** Don’t try to handle all situations with one process; use different versions of a process.

**Symptom:** Excessive inventory and inventory buffers.

**Disease:** System slack to cope with uncertainty.

**Treatment:** Remove uncertainty by sharing information (for example, coordinating production planning across suppliers and customers), and thereby reduce the need for inventory.

**Symptom:** High ratio of checking and control activity to value-added activity.

**Disease:** Fragmentation. Organizations perform checking and control due to the errors and mistrust that are the result of fragmentation.

**Treatment:** Remove the fragmentation; integrate activities that make up the process.

**Symptom:** Rework and iteration.

**Disease:** Inadequate feedback along chains. Problems are not caught when they happen, but later in the process, requiring more than one step to be redone.

**Treatment:** Increase feedback and communication, and simplify the process if possible.

From *Reengineering the Corporation* by Dr. Michael Hammer

Surface and Question All Assumptions

Assumptions lead to rules, which lead to certain results. If the assumptions are untrue, they should be broken. Here are some common assumptions:

|  |  |  |  |
| --- | --- | --- | --- |
| **Assumptions** | **Rule** | **Result** | **Assumption Break** |
| Work is complex | Need specialists | Handoffs, delays | Use generalists |
| Don't know our customers' level of demand | Carry inventory just in case | High inventory-carrying costs | Share demand and production data |
| Receiving doesn’t know what's been ordered | Accounts payable pays when it receives an invoice | Reconciliation of invoices, receipts, POs | Share data between purchasing, receiving and payables |
| Employee doesn't have the skills or expertise to perform a task | Activity must be handled where the expertise resides | Handoffs, delays | Enable employee (technology, expert systems, etc.) |
| Department A doesn't know what Department B has done | Must reconcile work of A and B | Non-value-added work | Share data, improve communications |
| The activity is high risk | Must have controls | Non-value-added work | Build control at source |

Dr. Michael Hammer at Andersen Consulting’s Global Consulting Seminar, 1997

**RECONFIGURE (What)**

**Questions**

• How can the entire activity be eliminated?

• How can common activities be consolidated?

• How can reconciliation be reduced by putting quality at the source?

• How can information sharing with suppliers and customers improve the process?

• How can intermediaries and non–value-adding work be eliminated?

• How can best practices from other industries be borrowed and improved upon?

*Reconfiguring centers on the issue of what work is being done — and whether that work is even necessary.* It is about analyzing the steps and activities that are performed, and how similar outcomes can be achieved through different means.

Reconfiguring work goes to the heart of process innovation. When reconfiguring work, it helps to keep the following things in mind:

• **Keep the desired process outcome firmly in mind**, but assume that *everything else* can vary. Process innovation is about finding new ways to deliver those outcomes. **However:** Be certain that the outcomes are correct.

**• Analyze the process to:**

• identify the steps as value-adding, non–value-adding or waste.

• understand where delays, costs and errors come from.

• eliminate as much waste and non–value-adding work as possible.

• **Challenge every step in the process.**

• Is there a way to do it cheaper? Faster? Better? Is there a way to not have to do it at all?

• Design from the customer’s perspective. What attributes must the process have to produce the outcomes the customer wants?

• Don’t be constrained by what is — determine what *really* needs to be done to produce the outcome.

• **Think out of the box.**

• Consider rescoping the process if that would produce better results.

• Borrow ideas from *everywhere*.

• Consider starting with a “clean sheet of paper.” If a current process is very poor at delivering outcomes, don’t just tweak it.

• Ask, “What would the perfect solution be if we were starting a new company?”

• Usually, **a reconfigured process is a vastly simpler one** — fewer steps, fewer handoffs, fewer errors, fewer delays, less cost.

**RECONFIGURE EXAMPLES**

**How Can the Entire Activity Be Eliminated?**

**Example:** When Ford Motor Company redesigned its parts-

procurement process, it eliminated the step of receiving an invoice and matching it to a purchase order. In the new process, goods arriving at Ford’s receiving dock are checked against a purchase order database. If the shipment matches an outstanding PO,

payment is made. If not, the shipment is sent back to the vendor. Eliminating the invoice simplified the process and enabled Ford to shrink its accounts payable department dramatically.

**How Can Common Activities Be Consolidated?**

**Example:** Many industries have created call centers in recent years, removing some customer-support functions from local offices. The benefits include reduced costs, because one large facility is often cheaper than many decentralized facilities, and improved customer service, because:

• the call takers are *dedicated* to answering the phone; they are always there and are not distracted by other duties.

• call centers have the tools to enable call takers to perform more consistently and effectively — everything from headsets to sophisticated computer systems that supply the information that customers need.

• call centers generally are accessed via toll-free numbers that are both free for the customer and easy to remember.

**How Can Reconciliation Be Reduced By Putting Quality At the Source?**

**Example:** Navistar International and its supplier, the Dana Corp., have set up systems for sharing quality assurance data electronically. As a result, the need for duplicate quality tests has been eliminated, because Navistar can monitor the supplier’s quality as needed.

**Can We Eliminate Intermediaries and Non–value-adding Work?**

**Example:** Previously, when customers had claims with Progressive Insurance, they would call their agent, who would call a company claims adjuster, who in turn would call the customer. The company established a toll-free number that enables customers to call claims adjusters directly, thereby eliminating the intermediary. Progressive also has mobile claims adjusters who can go to a crash site shortly after an accident happens.

**How can information sharing with suppliers and customers improve the process?**

**Example:** To keep up with large superstores, independent retailers carrying GE Appliance’s products had to maintain large inventories of appliances. GE established a “virtual inventory” system, in which products are kept in GE warehouses and retailers can check inventory and place orders via computer. Orders are shipped directly from the warehouse to customers. As a result, the retailers can offer a full line of GE products while having only floor samples on hand.

**Example:** Walmart’s RetailLink system gives about 4,000 suppliers (in addition to internal buyers) direct dial-up access to Walmart’s data warehouses. This system allows Walmart and its suppliers to develop a single sales forecast, enabling suppliers to allocate capacity rather than inventory. This forecast can also be shared with transportation partners.

**How Can Best Practices From Other Industries Be Borrowed and Improved Upon?**

**Example:** In recent years, many companies have improved their processes by benchmarking across industry lines. For example:

• Motorola learned delivery-management techniques from Domino’s Pizza, a company that delivers pizza in 30 minutes or less.

• Xerox improved its warehouse productivity by analyzing methods employed by L.L. Bean, a U.S.-based catalog retailer.

• GE got ideas for cost cutting and improving customer service from computer-parts wholesaler AMP and Ford.

• A medical center, realizing that patients judged their hospital experience not only on the quality of care but also on how much time, hassle and paperwork was involved, used Marriott to help redesign its admitting process.

• An airline used the best practices of an Indianapolis 500 pit crew to help develop faster turnaround in its maintenance processes.

**Controlling the Controls**

Control activities do not add value, and multiple controls often have diminishing benefits. Consider eliminating such activities. For example:

• If an organization’s budget has been approved, and appropriations are within that budget, then additional approval and control is not necessary.

• Qualified vendor programs eliminate the need to match receipts and invoices. With qualified vendors, simply pay upon receipt.

• Instead of investigating all discrepancies between what was billed and what was paid, implement tolerance levels and focus only on significant discrepancies.

• Instead of reconciling receipts with invoices, Toyota has arranged with suppliers to pay for what it uses, instead of what it receives — meaning that items are tracked only once.

**REASSIGN (Who)**

**Questions**

• How can existing activities and decisions be moved to a different organization?

• How can the activity be outsourced?

• How can the customer perform this activity?

• How can the organization perform an activity that the customer is currently performing?

• How can cross-training integrate and compress tasks?

• How can suppliers/ partners perform this activity?

*Reassigning is concerned with the question, Who does the work*? Today, there is a tremendous array of possible answers to that question. In nearly every industry, organizations are turning to suppliers, customers, strategic partners, outsourcing partners, subsidiaries, temporary workers and others to do work previously done in-house.

Who does the work is no longer limited by the historical constraints of geographic location, organization or even skill level. Because of technology and changes in the competitive landscape that are driving intercompany cooperation, workers and organizational partners can come from anywhere. Even direct competitors sometimes find it’s better to partner than fight. This wealth of options creates enormous opportunities for process-innovation efforts. Often, when the “who” dimension of a process is changed, the “what” and “how” can change as well, and a new process is born.

Given the broad range of possibilities, how can companies decide when to move all or part of a process to another organization? They need to ask:

• Who can produce the best outcome for the customer? Consider internal and external possibilities. Who has the best skills and assets for serving the customer? Sometimes, it’s the customer.

• What are the company’s core competencies and strategies — or what does it want them to be? It may make sense to outsource a noncritical process so that management can focus on more important things. Or a company may want to invest in re-skilling people to enable them to perform at a world-class level in a process it considers strategically important.

Use the Reassign heuristic to think beyond the boundaries of the current organization — be it team, department, division or company — to perform the work where it makes the most sense and adds the most value.

**REASSIGN EXAMPLES**

**How Can Existing Activities and Decisions Be Moved To a Different Organization?**

**Example:** When United Airlines wanted to offer lower-priced commuter service, it created the United Shuttle, a separate organization with a culture and processes suited to providing cheaper flights. It rethought everything, from boarding procedures to ticketing, and asked employees to perform many different tasks. The degree of culture and skill change necessitated creating an entirely new company.

**Outsourcing and Virtual Companies**

The extensive use of outsourcing enables the creation of virtual companies. Examples:

• Monorail Computers outsources manufacturing, ordering, delivery and accounts receivable work needed to produce machines. Only design is handled in-house.

• Virgin Cola has a significant share of the UK market, yet it has only a handful of employees because most work is outsourced.

• Trufresh Marketing Group markets “fresh-frozen” farm-raised Atlantic salmon. It has a bare-bones staff, no headquarters and no plans to add bricks and mortar. Distribution and warehousing, as well as direct sales, are all outsourced.

**How Can the Activity Be Outsourced?**

**Example:** Volvo GM Heavy Truck Corp. sells repair parts in the United States through a channel that includes regional warehouses and commercial truck dealers. Dealers complained of stock-outs on critical parts, even as inventory levels soared. Because they couldn’t provide timely repairs, the dealers were losing business. The problem: It was difficult to predict demand for emergency roadside repairs, and if the parts weren’t readily available, truck owners went elsewhere. GM Volvo turned to FedEx Logistics Services, which began managing a toll-free line and a warehouse in Memphis that is stocked with a full line of truck parts. Now, when dealers need parts for an emergency repair, they call in their order, and the parts are shipped by FedEx.

**Example:** Allied Signal Aerospace was looking for ways to provide quick delivery of part kits directly to aircraft. It realized that catering trucks make deliveries to every plane, so it teamed up with LSG/SKY Chefs to provide delivery service for its parts. The company found a partner not by looking for special expertise, but by looking at how other organizations were interacting with its customers. The lesson: Sometimes, an outsourcing or alliance partner may emerge from a less-than-obvious place.

**Revolutionizing Customer Habits**

When technology transforms a process, it often transforms the behavior of customers as well — witness the growth of catalog shopping, or the shift from physical retail bank branches to virtual channels such as ATMs or phone banking. In particular, technology-based self-service is usually perceived as a valuable convenience, rather than a burden. Consumers often prefer to do it themselves — be it tracking their own packages, designing their own windows, looking up their own loan rates or using pay-at-the-pump technology when refueling their cars.

**How Can the Customer Perform This Activity?**

**Example:** FedEx’s shipping software allows customers to schedule pickups, track and confirm deliveries, and print routing bar-code labels. This lets them prepare, process and track shipments on their own terms, without having to contact a FedEx employee. It has also reduced FedEx customer service calls and costs by 60%.

**Example:** Xerox used to send technicians to customer sites to perform copier repairs. However, most repairs were relatively simple. Xerox now provides customers with the tools and instructions needed to make their own simple repairs. As a result, customers no longer wait several hours for a technician to be sent.

**How Can the Organization Perform an Activity That the Customer Is Currently Performing?**

**Example:** Levi Strauss & Co. uses its LeviLink services to advise retailers on what products and sizes they should carry. The system can create an order for the retailer, and supply the goods pre-ticketed and ready to go on the retailer’s shelf.

**Example:** Westinghouse Electric used to simply deliver its finished power generators to utility companies. Now, it will install generators, and even build an entire plant to house the generators, allowing customers to focus on managing operations, rather than on construction.

**How Can Cross-training Integrate and Compress Tasks?**

**Example:** GTE responds to customer reports of service outages with three activities: getting information from the customer, checking its equipment and lines, and dispatching a repair technician, if required. The three tasks were previously handled by three specialists, requiring coordination, handoffs and communication. Today, all three activities are performed by cross-trained individuals.

**How Can Suppliers or Partners Perform This Activity?**

**Example:** With Vendor Managed Inventory, the vendor and retailer coordinate stock plans. The vendor tracks retail inventories, initiates replenishment based on sell-through, and may also manage the merchandising of the items on the selling floor. In one case, Procter & Gamble, the consumer products company, took on work from customer Walmart, and now manages Walmart’s inventory of disposable diapers. P&G is able to add value because it has the facilities, skills and information that are appropriate for managing the product.

**Cooperation Across the Value Chain**

When rethinking who does what in an extended process, there are several interorganizational arrangements and techniques to consider. These include:

**The consortium**

Companies can benefit from economies of scale by banding together to share resources. For example, manufacturers of noncompeting consumer goods can solve the problem of dealing with infrequent, small shipments to particular regions by cooperating to ship their products together. This situation is win-win-win: The two manufacturers lower their per-unit delivery cost, and customers benefit from more current stock and more responsive order fulfillment.

**Reversing the supply chain**

The traditional view of the supply chain is buy, make, move, sell: Manufacturers acquire materials, make finished products and move the products to retailers who sell the goods to consumers. This view was based on the projecting of market demand. Because of the uncertainty inherent in projections, businesses put buffers into the supply chain, such as excess manufacturing capacity and inventory. Reversing the supply chain means taking a “sell, move, make, buy” view. All activity is triggered by a consumer sale or order, and supply-chain members respond to consumer actions with only the necessary resources. This approach requires close cooperation and information sharing.

**Supply-chain partnerships**

By partnering up and down the supply chain, participants can minimize total costs while maintaining service and rates of return. Supply-chain partnerships are enabled by:

• Dedicated capacity. Suppliers can reserve some amount of production capacity for a particular customer.

• Shared cost information. Supply-chain participants share cost- and process-flow information to identify win-win opportunities and eliminate non–value-adding activities.

• Coordinated production planning efforts. Production planning is coordinated across the supply chain by sharing forecasts and production schedules.

• Partnering for new product development. Involving suppliers in design work can bring them up to speed, and reduce supplier-related lag time and errors later in the process.

**The Extended Enterprise**

Processes not only cross the boundaries between an organization’s immediate suppliers and customers, they also cover the entire extended enterprise, encompassing everything from the supplier’s suppliers to the customer’s customers. In developing innovative designs, consider this entire extended enterprise.



**Virtual Relationships**

Electronic commerce and the Internet are affecting how and where processes are performed across the supply chain. However, no one knows precisely where these growing connections will lead. Some observers talk about disintermediation — the elimination of middlemen, such as distributors and retailers, due to direct electronic links. Netscape, for example, distributes much of its browser software in this manner. Others talk about hyper-intermediation — the proliferation of electronic middlemen that add value by organizing and simplifying electronic business. Either way, such developments will accelerate the shifting of work from one place to another.

**RESEQUENCE (When)**

**Questions**

• How can predicting increase efficiency?

• How can postponement increase flexibility?

• How can the number of interconnections and dependencies be minimized?

• How can parallelism reduce time?

*This heuristic centers on the question of when work is done — on sequencing, timing and interdependencies.* When activities have been performed a certain way for many years, it is easy to assume that some steps simply must be performed before others. However, there may be fewer real dependencies than first meet the eye. Varying the timing and sequence of work can be a powerful lever for designing not just a faster process, but one that enables greater customization, lower cost and fewer errors. Once process performance requirements are known, see if resequencing the work can help achieve them.

Resequencing options include:

• **Prediction.** A process designed around strong capabilities in predicting usage or demand can:

• enable faster response times (e.g., by starting the build process in advance of orders)

• improve customer service (e.g., by minimizing stock-outs)

• **Postponement.** A process that postpones key decisions until better information is available can:

• more closely meet customer needs (e.g., if you manufacture to order, rather than manufacture in anticipation of an order)

• reduce costs (e.g., minimize inventories)

• **Parallelism.** A process with many parallel activities — rather than lengthy, linear ones — can:

• compress time (e.g., as multiple tasks are performed simultaneously rather than sequentially)

• reduce errors (e.g., as complementary activities provide feedback about potential problems sooner and more frequently)

In addition, look closely at interdependencies in a process. Where critical interdependencies cause delays or errors, find ways to redesign the process to minimize such links. A simple example: If approvals are a long, tortuous affair, see how many managers can be removed from the loop. Often, multiple approvals aren’t really necessary; they are simply done because of tradition or politics. It may not be easy to do, but minimizing approvals can be an effective way to speed up a process and get better results.

**RESEQUENCE EXAMPLES**

**How Can Predicting Increase Efficiency?**

**Example:** In its admissions process, a hospital accepting transferring patients used to verify the availability of rooms before the patient was moved — a step that took considerable time and sometimes resulted in the loss of the referral to another hospital. However, the hospital realized that it was nearly always able to find a vacant bed, so it now immediately agrees to admit patients upon request, and finds and prepares a room while those patients are in transit to the hospital.

**How Can Postponement Increase Flexibility?**

**Example:** Gateway Computer produces its machines with interchangeable modules. This allows the company to postpone decisions about the configuration of a given product until it receives an order. Then, it assembles the modules into a custom product.

**Example:** Instead of making a broad range of colors in their plants, paint manufacturers give hardware stores the base colors and tools needed to mix custom colors on-site. The final decision about color occurs at the very end of the process, when the customer is picking up the paint. This ensures the right color paint is available when the customer wants it.

**How Can the Number of Interconnections and Dependencies Be Minimized?**

**Example:** In its “Java around the clock” software development push, IBM questions one of the most fundamental dependencies: the workday. When the company’s Java developers finish their day, they forward the work via network to another location that is just beginning its workday. These employees work on the project, and at the end of their day, they forward it again to another geographic location, and so on. As a result, the work is no longer dependent on time or geography.

**How Can Parallelism Reduce Time?**

**Example:** At one company, a serial product-development process meant that marketing developed an idea and handed it off to engineering, which designed the requirements for the new product and then passed the specs on to tooling and manufacturing. Often, tooling and manufacturing would ask engineering for revisions, based on what could and couldn’t be done with the manufacturing equipment available. Engineering would then go back to marketing, and so forth. Several such iterations were typical, which greatly slowed the product-development process. A new process was designed around a shared data repository that allowed all of this to occur in parallel. A design could be reviewed simultaneously by all the departments during the design phase. Revisions could be incorporated as the design progressed. Manufacturability was, in a real sense, built into the design from the beginning, and overall product-development time was reduced.

**The Power of Postponing**

Benetton, which sells its clothing through 7,000 boutiques in 120 countries, has gotten around the problem of rapidly changing fashion by using the “delayed decision” approach. Rather than manufacturing clothes from pre-dyed cloth, Benetton makes many items of clothing without color. Quantities of specific colors are then determined by current customer demand; as it becomes clear which colors are wanted, the company dyes items shortly before shipment. As a result, stores carrying Benetton goods can use EDI to order clothes in response to changing customer tastes, and have the orders filled quickly. The problem of disposing of unsold colors is also greatly reduced.



**Give Customers What They Want**

Often, the accurate information needed to make decisions can come late in the process, in the form of the customer’s actual order. This makes it possible to give customers exactly what they want:

• Hewlett Packard’s products consist of modules, allowing the company to hold off on building the final product and assemble modules for each customer’s order.

• Ronal Tool Co. builds stamping dies and injection molds from specifications sent from the customer via the Internet.

• McGraw-Hill’s processes allow it to offer custom textbooks. Customers specify what they want, and the publisher reconfigures chapters, includes articles from various sources and produces books in runs as small as 25 pieces — all within a week.

**When to Decide**

Key process decisions (what to make, ship, order, etc.) can be made at several points in a process. In general:

• Making decisions later in a process can increase flexibility of the outcome.

• Making decisions earlier in a process can improve efficiency of the outcome.

When do you decide early and when do you decide later? It depends on when reliable information is available for decision making. A company that anticipates customer tastes or needs incorrectly may well wind up manufacturing and selling products no one wants.

**RELOCATE (Where)**

**Questions**

• How can the activity be moved closer to the customer or supplier to improve effectiveness?

• How can the activity be moved closer to related activities to improve communication?

• How can we decrease cycle time by reducing travel time and distance?

• How can geographically virtual organizations be created?

*This heuristic focuses on the question of where work is done; it’s about location, distance and physical infrastructure.* The idea is to minimize distance and maximize communication between the people involved in a process, thereby reducing the costs associated with travel time, handoffs, late error detection, rework and quality problems. There are several key points to bear in mind when thinking about the location of work:

• **Where work happens is changing**. In the past, work tended to be associated with a fixed and permanent location — the plant, or the office. However, as we move from the industrial age into a knowledge economy, the primacy of physical assets is fading. Work is less physical and tangible, and more intellectual and portable, so where work happens is no longer a given. That opens up numerous possibilities for process innovation.

• **Organizations are becoming more permeable**. In the past, work on a company’s premises was done by employees only. As organizations ask where it makes the most sense to do the work, they are relaxing these once-strict boundaries. Today’s more permeable organizations may have customers, suppliers or temporary workers maintain an on-site presence.

• **Virtual organizations are increasingly common**. Technology allows work to be done remotely. Today, workers telecommute from home, a software package turns lights and HVAC systems on and off remotely in multiple office buildings, and radiologists can immediately read X-rays in offices far from the hospital where the images were taken. The number of virtual organizations is growing rapidly, driven by lower costs, higher quality of resources and often higher satisfaction levels of people who can work flexibly across locations.

• **New work requires new facilities**. A change in the nature of work often requires a change in physical infrastructure. Many innovative processes rely on teamwork for proper execution. This in turn drives a need for plant or office facilities that enable fast-cycle communications and high levels of interaction — shared spaces, shared access to information and “generic” space that can be used by any member of a constantly changing team. This requires floor plans that are radically different from the usual office with its warren of private offices and cubicles. The payoff is faster processes, fewer errors and problems that are caught earlier in the cycle because team members are all involved right from the beginning of the activity.

• **Just say no to travel**. Since travel time is non–value-added time — whether it’s a professional flying city to city for meetings or a worker moving a long distance to the next station on an assembly line — look for ways to design travel time out of the process.

**RELOCATE EXAMPLES**

**How Can the Activity Be Moved Closer To the Customer or Supplier to Improve Effectiveness?**

**Example:** At Volkswagen’s Resende plant in Brazil, major suppliers will assemble components right in the plant, and then fasten those components to new trucks and buses. This will enable high-quality, accurate just-in-time delivery, and the coordination of cost-cutting initiatives.

**How Can the Activity Be Moved Closer to Related Activities to Improve Communication?**

**Example:** IVI Publishing, a Minneapolis-based multimedia publisher, reengineered its product-development process for CD-ROM titles, changing from a fragmented and lengthy sequence of tasks to an integrated process that relies on “title development” teams (a *title* is a particular CD-ROM product). Each team has complete responsibility for a title. This approach is supported by the design of the company’s new headquarters. The previous building featured individual offices clustered into departments, but the new space is predicated on the notion that most people at IVI will spend their time either working on a title development team or advancing their skills in a discipline-oriented center of excellence. Therefore, the facility emphasizes moveable workstations organized around shared team space, which accommodates the frequent movement of employees into and out of teams.

**How Can We Decrease Cycle Time By Reducing Travel Time and Distance?**

**Example:** Inacom Corp. used to ship monitors, keyboards and modems from suppliers across the United States to its headquarters in Omaha, Nebraska. There, the components were packaged with central processing units and shipped to customers — all of which meant that some parts were crisscrossing the country before final delivery. Now, a logistics company picks up components from manufacturers and CPUs from Inacom, packages them at four regional centers that are closer to end customers, and delivers them. Parts make fewer trips overall, making the process more efficient.

**How Can Geographically Virtual Organizations Be Created?**

**Example:** The Chiat-Day advertising agency has totally reinvented its California, New York, Toronto and London offices to better support rapid development and delivery of ad campaigns. Private offices have been replaced by unassigned cubicles, each equipped with a Macintosh computer, table and chair. Anyone can sit down at a free carrel and work. Project rooms house all the files and materials pertaining to a given client. Computers are ubiquitous, and no worker is more than 12 feet from a network connection that provides access to e-mail and remote files. All employees have virtual telephone extensions, so that they can be reached anywhere there is a phone.

This question can be applied to distance and communication between companies and their customers, as well. **Example**: In the United States, many banking institutions have moved into PC- and phone-based banking, and even “supermarket banking” through branches in grocery stores, thereby “bringing the bank to the customer.”

**Why Bring Them Together?**

In a manufacturing environment, traditional workspace design often leads to excessive work in progress (WIP) — that is, partially completed products or paperwork that must be moved between operations or subprocesses. Ideally, the amount of WIP should be close to none, with products and pieces flowing smoothly and immediately from one station to the next, or even being completed at a single, multipurpose workstation. When process performers are widely separated and out of touch with one another:

• errors and delays increase.

• workers are less productive, because they have to spend time moving from one position to another.

• handling costs and cycle times increase.

• the number of supervisory and technical specialists tends to increase.

• inventory investment increases because excess space is often filled with WIP.

**REDUCE (How Much)**

**Questions**

• How can the frequency of the activity be reduced or increased?

• How can critical resources be used more effectively?

• How would less information or fewer controls simplify and improve efficiency?

• How would more information enable greater effectiveness?

*This heuristic is about frequencies, volumes, resources, information and quality levels, and determining how much of each is really necessary and appropriate*. In spite of its name, the Reduce heuristic encourages designers to explore what kind of process improvements are possible if the frequency of activities varies up or down. Depending on the process outcomes desired, either direction may be the way to go. There are several key points to bear in mind when thinking about “how much”:

• **Change the frequency of activities**. Essentially, leave the activities the same, but consider changing the frequency with which they are performed. The classic example of this is meter reading by utilities. Rather than read the meter every month to create a bill for actual usage, they read less frequently, and estimate usage. They then reconcile any differences at the end of the year. This saves time and cost, and accomplishes the same objective.

• **Vary the amount and type of information captured**. Consider the amount of information gathered and used in the course of performing a process. Along with doing things, people also typically report on the things they do. It is not uncommon for companies to be drowning in data, but thirsting for information they can act on. Sometimes, changing the amount of information tracked — again, either more or less — can make a huge difference in the efficiency or effectiveness of a process.

• **Make the most of critical resources**. Scarce and expensive resources need to be utilized properly. In a hospital, for example, that may mean ensuring that doctors focus more time on diagnosis and treatment of patients, rather than chasing down misplaced charts or prepping examination rooms. In a manufacturing plant, it may mean finding ways to ensure that an expensive piece of equipment has a high utilization rate.

**REDUCE EXAMPLES**

**How Can the Frequency of the Activity Be Reduced or Increased?**

**Example:** In order to send monthly bills to corporate customers for the use of its photocopiers, Xerox sent meter-read cards to customers and asked them to read the meter, record the count and mail in the results each month. Asking how to improve this process led the company to consider automating these meter readings, which would have required a fairly expensive networking arrangement. Asking how much, however, led to a simpler solution. The company realized it did not need to read actual figures every month — that it could bill a flat rate on a monthly basis and, based on an actual meter read performed when technicians did annual routine maintenance, send an annual adjustment bill to customers.

**How Can Critical Resources Be Used More Effectively?**

**Example:** Manufacturers have learned that instead of sending a delivery truck out full and back empty, they can make or save money on the return leg by carrying cargo for other companies.

**Example:** When a golf course has too many players at once, it can take a parallel approach and “double tee” customers — start one group at the first hole, and simultaneously start another group at the 10th hole.

**Sometimes, Less Is More**

A major entertainment company required approvals for all expenditures over $500. That delayed production schedules as production assistants tried to track down busy executives for relatively minor expenses. The company raised the limit to $5,000. This eliminated the vast majority of approvals and sped up the production schedule. Budget reports could easily flag any unfavorable trends in expenses.

**How Would Less Information or Fewer Controls Simplify and Improve Efficiency?**

**Example:** A hospital was tracking the usage of low-cost supplies, such as bandages and tape, in great detail and sending patients itemized bills. However, because this cost varied little from one patient to the next, the hospital found it more effective to simply bill a flat per-room charge based on average usage of those items. The organization realized that the extensive effort that went into tracking a high level of detail provided little payoff.

**How Would More Information Enable Greater Effectiveness?**

**Example:** Progressive Insurance realized that by collecting slightly more data from customers, it could better assess risk levels, and therefore more accurately price insurance.

**What’s a Critical Resource?**

Understand which resources are most critical to process success and find ways to make the most of them. Example: In delivering primary health care, a doctor’s time is the most scarce and costly resource. Health-care organizations seek to maximize the doctor’s time with patients, as opposed to doing administrative tasks. In a company’s Order Fulfillment process, making the most of critical resources may include keeping the plant running and keeping trucks full both outbound and inbound. In delivering excellent customer service, the most critical resource may be keeping the customer database up-to-date and accurate.

What makes a resource critical?

• The process cannot operate without it.

• It is a high-cost item (either fixed or variable).

• It differentiates the company from competitors and drives competitive advantage in the marketplace.

**Information Is Power**

A major greeting-card manufacturer originally tracked cards sold by category (birthday, Christmas, etc.). But it did not know which individual cards sold well or poorly, causing build-ups of unsold stock. It installed sophisticated point-of-sale devices at 250 key stores that captured sales information down to the individual card level. By analyzing the sales of new cards prior to releasing them to 22,000 stores, the company was able to eliminate the poor sellers early, thereby avoiding the costs of unsold cards.

**RETOOL (How)**

**Questions**

• How can technology transform the process?

• How can the activity be automated?

• How can assets or competencies be leveraged to create competitive advantage?

• How can up-skilling, down-skilling or multi-skilling improve the process?

*This heuristic is about how work is accomplished — the technologies, human capital and competencies that enable organizations to do work.* Few truly innovative processes are created without extensive introduction of new technology and skills to an organization. There are several key points to bear in mind when thinking about this dimension:

• **Technology can transform processes**. Organizations need to think beyond automation when it comes to using technology. Automation may be a sensible move, but it is unlikely to create competitive advantage. The real payoff of technology lies in its power to transform. Not long ago, the use of handheld computers in rental-car return lots was a novelty; now the speed, convenience and accuracy that the technology brings has created a new standard in the industry. That is the kind of technology-related transformation that process designers should seek — but they should also be wary of pursuing “technology for technology’s sake.” Focus on the process outcome that’s desired, and find the technology that enables that.

• **Re-skilled human resources can be hard to beat**. Think beyond the capabilities of current human resources in designing new processes. Depending on the outcomes desired, employees may need more skills, fewer skills or just different skills to be effective at performing a new process. Organizations are simply wearing blinders when they insist that a new process must match the current skill levels of employees. Balance the costs of re-skilling against expected benefits of the new process, and expect that some employees will thrive in a new process, and others won’t. Re-skilling can be a daunting prospect, but it is one of the hardest things for competitors to match.

• **Know thy organizational strengths — and use them creatively**. Understand existing organizational competencies and consider using them in new ways. When a company has a world-class process, or underutilized resources, the best opportunity may lie in extending a process, assets or capabilities into new areas of the market.

**RETOOL EXAMPLES**

**How Can Technology Transform the Process?**

**Example:** The National car rental company’s Emerald Aisle program eliminates the time-consuming sign-up process. A member’s billing information is captured once and encoded on a “smart” credit card. That customer can then go directly to the rental lot, choose a car and check out using the card at the exit booth.

**Technology and Process**

In the search for innovation, processes and technology go hand in hand: Technology inspires ideas for new processes, while new processes drive the shape of technology.



**Example:** Andersen Windows established a kiosk system called Windows of Knowledge. Using the kiosk, customers can enter their home floor plan into the system and try out standard window options, or even design their own custom windows. The system tells them what can and cannot be built. When customers have come up with what they want, the system automatically generates a parts lists and price, and places the order. Increasingly, such applications are being integrated with the Internet and home PCs, moving them even closer to the customer.

**Example:** The Peapod company works with retail grocers to let customers shop for groceries online. Customers simply use their home PCs to submit a list of groceries, and Peapod handles the actual shopping and delivery. This process saves time for customers, and lets them shop when it is most convenient. The system also helps the customer by proposing reduced-price alternatives and offering coupons.

**How Can the Activity Be Automated?**

**Example:** The U.S. Internal Revenue Service has found the error rate on electronic filings to be just 1.3%, as opposed to approximately 15% for paper forms. Electronic filers generally receive refunds within two to three weeks, compared with a four- to six-week wait for paper filers.

**“To suggest that process designs be developed independently of IT or other enablers is to ignore valuable tools for shaping processes. A sculptor does not take a design very far before considering whether to work in bronze, wood or stone. A process designer pursuing innovation should consider all the tools that can help shape or enable the process, and IT and the information it provides are among the most powerful.”**

From *Process Innovation* by Thomas Davenport

Beware, however: Automating an existing process may just accelerate a process that is fundamentally flawed.

**How Can Assets or Competencies Be Leveraged to Create Competitive Advantage?**

**Example:** The William Companies, a natural gas company, faced increased competition due to deregulation. Executives realized that the right-of-ways used for their pipelines were a tremendous asset — in telecommunications, that is. They used the right-of-ways for fiber-optic cable, became known as Wiltel, and quickly entered a new industry.

**How Can Up-Skilling, Down-Skilling or Multi-Skilling Improve The Process?**

**Example:** An increase in employees’ skill levels can enable each individual to handle a wider range of integrated tasks, thereby reducing the need for handoffs. A major HMO considered putting RNs on the phone instead of less-skilled health professionals, so that the organization could handle a wider array of patient questions over the phone — rather than in the doctor’s office.

**Custom Build or Buy?**

As a rule, use packaged software for tactical processes and custom applications for strategic processes. Custom software lends itself to strategic processes in which flexibility is more important than fast implementation. Packaged software lends itself to tactical processes requiring less flexibility and to situations where getting the system quickly installed and operational is more important.



Adapted from Gartner Group

**Example:** At times, lower skill levels may be more cost-effective. When dispersed customer-service specialists are replaced by centralized call centers, the call-center employees will not normally need as wide a range of skills as their predecessors. However, because they are supported by customer and product information via computer, they will typically provide more consistent and cost-effective service.

**Tools That Reshape Processes**

There is a wealth of technologies that can totally reshape the way work gets done — and more are appearing every day. Process designers need to stay close to their technologist colleagues to track the latest developments. Here are just a few:

• The **Internet** and the **World Wide Web** provide a kind of “universal connectivity” that has led to new marketing approaches, delivery channels, disintermediation, hyper-intermediation, direct interactive links between manufacturers and consumers, collaboration across distances and, of course, electronic commerce.

• **Intranets** use Web pages to share graphical information with a company’s internal audiences; **extranets** use Web pages to share internal company information with customers and suppliers.

• **Groupware**, such as Lotus Notes, makes previously restricted information available to all workers throughout the organization. It also allows the organization to empower employees who are closest to the customer, manage knowledge capital more effectively, and foster a sense of community and shared purpose in a large workforce.

• **Network computing** overcomes the limits of geography, allowing the organization to coordinate processes and work across regions and borders. Customers and suppliers can also be tied into the company’s network for increased efficiency.

• **EDI** allows suppliers and customers to exchange business information — such as purchase orders, shipping documents, invoices and payments — electronically and without human intervention. The technology makes it possible to forge closer links with organizations up and down the supply chain, and respond more quickly to changing customer tastes. When integrated with a company’s internal systems, it can also pave the way to taking steps out of processes. (Traditionally done over private Value-Added Networks, EDI is gradually migrating to the Internet, as security on that more universal network improves.)

• **Shared databases** allow business partners to eliminate transaction-oriented activities between organizations, because both partners are working with the same real-time information.

• **Data warehousing** allows companies to gather and manage huge volumes of data to get a highly detailed view of customers’ tastes and segments. It has the potential to provide powerful new sources of feedback to processes, especially in the area of mass customization.

**Technology Tips & Traps**

• Ensure that the use of technology improves value delivered to the customer. If it doesn’t, is it worthwhile?

• Keep an eye on the original process vision, and use technology to enable that vision. Process design should be enabled by technology, not driven by it. Watch for warning signs that technology is becoming too dominant a factor, such as automating the way things are done today or accelerating existing process flows.

• Design new processes and new technology solutions in tandem. Start exploring technology options early in the process redesign. Don’t make the mistake of spending lots of time redesigning a process, only to discover too late that no technology can support the design.

• Recognize the inhibiting side of technology — early. Just as technology can inspire process designs, it can also present barriers to change. Ask questions such as:

• Is the technology viable?

• Will extensive user training be required?

• How much lead time is needed to develop the systems?

• Does the organization have the IT skills needed to create and maintain the system?

• If the platform is nonstandard, are the benefits worth the costs this will entail?

• Is the system flexible enough to change as the process changes?

• The process redesign initiative should be owned by operations specialists rather than information specialists. Combine process and technology design teams, so that both disciplines are included in an integrated approach.

• Do not focus on one technology. There is a tendency to devote energy and resources to the latest-and-greatest technology, which excludes other potentially valuable technologies. An emphasis on the latest technology can also cause the project team to lose sight of the strategic business objectives.

**Summary**

**Principle 3: Innovate, Don’t Duplicate**

The design of excellent processes depends heavily on innovation. To help uncover new possibilities and opportunities for process design, process professionals can use the Seven Rs:

• Rethink (Why)

• Reconfigure (What)

• Reassign (Who)

• Resequence (When)

• Relocate (Where)

• Reduce (How Much)

• Retool (How)

This set of heuristics gives process designers a systematic approach to looking at processes in a new light — to seeing past the obvious, to questioning the status quo and to getting beyond the baggage of tradition and habit. This wide-ranging exploration is critical to creating processes that deliver value over the long term and allow organizations to lead, rather than follow, in the marketplace.

**Principle 4:**

**Excellent Processes Need Excellent Owners**

**Overview**

*The role of Process Owner is critical to Process Excellence.* A Process Owner has end-to-end responsibility for achieving the outcomes of the process, and his or her influence cuts across functions and traditional divisions of power. The Process Owner:

• is responsible for measuring and improving the process, driving innovation and acting as an advocate for the process.

• participates in the governance processes of an organization.

• has a role that is fundamentally different from the role of the traditional functional manager.

At the same time, the Process Owner is only one player in a process organization. He or she needs the support and participation of a committed leader, skilled process performers and, in a hybrid organization (i.e., part process, part function), the support of the functions.

**The Roles of the Process Owner**

The Process Owner has three fundamental roles:

**Innovator: designing the process and measuring performance**

• determine process performance requirements

• architect, design and improve the process

• architect measurement and training systems

• review and interpret performance measures

• manage process-improvement efforts

**Coach: enabling the performers by acting as a resource, rather than a supervisor**

• serve as the process expert

• instruct in process technique

• handle exceptions and solve operational problems

• assist in conflict resolution

• redeploy resources on ad hoc basis

**Advocate: representing the process in the organization**

• negotiate performance requirements

• determine interfaces with other processes

• sit on the process council

• drive major change when needed

• negotiate with constituencies and stakeholders

Adapted from Hammer & Co., 1997

**Questions**

• Do all processes have an owner?

• Are the responsibilities of the Process Owner clearly defined? Does he or she:

• have accountability for achieving process outcomes and process performance?

• own the process design?

• act as a coach, mentor, facilitator and negotiator?

• act as an advocate for process thinking?

• have responsibility for a continuous-improvement process?

• Is the Process Owner measured and incented on the basis of process outcomes?

• Does the Process Owner’s scope span multiple functions? Is he or she empowered to work across relevant functions?

• Is the Process Owner in it for the long haul?

• Does the Process Owner create an environment of continual learning?

**Question:**

**DO ALL PROCESSES HAVE AN OWNER?**

*Processes don’t perform well on their own; they need someone who is accountable for their performance. Thus, every process must have an owner.*

**Processes in a Functional Environment**

Simply dropping a process into a functional structure is much like dropping a high-powered engine into a Volkswagen Beetle without altering the transmission, drive train, suspension and so forth. It can be done, but the finished product won’t work very well. The Process Owner is the chief engineer who makes sure that all the pieces fit together.

*A Process Owner is someone whose full-time job is the success of the end-to-end process.* The Process Owner is responsible for the entire process, from initial inputs to final outcomes. That means that there is no “other department” to blame if things go wrong. The Process Owner is the single point of accountability.

*The Process Owner is critical to building an enabling environment for processes.* Superior processes cannot simply be added onto an existing functional organization; they require changes in virtually all parts of the organization, from management style to measurement systems. A Process Owner provides the focused support and leadership needed to ensure that all the necessary resources and elements are in place.

**A Common Challenge**

Quite often, a Process Owner does not “own” the people who perform the process; often those people are still housed in functions. Therefore, a Process Owner must be a mentor, coach and negotiator, rather than a boss or task master. This is a challenge for many Process Owners who were trained in the traditional command-and-control style of management. In addition, process performers, after years of training, are accustomed to being told what to do and often have difficulty making decisions and dealing with ambiguity.

*Designating a Process Owner sends the message that processes are important.* In addition to providing management attention, naming a Process Owner makes it clear that the transition to a process orientation is real and lasting, and not just another improvement program of the month.

**What Does It Take to Be a Process Owner?**

To be effective, a Process Owner should be:

• respected within the organization for getting results

• determined, confident, energetic, persistent and thick-skinned

• empathetic to and especially adept at handling human concerns

• process-oriented, process-knowledgeable

• devoid of any personal agenda — that is, not egocentric or precommitted to a particular solution or political view

• able to grasp the big picture while being especially attuned to the customer’s perspective

• a superior listener

**Question:**

**ARE THE RESPONSIBILITIES OF THE PROCESS OWNER CLEARLY DEFINED?**

Success depends on an owner who plays the role — a role that is very clearly defined.

***Does the Process Owner:***

• **have accountability for achieving process outcomes and process performance?** Accountability should encompass both process outcomes (did we make the number of widgets we planned?) and process performance (did the process operate within the expected parameters of time, cost and quality in producing those results?). This accountability should be formally assigned and used to evaluate the Process Owner’s performance.

**Ownership and IT**

In owning the process design, the Process Owner should also own the IT design. In fact, processes are most successful when the Process Owner owns the IT budget.

• **own the process design?** The Process Owner should:

• be involved in the original design of the process.

• understand the design well enough to explain it to others.

• be passionate about seeing it realized.

• be committed to improving it.

As owner of the design, the Process Owner is a key innovator and helps in the cross-pollinating of ideas across the organization.

• **act as a coach, mentor, facilitator and negotiator?** The Process Owner should not be a traditional, controlling manager. However, this is not simply a matter of being nice to people — it is a matter of making people more effective. Process Owners need to have skills and attitudes that bring out the best in the people who do the work — that is, the process performers. As coach and mentor, the Process Owner shares process expertise with performers so that they can do a better job. As facilitator and negotiator, the Process Owner helps performers work through disagreements or unexpected obstacles, and bargains for the resources performers need. Overall, the emphasis is on enabling the performers, rather than controlling them. **Example**: At Trane (a manufacturer of air-conditioning and heating units), a choice had to be made between two expensive pieces of equipment. The team making the selection looked to the Process Owner for the decision. Instead, the Process Owner helped team members “do the math” and enabled the team to make the decision.

• **act as an advocate for process thinking?** Process thinking is new and different in most organizations. The Process Owner must “walk the talk,” and constantly reinforce process thinking through words and actions. In addition, the Process Owner must be an advocate for his or her specific process, being careful to avoid advocating one process at the expense of the organization’s greater good.

• **have responsibility for a continuous-improvement process?** Process Excellent companies have explicit processes for continuous improvement. The Process Owner is responsible for those processes and for identifying:

• ideas for *small improvements*, which are likely to surface through the day-to-day monitoring and periodic analysis of process performance, and through the suggestions of process performers.

• the need for *large improvements*, which may surface through the monitoring of changing customer requirements and other external factors. Tracking such external factors is one aspect of an organization’s “governance processes,” which produce strategic decisions that affect the course of the business. The Process Owner should have a role in governance processes — typically, that means having a seat on an organization-wide process council.

**Changing Roles**

“As a manager, it’s been a big change. I’ve had to learn to back away from my normal command mode. Because I’ve been managing data processing for many years, the thought used to be that I’d just go off and automate our processes on my own. But now the teams are empowered to create the automated processes and pick our software vendor. I’m just there as a resource and a coach for the teams dealing with automation issues.”

David Pou, Premier Bank; “Real-World Reengineering: Supporting Organizational Change at Premier Bank,” National Productivity Review, Spring 1996.

**Process Owners and Innovation: Roles and Responsibilities**

|  |  |
| --- | --- |
| **Roles** | **Responsibilities** |
| Assess process performance requirements in light of customer expectations | * Manage ongoing customer communications and understand customer requirements * Determine process performance requirements * Understand the capabilities of the process * Understand the capabilities of the competitors and other companies (e.g., by benchmarking) |
| Facilitate work across the organization in the assigned core process | * Resolve conflicts and disconnects between functions * Engage process performers in dialogue about their problems and perceptions |
| Recommend improvement strategies | * Review and interpret performance measures * Formulate the vision * Assess processes for efficiency and effectiveness, and commission improvement teams |
| Lead improvement activities | * Ensure that the direction is clear and expectations are understood * Select the right resources for each team * Allocate support and arrange for training * Establish effective tracking and monitoring systems * Manage change program |

**The Process Council**

As discussed in the Target High-Value Processes principle (see Chapter 2), processes cannot be designed in isolation. To avoid suboptimization, process-based companies typically have a process council that looks at organization-wide performance. The process council is usually made up of:

• the CEO or COO

• the Process Owners

• a cross-process program manager

• the heads of key support groups, such as Human Resources or Technology

**Example**: At Xerox, a group of high-level Process Owners has been assigned overall, full-time responsibility for processes. In addition, for each process there is a process sponsor, who is an executive vice president who reports directly to the CEO. Working together as a process council, this group provides a means for transcending individual processes — for making sure the various processes are integrated and for keeping the larger organizational goals in sight.

Sources: *Process Reengineering*, by Lon Roberts; *Beyond Reengineering*, by Dr. Michael Hammer.

**Question:**

**IS THE PROCESS OWNER MEASURED AND INCENTED ON THE BASIS OF PROCESS OUTCOMES?**

*The best way to ensure that the owner will focus on delivering process outcomes is to tie his or her compensation to the performance of the process.*

*Like everyone else, Process Owners need measures to help them stay focused on process outcomes.* A Process Owner’s role is different from that of the functional manager, and the measures used to gauge the owner’s performance must be different as well. A Process Owner’s performance should be assessed in terms of the process outcomes he or she achieves, rather than tasks completed. Process outcomes should be explicitly spelled out in a Process Owner’s performance goals, with rewards and recognition (e.g., raises, promotions and incentives) aligning to those outcomes. **Example**: At Duke Power, 80% of the Process Owner’s bonus is based on successfully achieving the performance objectives of the process.

*Ensure that the Process Owner’s measures are aligned with those used for process performers.* (See Chapter 5, “You Get What You Measure,” for more on aligning measures.) **Example**: In undertaking a business improvement initiative, Fleet Bank decided to measure senior executives on positive changes in stock price, while measuring performers on achievement of aggressive cost-cutting targets. Because the cost-cutting targets were not fully achieved, performers did not receive incentive payouts. But because the stock market in general happened to be doing exceptionally well, the executives got handsome bonuses. This caused enormous resentment within the ranks, and led to high turnover. When designing measures for a Process Owner, don’t stop there. Measures need to be aligned up and down the organization.

**Question:**

**DOES THE PROCESS OWNER’S SCOPE SPAN MULTIPLE FUNCTIONS?**

**IS HE OR SHE EMPOWERED TO WORK ACROSS RELEVANT FUNCTIONS?**

*Because processes span multiple functions, the power of the owner should do so as well.*

*Processes span multiple functions; a Process Owner’s authority, influence and access to information should do the same*. This does not mean that everyone involved in performing a process must report directly to the Process Owner — but the Process Owner must have enough influence on work and performance evaluations to be able to guide people and affect the operation of the process. Ensure that traditional functional fiefdoms do not stand in the way of the Process Owner’s ability to exercise necessary authority. **Example**: At one U.S. utility, the Product Development process was redesigned around cross-functional teams. The head of the finance department balked, however, at the notion of marketing people managing, scheduling and evaluating the financial analysts on the product teams. Ultimately, that finance manager was replaced so that the process could function effectively.

*The same person should not act as Process Owner and functional manager at the same time.* Otherwise, his or her attention will be divided between two often-conflicting roles. Functional roles typically involve controlling and hoarding information and other resources; they are internally oriented and focused on departmental tasks. A Process Owner, on the other hand, needs to take a customer-oriented view that cuts across internal boundaries. An executive trying to do both jobs is left juggling two very different approaches and objectives. Those who try to wear two hats usually end up wearing the most comfortable one the most often — and typically, the functional role is the older, more familiar hat. (See “Process Owners vs. Functional Managers,” opposite.)

**Process Owners vs. Functional Managers**

Cynics sometimes claim that the coaching aspect of the Process Owner’s job is just a linguistic trick — that it is nothing more than the old supervisory role. In reality, there are several fundamental differences.

|  |  |
| --- | --- |
| Process Owner | Functional Manager |
| Monitors results, examines outcomes | Monitors subordinates, examines work |
| Only gets involved when approached | Is elemental link in chain of work |
| Visioning, facilitation and negotiation skill | Task skill (e.g., previous star sales associate) |
| Represents the customer and the team within the organization | Represents the department, the boss |
| Supportive behaviors | Dictatorial, directive behaviors |
| Helps solve problems | Solves problems |
| The "oil" that lubricates the performance of others | The "glue" that holds the organization together |
| Encourages teams to challenge the process | Encourages employees to "color inside the line" |

Adapted from Hammer & Co., 1997

**Question:**

**IS THE PROCESS OWNER IN IT FOR THE LONG HAUL?**

*Long-term success requires long-term thinking. Process ownership must be a meaningful career move, not a short-term assignment.*

*Process Excellence takes years to achieve. It is an ongoing commitment to a different kind of business operation*. The changing of Process Owners reduces momentum and increases the risk of the process initiative being undermined or stalled. Companies may have to revamp their promotion policies and career paths so that professional success is not equated with rapid movement from one position to the next, but rather with long-term results. **Example**: The Process Owner of the Market to Collection process for a major manufacturer was providing the vision and direction for a process initiative. When he retired (somewhat unexpectedly), process-improvement efforts stalled and executives started to rethink the vision.

*Ensure that the long-term success of the Process Owner is tied to the long-term success of the process, through bonuses and other rewards*. If the desired outcomes aren’t really expected to happen until three to five years out, then construct an incentive program to reward three to five years of tenure (at least) in a Process Owner position. However, be alert to any unintended consequences of such incentives. **Example**: One large telecommunications company incented executives with bonuses granted every three years based on profitability. During the third year, however, prior to bonuses being issued, all investments stopped to make the organization look more profitable. **A better idea**: Issue bonuses every year based on the performance objectives for the processes. Be sure that process outcomes are specific and measurable and that they take a long-term view. Therefore, if the biggest improvements are expected five years out, the bonuses at that time should be larger to reflect the higher hurdles.

**A Leader Makes It Happen**

The Process Owner is only one player in a Process Excellent organization. Without a strong, committed leader, significant process change is unlikely. The leader — usually a top-level executive — supports and nurtures the Process Owner’s effort. An effective leader:

• **creates a sense of urgency.** Leaders often drive change by finding a “burning platform” — a competitive threat, falling profits or some other crisis — that can be used to drive people out of their comfort zones.

• **identifies and aligns best resources.** An effective leader must be able to pull resources from across the organization, and gain support from executives and managers for the process change effort.

• **creates and communicates the vision.** The leader must be able to paint a picture of the better world to come. This vision pulls the organization forward, and helps define how individuals and processes will fit together to produce the right outcomes.

• **understands that process improvement drives business improvement.** A leader must be process literate enough to explain the new process, and how the outcomes of the process will benefit the company. Dr. Michael Hammer says, “Only a process-oriented senior executive who is capable of thinking about the entire value-added chain should lead the effort — seniority and authority are not enough.”

• **overcomes adversity.** The leader must keep an “ear to the ground” for signs of resistance to change, reinforce a commitment to the vision and defuse any doubts stakeholders have about the change.

• **has the necessary clout.** Because of the breadth and depth of process change, the leader must have the power to reallocate the firm’s best people, resources and knowledge capital to support the process change. He or she must be well-respected, able to navigate stormy political waters and capable of overcoming departmental squabbling.

**Question:**

**DOES THE PROCESS OWNER CREATE AN ENVIRONMENT OF CONTINUAL LEARNING?**

*The continuous evolution of the process requires a learning organization. The Process Owner is accountable for creating this environment.*

**Learning and Problem Solving at Xerox**

At Xerox, employees are provided with decision-making tools in four areas:

• generating ideas and collecting information (brainstorming, interviews, surveying)

• reaching consensus (list reduction, rating forms, weighted voting)

• analyzing and displaying data (cause-and-effect diagrams, force field analysis)

• planning actions (flow charts, Gantt charts)

Employees are trained to use these tools by working in teams to solve real problems. The result: A common vocabulary and consistent, company-wide approach to problem solving. Employees are expected to use the techniques at all meetings, and no topic is off-limits.

*A Process Excellent organization is a learning organization*. Information about process performance should be widely available and shared, and all process performers and owners should use that information to help improve processes. In addition, process performers should be encouraged to enhance their skills and acquire new knowledge.

*Process Owners help create the right environment for learning*. The Process Owner should encourage learning by:

• supplying the tools for process performance monitoring and information sharing.

• helping shape career paths that reward horizontal growth, rather than the traditional climbing of a hierarchical ladder.

• using process performance data for learning, rather than placing blame.

• visibly recognizing and rewarding people for learning new skills.

*A learning environment enables performers to do their work more effectively*. Learning environments are not an end in themselves — they are created to help improve the performance of the process. In a learning environment, performers are more likely to:

• make correct decisions.

• take timely action on their own initiative.

• work well in team situations.

As a result, the process is more likely to perform successfully.

**“Only by making process management the backbone of the organization’s management practices can a constant readiness to change be achieved.”**

From *Building Process Excellence; Lessons From the Leaders*, by Andersen Consulting and Economist Intelligence Unit

**The Attributes of Effective Process Performers**

Just as the Process Owner depends on a leader for help in achieving Process Excellence, he or she can't get there without the process performers – the people who do the work. In a process-centered organization, the process performers have certain important attributes. These performers:

* **focus on outcomes rather than tasks.** They understand how their work contributes to the whole, and they feel responsible for results. They are willing to step outside of their assigned tasks to make sure that the process produces the right result.
* **are cross-functionally educated.** They learn new jobs and skills, so that each worker can perform different tasks as needed, and understand how one worker's role relates to the work of others on the team and elsewhere in the process.
* **make the critical decisions and take initiative.** With its outcome-oriented perspective, the process performers role becomes that of the professional, rather than the worker. Process performers see decision making and the identification of opportunities and problems as an integral part of their job.
* **work in teams rather than alone.** They see themselves as a part of a team, and have some of their incentives based on team performance.
* **continually learn.** They understand that in order to contribute and succeed within a constantly evolving process, they must acquire new skills throughout their careers.
* **value contention and disagreement for the ideas they inspire.** They understand that competing ideas are a source of innovation, and they have the tools, forums and procedures for surfacing and evaluating new ideas.
* **use knowledge assets to their advantage.** Process performers are no longer the passive recipients of information. They have the tools and skills to manipulate it, analyze it and use it to add value – to help customers, improve operations and exploit opportunities.

**The Learning Organization**

A learning organization is “an organization that is continually expanding its capacity to create its future.”

Peter Senge, *The Fifth Discipline*

**Summary**

**Principle 4: Excellent Processes Need Excellent Owners**

• Process Owners are essential in a process-centric organization.

• “Process Owner” is a hands-on, multifaceted role that is different — in style and substance — from the role of traditional functional manager.

• Process Owners manage the day-to-day process and are the catalysts for process improvement.

**Principle 5:**

**You Get What You Measure**

**Overview**

**Characteristics of Good Measures**

A good measure:

• is accurate.

• is objective.

• contains one or more dimensions (e.g., time).

• includes a target (e.g., 75% faster).

• balances the trade-offs between cost/quality, speed/flexibility.

• is clear to all involved.

• supports the organization’s strategies.

*Process measures and targets are the key indicators of an organization’s performance*. They:

• provide feedback for achieving results.

• communicate what is important throughout the organization.

• shape behaviors — people act according to the way they are measured.

The importance of measures is widely recognized, yet they are often one of the most neglected parts of the business. That is because creating a good measurement architecture is difficult. There is no right or universally accepted answer. And, because it eventually affects compensation, measurement is a highly sensitive area.

**Questions**

• Are process measures balanced across multiple dimensions?

• Do the performance targets seem achievable? If so, consider setting more aggressive targets.

• Are the performance targets defined concurrently with, or in advance of, the process design?

• Are the process measures future-oriented?

• Are the process measures timely, visible, understandable and clearly communicated?

• Do the process measures focus on outcomes rather than tasks?

• Are process measures tied to the desired organizational outcomes?

• Are individual/team measures tied to the desired process outcomes? Do the measures encourage teamwork?

• Are process measures holistic? Has their impact on other processes been taken into account?

**Question:**

**ARE PROCESS MEASURES BALANCED ACROSS MULTIPLE DIMENSIONS?**

*Avoid the “squeezing the balloon” syndrome where one part of the business is optimized (squeezed) while other aspects of the business deteriorate.*

*Include both financial and nonfinancial measurements*. Managing a process entails a focus on operational concerns, such as cycle time and the accuracy with which work is done. In this environment, nonfinancial measures become critical. Financial measures don’t provide information that enables the organization to take timely action. Financial measures:

• tend to be historical in nature.

• don’t provide insight into why the numbers are up or down.

• are driven by accounting needs, not operational considerations.

*In addition, an action that makes the books look good can sometimes have a negative impact on the process and the customer.* **Example**: To improve its profitability picture, a large beverage company kept fully depreciated vending machines in the field well beyond their normal useful life. Customers suffered because older machines broke down more frequently.

*Nonfinancial measures provide greater insight*. Nonfinancial measures such as quality, cycle time, customer-retention rates and employee satisfaction provide deeper — and earlier — insight into the operation of a process. And, nonfinancial measures can often lead to financial benefits. **Example**: A manufacturer was losing business and wanted to sell more product. When the company investigated further, it found that it had an extremely low customer-retention rate due to poor service. That insight allowed the company to improve service, and increase sales.

*A focus on any one dimension of performance will distort behavior*. **Example**: Several years ago, Sears measured its auto centers on volume alone. The result was massive fraud. The auto centers started billing customers for repairs that weren’t necessary and sometimes weren’t even performed. That landed Sears in court. While this is an extreme example, it is telling. You really do “get what you measure.”

*A single measure can be a balanced measure*. Multiple measures are not always needed to achieve a balanced outcome. **Example**: “Perfect order” measures the quality of the order only. “Cost-effective perfect order” balances two key dimensions and describes a desirable process outcome. **Example**: A purchasing department initially measured its success in terms of how well it bought the lowest-cost items available. Over time, the department learned that low initial costs sometimes correlated with long lead times, less-frequent deliveries and large lot sizes — all of which contributed to increased inventory levels. The department modified its measures to track costs over the entire life cycle, thereby using a single measure to encourage people to balance low cost with quality.

**Kaplan’s Balanced Scorecard**

Robert Kaplan, in his seminal Harvard Business Review article on the balanced scorecard, describes four specific types of measures that should be included in any measurement architecture:

• financial

• customer

• operational

• innovation (organizational learning and agility)



**Fixing the Potholes**

In an effort to address a pothole problem, a municipal government began measuring what it spent on repairing holes — and found that costs kept rising. The measure inadvertently prompted people to focus on minimizing expenditures and settle for cheap, inferior materials that would not last more than a year. Because it did not balance the cost focus with quality, the municipality wound up spending more to repeat the work every year than it would have spent on repairing the potholes correctly in the first place.

**Question:**

**DO THE PERFORMANCE TARGETS SEEM ACHIEVABLE? IF SO, CONSIDER SETTING MORE AGGRESSIVE TARGETS.**

*“The thing that is always wrong with measurements is that you set them to a place where you can meet them.” — Jack Welch, CEO of General Electric*

*Measures can drive innovation if ambitious targets are set*. An ambitious target — or stretch goal — forces people to “think out of the box” and find new ways to do things. Setting a stretch goal means calling for a 50%-100% improvement in performance, rather than an incremental 5% or 10% gain. Stretch goals are based on what should be attempted, rather than what can be accomplished.

*Base stretch goals on aspirations, not extrapolations*. If benchmarking shows that a company’s process is four times worse than a competitor’s, even a 50% improvement in performance would be insufficient. So, don’t set targets based on past performance (e.g., a 50% improvement) — set them as an articulation of future requirements and aspirations (e.g., cycle time of one hour, which will set a new industry standard).

**Stretch for the Gold**

Shoot high and reward for good performance even if the target is missed, rather than shooting low and succeeding.



*Stretch goals can help motivate high performance*. In the early 1960s, President Kennedy challenged the United States to “put a man on the moon by the end of the decade.” This simple, clear target seemed unattainable at the time, but it galvanized the space program, and in the end the goal was achieved. Setting a stretch goal can pay long-term dividends in terms of the pride and motivation people feel in doing their work.

*Modest goals bring modest — or no — results*. Measures are powerful shapers of people’s expectations and behaviors. Too often, companies squander management attention and other resources on projects that have a limited scope and, consequently, limited benefits. Process change is often big change, and the goals need to be commensurately large. Modest goals for a process-change effort may invite trouble because people aren’t challenged to make a break from the status quo.

**Making the Impossible Happen**

At a large greeting-card company, senior executives set a stretch goal of getting new cards “from concept to market in a year.” (Cards typically took 18 to 24 months.) Individual departments — the designers, writers, artists, printers, shippers and so on — were aghast: Surely the executives did not understand what it took to produce cards. But the target became a rallying cry for those advocating process change, and in the end the company got cards to market in four months. The “impossible” goal forced people to abandon their conventional approaches and try something new.

**Question:**

**ARE THE PERFORMANCE TARGETS DEFINED CONCURRENTLY WITH, OR IN ADVANCE OF, THE PROCESS DESIGN?**

*The establishment of measures and targets cannot be an afterthought. They must be done*

*early in the change effort to provide clear goals that people can aim to achieve.*

*Set performance targets early in a process-design effort*. Because measures can be difficult to design and agree on, many companies delay any attempt to quantify the results they wish to achieve. This is a mistake. First, it is virtually impossible to design a process without the “specifications” for how it needs to perform. Second, as mentioned earlier, stretch goals can have a powerful influence on how a new process is designed. If performance targets are left undefined, a company sacrifices an important tool for motivating people to innovate.

*Break performance targets down to successive levels of detail*. Setting performance targets is an ongoing activity, not a one-shot task. Initially, a high-level stretch goal serves as both a rallying cry for a process-change effort, and an overarching performance specification. Then, the stretch goal is decomposed into specific operational measures and targets along dimensions such as time, cost, quality and service levels. Ultimately, the operational measures and targets need to be further broken down into performance measures and targets that apply to an individual or team.

*Pilot measures and targets when you pilot the new process design*. This approach does two things: It provides a baseline for how well the new process is working; and it provides insight into the feasibility and usefulness of a new measurement architecture. There will be a certain amount of trial and error before the right set of measures is identified. Pick a measurement approach, try it out, and make modifications based on what you learn. Don’t be too quick to abandon a new set of measures if they don’t work perfectly right away. It takes time to understand why measures aren’t working, and to make the right modifications.

**Set Measures Early, Often and Iteratively**



*Constantly revisit measures and targets as the process matures*. Like the processes they track, measures and targets need to evolve. As process performers become more proficient in their work, the performance bar can be raised. And as customers and competitors present new challenges and opportunities, organizations may need to measure different things. **Example**: In many Japanese companies, the process for improving processes has its own metrics, most of which relate directly to increasing customer satisfaction, achieving margins within a predetermined price structure and gaining market share.

**Question:**

**ARE THE PROCESS MEASURES FUTURE-ORIENTED?**

*Measures must not only describe what has happened, they must also help in determining what should happen going forward.*

**You Can’t Get Where You Want to Go by Looking in the Rearview Mirror**

Just as a driver can’t reach a destination if he is always looking behind him, a business cannot attain its objectives if it only focuses on the past. As the speed of change increases, knowledge of what has worked in the past becomes less useful in preparing for the future. When developing a measurement architecture, consider the ratio of backward-looking to forward-looking measures. Rethink the measurement architecture if the ratio is heavily weighted toward the former.

*You can fix a problem that is on the horizon, but you can’t do much about one that has already occurred.* A common measurement pitfall is to measure only things that have already happened — number of sales closed, costs and so on. These backward-looking measures are important, but they need to be balanced with forward-looking measures (e.g., How many sales leads are in the pipeline? Which expenses are projected to be over or under budget?). With such future-oriented measures in place, it is more likely that corrective actions can be taken in time, and that problems can be addressed while they are still relatively minor.

*Future-oriented measures can also help identify opportunities*. The shift in consumer preferences from sedans to sport utility vehicles, from beef to chicken, from work to leisure time — all these represented huge business opportunities. While companies can’t actually measure the future, they can spot trends — and those companies that routinely measure where things are going have a better chance of capitalizing on those trends before their competitors do.

**Future-Oriented Measures**

At a large HMO (health maintenance organization), a team redesigning the primary-care delivery process struggled to identify the right measures. Historically, the HMO had counted the number of procedures doctors performed and what those procedures cost. In the future, it wanted to measure such things as the overall health of its member population, the degree to which preventive health procedures were reaching the community, and the relative success of different protocols on a given health problem. It was difficult to define measures for such things, and it required extensive new data-collection mechanisms. But the HMO realized that it needed new measures for assessing whether the desired organizational outcomes (lower costs per member, better health for the member population) were being achieved, and whether key drivers of those outcomes (expanding access to preventive health care) were being performed.

**Question:**

**ARE THE PROCESS MEASURES TIMELY, VISIBLE, UNDERSTANDABLE AND CLEARLY COMMUNICATED?**

*For measures to make an impact on the performance of an organization, they must be clearly communicated to the organization. Communicating the measures helps a company convey its strategy.*

**Measures That Communicate a Strategy**

Several years ago, Cigna Property & Casualty was in financial trouble and needed a new strategy. The first step was to articulate a set of measures that would clearly state the strategy in both financial and nonfinancial terms. These were then communicated throughout the organization. For example, at a high level, premium growth was an objective. But getting profitable growth in different businesses requires different actions. So in some businesses, Cigna chose increases in premiums from new producers as a leading growth measure; in others, it chose premiums from new segments; and in still others, new premiums from new product sets. By changing the measures, the new strategy was communicated to the organization.

*In order to make decisions and act effectively, process performers must know the score*. People must have a solid grasp of measures, and of how their behavior can affect process performance. This means that measures must be:

• timely — so performers can act before a situation is beyond help.

• visible — shared openly and broadly with performers.

• understandable — not so complex that performers are confused about how to reach a target.

• clearly communicated — so there is no ambiguity about what the score is. This means that it is important to articulate how the measure is calculated.

**Failing to Share**

At one U.S. utility, a CEO meeting with his top 50 managers said that he was unhappy because the company was tens of millions of dollars under its revenue target for the quarter — and he was even more distressed at the lack of urgency his managers showed. The managers reacted with surprise — many were unaware of the revenue shortfall because such information was not routinely shared outside of the executive “inner circle.” The lack of urgency was essentially due to a lack of information.

A process-centered organization is predicated on open and frequent sharing of performance data with all levels of the organization. Leaders and Process Owners must be consistent and active in communicating measures and performance data in order to create a “measurement culture.”

*Measures send a powerful message about what is important, which helps shape behavior*. Countless studies have shown that people act according to the way they are measured. To establish a performance measurement system is to determine how people understand their contribution to the organization and, ultimately, what they do. In short, by quantifying performance, the organization influences it.

**The Hawthorne Effect**

In an experiment, researchers told a group of employees who were responsible for inspecting a product that they thought the lighting in the area was too dim. The researchers then installed brighter lights. Next, they conspicuously observed the inspectors and their resulting production levels — and sure enough, productivity improved.

A short time later, the researchers went to the same group of employees and hypothesized that the lighting was too bright, causing a glare and thus negatively affecting production levels. The researchers dimmed the lights to below the original level. Once again, productivity improved.

In short, researchers found that the mere act of measuring and focusing attention on an area had an effect on productivity.

**Question:**

**DO THE PROCESS MEASURES FOCUS ON OUTCOMES RATHER THAN TASKS?**

*Just as processes focus on outcomes rather than tasks, process measures must focus more on what gets produced rather than on how the work gets done.*

*Measure process outcomes in order to determine whether the process is achieving its goal.* Process Excellence focuses on implementing processes that produce outcomes of value to customers. The best way to determine this is to measure outcomes, rather than activities. **Example**: A major beverage company tracked the number of repair calls on its vending machines (activity), because it was concerned about the rising costs of maintaining equipment. While this was an interesting number, it didn’t help much because it failed to show whether the company was attaining the process outcomes it wanted, such as increasing the overall uptime of machines. When the measures were changed to focus on outcomes, costs dropped and customer satisfaction increased.

*Don’t forget process performance. In addition to process outcomes, measure process performance* to ensure that the process is operating within expected parameters of time, cost and quality in producing those results. In other words, it does little good to produce the planned number of widgets if they are over budget, late and of poor quality. **Example**: At a major entertainment company, it was an unspoken rule that if a new television show turned out to be a hit in the ratings (a desired process outcome), all was forgiven regarding cost overruns or late schedules (process performance). Over time, this lack of attention to process performance measures led to costs being dangerously out of control and programming schedules having to be juggled because new shows were not ready by expected release dates. The company was forced to adopt a set of process measures that included performance as well as outcomes — that is, a more balanced set of measures.

**The State of the State**

Avoid measuring for the sake of measuring, especially if the measures are not actionable and do little to guide behavior. Consider the state of Oregon.

This picturesque state loves to boast about its quality of life. Far more interesting, though, is its fascination with the quantities of life. It is, for example, official state policy that by the year 2010, 90% of Oregonians will exercise aerobically for 20 minutes three times a week. It is also enshrined in state law that 70% of children will be free by then of tooth decay, and that 50% of adults will have entertained a foreign visitor....

The quantifying craze began five years ago with a noble goal: Set lofty targets for the state and measure the government’s progress. Oregon calls its program Benchmarks, a pioneer in the fashionable field of “results oriented” or “outcomes based” governing. But, hundreds of benchmarks later, something is off-target. “It’s a little out of control,” says Pamela Wev, who runs the Benchmarks program for the Portland area....

From *The Wall Street Journal*

**Question:**

**ARE PROCESS MEASURES TIED TO THE DESIRED ORGANIZATIONAL OUTCOMES?**

*The sum of all process outcomes must add up to, and be aligned with, the overall business objectives.*

Be sure that organizational outcomes drive the process outcomes.



*Ensure that the results produced by the process clearly support organizational outcomes*. Process measures should be aligned with the organization’s overall goals, both financial and nonfinancial. This may sound like common sense, but it is not unusual to find measures that do little or nothing to support organizational goals. **Example**: One company has more than 14,000 measures — some 10,000 of which are not directly linked to anyone’s compensation. Process measures should help all people in the organization understand how their work and their performance are linked to the company strategy.

*If desired organizational outcomes are unclear, stop and clarify*. Sometimes, process redesign efforts flounder due to a lack of understanding of or agreement on what organizational outcomes are desired, or what strategies should be used to achieve those outcomes. Undertaking a major process redesign without having a clear understanding of these things risks wasting resources and disrupting the organization in pursuit of the wrong goals. **Example**: Faced with falling sales, a property/casualty insurance company was planning to redesign the process by which it acquired new business. However, the executive team could not agree on which customers they wanted to acquire — commercial, high-end residential, etc. They stopped the process-redesign effort in order to gain consensus on a strategy.

*Use measures to learn about causality between process performance and organizational outcomes*. Sometimes, organizations don’t really know what the drivers of the business are — that is, what kind of process performance would actually lead to certain organizational outcomes. In such cases, some trial-and-error experiments with measures may be necessary. Using preliminary measures, and then quickly modifying those measures as the organization learns more about business drivers, can be an effective approach. All measurement architectures need to evolve — in some cases, more iterations of measurement approaches may be necessary.

**Unable to Manage the Mission**

A manufacturing company’s mission statement says, “This organization provides products and services which consistently meet or exceed standards set by our customers, on time and at the lowest cost.” The CEO was asked, “How do you know? What reports tell you what your customers’ standards are, if you are delivering on time, and if you are the lowest-cost provider?” He had to admit that although his mission statement was powerful, he had no way of knowing whether people in the organization were working toward that mission. In order to realize a mission or vision, people must have specific measures and targets to shoot for.

*Use a metrics tree to link organizational outcomes to process measures*. It may be helpful to actually diagram the link between organizational outcomes and process measures. An organizational outcome is something that is desired, but over which the organization has no direct control, such as increased market share. Organizational outcomes are achieved by process outcomes, which the organization does have control over. Process measures need to focus the organization on the right kind of performance to get the desired organizational outcomes. (See “Summary” at the end of this chapter for a description of the metrics tree.)

**Question:**

**ARE INDIVIDUAL/TEAM MEASURES TIED TO THE DESIRED PROCESS OUTCOMES? DO THE MEASURES ENCOURAGE TEAMWORK?**

*Process measures must be aligned with the reward system used by the organization supporting the process, so that those people will execute the process effectively.*

Be sure that process outcomes drive the individual and team measures.



*Link individual performance measures, compensation and rewards to process outcomes*. Measures should translate process goals into day-to-day terms and help people at all levels make the connection between their work and the company’s strategy. Process Owners, senior management and people performing the process should have their compensation tied to the desired results. **Example**: A computer software company found that paying 100% of a commission to the salesperson when the sale closed tended to encourage an attitude of “take the money and run.” That is, salespeople focused more on getting the next sale than on ensuring that new customers were actually successful and happy using the software. The company modified its compensation system so that the salesperson received 50% of his or her commission when the sale closed and the other 50% only when the customer paid the bill (a proxy for customer satisfaction). This improved the level of after-sale service to customers, and increased the number of reference-able accounts for the software maker.

*Compensate people on what they can control and on what they can influence*. The people being measured must be able to adjust their behavior to improve the results. It is unfair, and ultimately de-motivating, to give people responsibility for results without the tools or authority to make those results happen. Remember, however, that in a process-centered organization, there are many instances where people must use their influence, rather than any direct control, to achieve an objective. A Process Owner, for example, may not have direct authority over all the people in his or her process. And in the case of process performers who work in teams, peer pressure is an important tool in getting results. **Example**: Continental Airlines wanted to achieve the highest ranking for on-time departure of its flights. It incented employees — the gate agents, ticket agents, flight attendants, baggage handlers, etc. — to meet this goal by offering $60 bonuses to each employee for each month that Continental received the highest ranking for on-time departure. The bonuses motivated employees not just to modify their own behavior, but to encourage other employees to behave in ways that helped achieve the desired result. Note that the pilots, who are primarily concerned with safety, are not incented this way.

*Where work is done by teams, be sure the measures hold the team accountable*. The focus on individual performance and individual rewards runs deep in some cultures. However, Process Excellence involves doing work in teams. If a team fails to produce expected results, but individual team members receive stellar performance reviews, the foundation of the team and the prospects of success for the process will be undermined. Team members must learn to succeed and fail together. **Example**: Kodak created a call center that was staffed by a self-directed work team. To reinforce the principles of teamwork, 80% of the performance measures were team-based rather than individually based. Team members were motivated to support the work of their teammates to ensure good overall performance. The 30-person team became so adept at working together that it required the guidance of a manager less than half a day a week.

**Example**: A large U.S. utility was taking up to two years to get relatively simple new products out the door. When it looked into the problem, the company realized that a “product manager” was charged with designing, developing and launching a product single- handedly — even though that manager needed the cooperation of people from finance, sales, IT, training, regulatory, legal and so on. The product manager had to beg these other people for help, and chase them down when they didn’t deliver. In the end, only the product manager was accountable for the product’s timeliness and success. None of the other players received feedback in any form.

When the process was redesigned, the company created cross-discipline product-development teams. The entire team was held accountable for the product’s success. Everyone’s performance in terms of product development was evaluated and documented. Not surprisingly, teamwork soon moved beyond lip service and became a reality when the new process and new measures were instituted.

**Question:**

**ARE PROCESS MEASURES HOLISTIC? HAS THEIR IMPACT ON OTHER PROCESSES BEEN TAKEN INTO ACCOUNT?**

*Just as processes must be designed in a holistic fashion, so must measures. Optimizing one piece of the business without consideration for other pieces tends to suboptimize the overall performance.*

*Measures should not drive improvements in one area at the expense of other areas or, especially, overall organizational performance*. **Example**: A large computer manufacturer might evaluate the Order Acquisition process on revenue growth, the New Product Development process on the functionality of a product, and the Order Fulfillment process on the cost of delivering the product to the customer. This drives different behaviors in the different groups: Order Acquisition wants to offer as many product options as possible to attract more customers. New Product Development wants to offer the product with the greatest possible functionality. Order Fulfillment wants to make fewer products at stable volumes to make planning simpler. If these differing objectives are not balanced by broad organizational measures, they can conflict with the organizational goals of providing customized products at the lowest cost with rapid delivery to customers.

**The Perils of Nonaligned Measures**

If a company lacks a consistent measurement architecture — one that’s made up of measures that are aligned with business outcomes — then organizational conflict and subpar business performance are inevitable.



*In establishing measures, be aware of the way processes interact*. Processes can be complex, and measures need to be designed with the big picture in mind. **Example**: A major U.S. health maintenance organization kept a holistic perspective when it reengineered its primary-care delivery processes. It delivered care to patients in two ways — over the phone and in doctors’ offices. The process redesigners were careful not to “optimize” the call center processes by setting aggressive targets for how long the registered nurses could stay on the phone with patients. They allowed longer calls because they knew that handling a patient complaint by phone cost about a tenth as much as having the patient receive the same advice in the doctor’s office. Longer calls enabled the nurses to handle a greater number of patient complaints, and minimized the number of expensive visits to a doctor’s office. By keeping their eye on the overall goal — delivering good-quality patient care at lower cost — designers developed two processes that complemented and enhanced each other.

**Summary**

**Principle 5: You Get What You Measure**



Measures should be designed with the metrics tree in mind. The tree encompasses:

• **Organizational outcomes**: At the top of the tree are the business’s overall objectives — market share, profitability, etc. (“Are process measures tied to the desired organizational outcomes?”)

• **Process outcomes**: The next level includes the outcomes needed from each process in order to deliver on the organizational outcomes. (“Do the process measures focus on outcomes rather than tasks?”)

• **Balanced outcomes**: For each process, a series of measures is required to ensure a balanced outcome. (“Are process measures balanced across multiple dimensions?”)

• **Key performance indicators (KPIs):** There may be a need to decompose each balanced measure further into its component parts, or to tie it back to specific factors within the business that affect the measures.

• **Core measures**: After establishing a set of high-level measures, the organization must agree on a small number (5 to 20) that can be used to measure and monitor the business. These measures must, in aggregate, focus on achieving the organizational outcomes and provide a holistic view of the business. These measures tend to serve as the primary measures of teams and individuals, as well. (“Are individual/team measures tied to the desired process outcomes?” and “Are process measures holistic?”)

In addition, remember to:

• set stretch targets early in the design effort to foster innovation

• use future-oriented measures that communicate the organization’s strategy…clearly

Appendix I:

The Business Integration Methodology and Process Excellence Principles

*It is important that process professionals understand how the Process Excellence Principles relate to the phases of the Business Integration Methodology.* The table on the following pages shows how each principle might come into play during each of the four Business Integration phases (Planning, Delivering, Managing, Operating). Remember that PEP is about mind-set — the principles don’t necessarily relate to specific tasks; rather, they should direct the focus of process professionals on a Business Integration engagement.

For example, in the Planning phase of an engagement, the first PEP principle (Process outcomes create value) should be used to keep the focus on identifying who customers are, what outcomes they value and what processes are involved. The second PEP principle (Target high-value processes) should be used to prioritize process-improvement efforts. The third principle (Innovate, don’t duplicate) might be used to help identify potential opportunities for breakthrough approaches. And so on. All the principles have some applicability in *all* four Business Integration phases. They are meant to be used continuously and pervasively in the course of an engagement. They are a means of keeping in mind the big picture and the right end results.

|  |  |  |
| --- | --- | --- |
| **BIM Phase** | **How the Principle Might Apply** | |
| **PRINCIPLE 1: PROCESS OUTOMES CREATE VALUE** | |  |
| **Planning** | An organization defines (or refines) its processes during the Operating Strategy and Business Architecture stages. These processes and outcomes must be aligned with the business strategy and objectives. There is, at times, a fine line between process work and strategy work. | |
| **Delivering** | The customer-focused mind-set continues during Delivering – in particular, in designing the organization to be "Easy to Do Business With." | |
| **Managing** | The process outcomes become the business benefits to be monitored as part of Journey Management. | |
| **Operating** | Processes need to be continuously improved after they are put into operation. Continuous improvement is a process unto itself and must be defined. | |
| **PRINCIPLE 2: TARGET HIGH-VALUE PROCESSES** | |  |
| **Planning** | Targeting is a key aspect of Business Diagnosis, which is about identifying the leverage points within the organization. Planning is also about building the overall architecture for the business, which includes analyzing processes and constructing a holistic view of the process. | |
| **Delivering** | Targeting continues at lower levels as specific subprocesses and activities are redesigned. All activities are not designed with the same degree of rigor and detail. | |
| **Managing** | Targeting requires that the magnitude of change (e.g., streamlining, BPR, etc.) take into consideration an organization's capacity to change. | |
| **Operating** | Continuous improvement requires constant targeting of new opportunities. | |

|  |  |  |
| --- | --- | --- |
| **BIM Phase** | **How the Principle Might Apply** | |
| **PRINCIPLE 3: INNOVATE, DON'T DUPLICATE** | |  |
| **Planning** | Innovation is fundamental to both the development of the Operating Strategy and the Business Architecture. | |
| **Delivering** | Innovation continues at lower levels of detail in the Delivering Phase. This principle is also applied to the development if innovative ways to deploy the new process. | |
| **Managing** | Minimal applicability. | |
| **Operating** | While operating new processes, continuously look for new opportunities to create innovative improvements. | |
| **PRINCIPLE 4: EXCELLENT PROCESSES NEED EXCELLENT OWNERS** | |  |
| **Planning** | Process Owners must be selected, and their roles clearly defined, during the Planning phase. The Process Owner serves as the chief architect during the Business Architecture stage. This is the most critical point where this principle is applied in a change effort. | |
| **Delivering** | The Process Owner continues to play a critical role in designing new processes during Delivering. | |
| **Managing** | The Process Owner is chiefly responsible for achieving the outcomes of an end-to-end process. | |
| **Operating** | Process Owners own the continuous-improvement process. | |
| **PRINCIPLE 5: YOU GET WHAT YOU MEASURE** | |  |
| **Planning** | Performance targets are defined during the Operating Strategy and Business Architecture stages. These must align with the business targets defined as a part of strategy development. | |
| **Delivering** | In Delivering, the performance targets from Planning are defined at a lower level of detail – the specific process and subprocess measures and KPIs. From a Human Performance perspective, the incentive and compensation models must be aligned with these measures. | |
| **Managing** | The performance targets are monitored as a part of Journey Management. | |
| **Operating** | Continuous improvement is about constantly raising the bar on performance targets and ensuring that the measures are still aligned with the desired business outcomes and objectives. | |

**Appendix II:**

**The Process Maturity Model — Stages in the Journey Toward Process Excellence**

*A company cannot achieve Process Excellence overnight*. The table on the following pages describes common stages that organizations go through as they journey toward Process Excellence. In each successive stage, evidence that the Process Excellence Principles are operating becomes more pronounced. This table can be a useful diagnostic tool to help companies determine:

• where they are today in terms of process maturity.

• where they want to be in the future.

• how to build a migration strategy that helps them move toward the future state, recognizing that the business must continue to operate profitably during the transition.

Note that it is not necessary, or even always desirable, to move to a 100% Process Excellent state.

**The five stages of the Process Maturity Model are as follows:**

**Ad hoc** — As the chart describes, most companies begin in an ad hoc mode where functions are fiefdoms, and heroes and heroines abound. Sales has its own castle and king, as do marketing, customer service and other areas. These organizations typically operate in isolation without much cooperation. In fact, they often view each other as enemies. Trying to serve the customer when each group has ulterior motives is, of course, difficult.

**Basic** — Here, the company dips its toes into the process-managed world. Functions are still paramount, but processes are now defined. These processes have a limited impact on the organization, and typically involve change initiatives supported by cross-functional teams. Sales reps may begin to talk with marketing or logistics for the first time. However, they still view themselves as being on separate teams with different goals as defined by their functionally oriented metrics and bosses.

**Emerging** — This is where processes begin to take hold, and it is often the stage where companies stay. Here, the company is managed by both functions and processes. Resources are typically owned by the functions and deployed to the processes. The role of functions begins to shift away from that of accountability and moves more toward deep-skills building. Process Owners have clear accountability for achieving process outcomes through borrowed resources. This requires excellent negotiation skills on the part of the Process Owner.

**Managed** — In this stage, the Process Owner is king, and work is always performed by multidisciplinary teams that are accountable to the Process Owner. The functions have been disbanded and reconstituted as Centers of Excellence (CoE). These centers enable process performers to build deep skills by providing a community of experts who share experiences and lessons learned. For example, logistics experts, regardless of which process they are supporting, would get together regularly to share insight and ideas about logistics. Self-development of skills becomes the norm.

**Process Excellent** — At this stage, process thinking pervades the organization. The business moves from needing to be led toward change to being an organization where organic change takes place. Everyone is focused on serving the customer. Employees are treated as the critical resource for the company’s success. Resources are invested wisely in the areas of the business that will have the greatest impact. The business is operated holistically, with all processes working together toward a common goal.

Each company needs to experiment to determine which stage gives it the best results. A processed-foods company, due to the need for deep brand-management skills, may decide that “emerging” is as far as it wants to go. Or, an electronics company with rapidly changing product lines may want to manage by processes to help it stay better focused on the customer and to provide great agility.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Stage** |  |  |  |  |
| **Principle** | **Ad Hoc** | **Basic** | **Emerging** | **Managed** | **Process Excellent** |
| **Process Outcomes Create Value** | Processes undefined – functions rule | Process defined but have minimal impact | Process begin to have an impact on the business | Process are the primary driver of an organization  Functions may be reconstituted as Centers of Excellence | Process thinking pervades the organization |
| **Target**  **High-Value Processes** | Change efforts and processes are not prioritized | A financial business case is used to justify payback – usually focused on functional organization | Change efforts are prioritized based on what will help achieve the process outcomes | In addition to prioritizing change efforts, processes are also prioritized based on which ones create the most value | Outsourcing aggressively used  Resources redeployed to processes with the greatest impact  No more than a few major change initiatives at one time |
| **Innovate, Don't Duplicate** | Try what has been tried in the past | Look across functions for innovation opportunities | Innovation is applied at the process level | Look beyond industry best practices for innovative ways of doing business | Apply the Seven Rs regularly as part of visioning sessions |
| **Excellent Process Need Excellent Owners** | Process Owners are nonexistent | Process Owner as project sponsor in isolated areas  Functional owners still primary leaders | Process Owner powers up with more formal project responsibilities  Organization operates as a hybrid with both functions and processes | Process Owner as senior leader | Process Owner as the voice of the customer  Process Owner lives all of the Process Excellence Principles |
| **You Get What You Measure** | Measures are mostly financial | Measures are primarily function- and task-oriented | Functional and process measures co-exist | Measurement architecture ensures alignment between measures and desired process outcomes  Measures encourage optimization of process performance | String alignment between business outcomes, process outcomes and compensation |

**Appendix III:**

**Glossary of Process Terms and Techniques**

**Activity** A logical collection or group of tasks that occurs over time and produces recognizable business results. A business process consists of one or more activities.

**Activity Based Costing** Accounting technique that accumulates costs based on the activities performed. It uses cost drivers to allocate the costs to products or projects. It strives to allocate overhead costs on a more realistic basis than direct labor or machine hours.

**Activity Value Analysis** A technique for identifying which activities create the greatest value, which are unnecessary, and which can be enhanced in order to create more value. This can help reveal improvement opportunities, which can then be prioritized in terms of benefit to the organization.

**Automation** The use of technology to perform an activity or process that was previously performed manually or on paper.

**Balanced scorecard** A measurement tool that translates strategic objectives into a coherent set of performance measures. The scorecard is “balanced” because it measures both leading and lagging indicators. These indicators are expressed in financial and non-financial terms.

**Benchmarking** A technique for comparing the performance of an organizational aspect with another identical or similar aspect in another organization. Benchmarking can be applied to business processes, technology infrastructure performance, human performance and other organizational elements.

**Best practices** Superior methods leading to measurable, exceptional performance regardless of industry, leadership, management or operational approaches. This is a relative term that usually indicates innovative or interesting business practices that have been identified during a particular benchmarking study as contributing to improved performance at leading organizations.

**Business case** A qualitative model of benefits and costs used to approve an investment and guide the work conducted during the activity that is being supported by the investment.

**Business Integration** The alignment of an enterprise’s people, processes and technology with its strategy. Business Integration is necessary for achieving lasting and durable superior business performance.

**Business process reengineering** The fundamental reexamination, redesign and implementation of a business process or processes. It involves rethinking the way a business operates.

**Capacity for change** The ability of an organization to successfully assimilate and absorb change. It is important to assess capacity to change before undertaking a major change effort, in order to ensure that an organization can handle the change.

**Change Spectrum** A graphical illustration showing that increases in the scope and magnitude of change have an increased impact on the value that is delivered through change.

**Competitive advantage** A capability that enables a company to offer superior value to customers and to achieve success relative to its competitors.

**Continuous improvement process** An explicit process for monitoring process performance against targets, identifying opportunities for improvement and changing the process. All processes are candidates for constant improvement.

**Core processes** Those processes that directly convert inputs into outputs of value to customers, in contrast to enabling and governance processes.

**Critical Success Factor (CSF)** The overall objectives set by management to define and measure the success of an organization’s performance. CSFs are based on the organization’s vision and mission statements.

**Cross-functional analysis** A method of examining key linkages between functional units of an organization by focusing on the activities performed by each unit.

**Cross-training** Training a person in several disciplines or types of work so that he or she is able to execute a set of related tasks, without having to involve other people. This typically saves time for the customer.

**Cycle time** The elapsed time between the start and end of a process or subprocess.

**Down-skilling** The use of process performers with a lower level of skill than was used previously; this is often associated with the use of supporting technology that guides these lesser-trained workers through a process. The customer may actually experience a higher level of satisfaction from this combination.

**Economic Value Added (EVA)** A method for calculating the financial and market value impact of an investment or business decision. EVA is the after-tax cash flow a firm derives from its invested capital, less the cost of that capital.

**Effectiveness** A type of improvement opportunity that focuses on growth potential and customer service (e.g., designing a process to offer even more value to customers). Effectiveness is about “doing the right things.”

**Efficiency** A type of improvement opportunity that relates to cost cutting and operational improvements, such as reduced cycle time. Efficiency is about “doing things right.”

**Enabling environment** The environment in an organization in which all the elements of the infrastructure have been realigned to support processes. These elements include such things as management, measurement, compensation and incentives, technology and culture.

**Enabling processes** Processes that support other processes, typically by supplying indirect inputs. Recruiting, facilities maintenance and IT support are examples of enabling processes.

**Extended enterprise** A view of the enterprise that goes beyond the boundaries of the organization. The extended enterprise encompasses the organization and the organization’s customers, suppliers, customers’ customers and suppliers’ suppliers. All these groups affect or are affected by an organization’s processes. Therefore, in redesigning processes, it is important to consider how changing processes throughout the extended enterprise might improve outcomes for customers.

**Fishbone diagram** A structured problem-solving technique used to identify, explore and graphically display all possible causes related to a problem, and discover its root cause(s). Also known as an Ishikawa diagram.

**Five Forces Model** A general strategy tool used to analyze an organization’s competitive environment. It helps in the systematic analysis of the industry structure as well as in identifying specific rivals, buyers and suppliers.

**Five Whys** A form of root cause analysis that systematically breaks down a problem until the ultimate root cause or causes are exposed. Refers to a belief that to get to the root cause of a given problem, one must ask “why” five times.

**Four Core Processes** Andersen Consulting’s list of high-level processes, around which the firm organizes its process knowledge. These are:

• Develop Products and Services

• Generate Demand

• Fulfill Demand

• Plan and Manage the Enterprise

**Function** A group of people performing similar tasks. These tasks may be part of a process, but the tasks in a given function do not, by themselves, produce an outcome of value to a customer.

**Governance processes** Processes that direct or tune both core and enabling processes, ensuring that they stay correctly focused. Governance processes typically take a long-term view and produce strategic decisions based on inputs such as competitive intelligence or customer insight.

**Handoffs** A transfer of work from one person or department to another. A source of error and delay in most processes. Process redesign should seek to minimize handoffs.

**Integration** The effort of identifying interdependencies among processes and factoring them into redesign decisions. This helps ensure that one process is not optimized at the expense of others.

**International Benchmarking Clearinghouse (IBC)** A cross-industry quality/benchmarking service of the American Productivity & Quality Center in the United States. It uses tools such as focus groups, voice of the customer and benchmarking to help companies understand customer needs.

**Just-In-Time (JIT)** A philosophy of manufacturing based on the planned elimination of all waste and the continuous improvement of productivity. The primary elements of JIT are to have suppliers provide what the company needs when it is needed in order to minimize inventory; to improve quality to zero defects; to reduce lead times by reducing setup times, queue lengths and lot sizes; to incrementally revise operations; and to accomplish these things at a minimum cost.

**Kaizen** A Japanese term for improvement. It implies continuing improvement for the organization.

**Key Performance Indicator (KPI)** A quantifiable measurement for evaluating progress toward a Critical Success Factor (CSF). KPIs may be financial or performance-based measurements. One or more KPIs may be associated with a single CSF. Lead time is an example of a KPI.

**Learning organization** “An organization that is continually expanding its capacity to create its future,” in the words of author Peter Senge.

**Market Value Added (MVA)** An external indicator that measures how a company has either increased or decreased the market value of cash invested. MVA is the company’s market value minus the total cash invested in the company.

**Measurement architecture** A framework that encompasses all levels of an organization’s measures, from high-level organizational outcomes to process outcomes to individual and team performance levels. These various levels must be aligned with each other in order to foster the right behaviors throughout the organization.

**Metrics** The specific quantifiable and qualitative measurements for a business that can be determined accurately and compared directly to predicted criteria.

**Multi-skilling** The training of a person in several disciplines or types of work so that he or she is able to execute a variety of tasks. (See cross-training.)

**Non–value-added work** Work that creates no value for the customer, but is required in order to enable value-adding work.

**Outsource** An approach to process improvement in which a company contracts with an outside organization to perform a process, either because the process is not a core process or because the other organization has superior process capabilities that the company cannot easily duplicate.

**Parallelism** A process-design technique in which activities that were once done sequentially are instead done simultaneously, or in parallel. Parallelism typically reduces cycle time and, often, errors. A form of parallelism is concurrent engineering, in which formerly sequential design and development operations are overlapped in a multidisciplinary (and usually co-located) team approach.

**Pareto Analysis** A structured problem-solving technique, based on the Pareto Principle, used to identify the underlying causes of a problem. Prioritizes the specific causes of a problem by depicting them on a vertical bar graph where the height of the bar indicates the priority of each cause.

**Pareto Principle** The 80-20 rule: 80% of a population’s characteristics are displayed by only 20% of its members.

**Performance targets** The specific quantified goals that a person or process is expected to achieve.

**Process** A group of interrelated activities that together create value for a customer.

**Process architecture** The blueprint that depicts the overall design of a process.

**Process cell** A grouping of machines and/or people based on the sequence in which operations are performed so that work may flow continuously from one operation to the next.

**Process council** A group of senior executives and Process Owners who work together to allocate resources and manage priorities across processes. The group makes sure that the various processes are integrated and keeps larger organizational goals in sight.

**Process Excellence** A state in which a company enjoys superior business performance from superior processes within an enabling environment.

**Process Excellence Principles** A set of five principles that constitute the conceptual basis for identifying, redesigning and implementing innovative processes.

**Process innovation** A process in its own right that focuses on generating, evaluating and implementing creative new process designs. Andersen Consulting’s approach to process innovation is the Seven Rs. (See Seven Rs.)

**Process map** Graphical representations of a process and its supporting activities. These typically show the activities that are performed, and the performing organizations, from end to end. A process map can be a fairly high-level picture, with additional detail provided by workflow diagrams. (See workflow diagram.)

**Process measure** A scale or gauge used to quantify whether a process is achieving its performance objectives. Measures should have targets associated with them.

**Process outcome** An outcome is a result. Processes exist to produce outcomes that are of value to customers.

**Process Owner** A key player in a process-centered organization who is responsible for achieving the outcomes of an end-to-end process, driving process improvement and acting as an advocate for the process within the organization.

**Process performance** The actual level at which a process operates compared with expected targets.

**Process performer** A person who executes some or all of the steps in a process.

**Process simulation** A technique in which a process design is modeled on a computer and “test-driven” with varying parameters in order to determine whether the process will operate and benefits will accrue as expected.

**Process sourcing** The determination of which organization will be responsible for executing a process, based on how critical the process is to the strategic intent of the business and how well it is aligned with the target operating vision. The decision whether to insource, partner with another organization or outsource is made by choosing from a portfolio of sourcing options.

**Quality Function Deployment (QFD)** A methodology designed to ensure that all the major requirements of the client are identified and subsequently met or exceeded through the resulting design process.

**Quick wins** Also referred to as “quick hits.” A process change that can be implemented quickly and with a minimum of resources. Quick wins can be an effective way to build momentum for a larger process change because they demonstrate success early.

**Re-skilling** The process of training workers in new and different skills.

**Return on assets (ROA)** A financial measure of the relative income-producing value of an asset. ROA is calculated as net income divided by total assets.

**Return on equity (ROE)** A calculation that measures management efficiency in producing net earnings on the capital invested in the business. ROE is calculated by dividing the net income by the owner’s equity.

**Return on investment (ROI)** A financial measure of the relative return from an investment, usually expressed as a percentage of earnings produced by an asset to the amount invested in the asset.

**Rework** A form of waste activity in which work is done incorrectly and must be done again. Superior processes should strive for no rework.

**Root cause analysis** A methodology for determining actual drivers or causes of process inefficiencies.

**Seven Rs** Andersen Consulting’s approach to process innovation, in which different dimensions of a process are varied to generate potential new process designs. The Seven Rs are:

**Rethink (why)** The rationale and assumptions behind processes and their outcomes.

**Reconfigure (what)** The activities involved.

**Reassign (who)** The process performers.

**Resequence (when)** The timing and sequencing of work.

**Relocate (where)** Location and physical infrastructure.

**Reduce (how much)** The frequency of activities.

**Retool (how)** The technologies and competencies that enable work to be done.

**Spaghetti chart** A map of the path taken by a specific item (part, document, etc.) as it travels from operation to operation, within one or several physical environments, to complete a process. So called because, for non-reengineered processes, the resultant chart typically looks like a plate of spaghetti.

**Stakeholders** The people affected by a change, whether it is a process change or any other. Stakeholders include employees, customers, suppliers and sponsors.

**Strategic engineering** The process of designing fundamental changes to the way a company does business. This may involve shifting the organization’s overall objectives, transforming the entire value network or redefining the “rules of the game” for an industry.

**Strategic process** A process that is key to differentiating an organization from its competitors, to creating value for customers and to driving competitive advantage. Whether a process is strategic depends on a company’s specific strategy. Companies in the same industry often have very different strategies.

**Streamlining** The simplest form of process change; it primarily addresses incremental improvement through such strategies as Just-In-Time (JIT) or Total Quality Management (TQM).

**Stretch goal** An ambitious performance target that forces people to think “out of the box,” because it cannot be achieved using traditional approaches.

**Tactical process** A process that does not differentiate a company from its competitors or support a competitive advantage. The process may be very necessary to the successful running of the business, however. Payroll processing or facilities management are examples of tactical processes (for companies that do not specialize in providing these services to others).

**Target (noun)** A quantified level of performance that a process must achieve. Targets are the goals associated with a process measure.

**Target (verb)** “Focus on” or “give priority to.” An organization should target for major investment and attention those processes that most directly drive competitive advantage and that offer high opportunity for improvement.

**Task** An activity or step in a process. The lowest logical work unit in a business process decomposition.

**Total Quality Management (TQM)** An approach to quality improvement that focuses on customer satisfaction. TQM is based on the participation of all members of an organization in improving processes, products, services and the company culture.

**Up-skilling** Training people more extensively within a discipline so that they are able to handle a more complex set of activities in that discipline.

**Value, customer** In a process-centered environment, value is defined by the customer. Four key components of value to customers are typically time, cost, quality and service/convenience.

**Value, stakeholder** In a process-centered environment, value (money) comes to stakeholders when an organization successfully provides value to customers.

**Value-added work** Work for which the customer is willing to pay.

**Value chain analysis** The process of analyzing activities both inside and outside an organization (customers, suppliers, etc.) in order to determine where value is created in a process or set of processes.

**Value density** The degree to which a process is composed of value-adding steps, as opposed to non–value-added or waste steps. A key goal of process redesign is to increase the “density” of value-adding steps.

**Virtual organization** An organization in which people, facilities, material or other resources are geographically dispersed, but linked electronically (by computer, fax, etc.). The electronic links enable the organization to perform work in a coordinated fashion, despite the physical distances involved.

**VT/ET** Value-adding time divided by elapsed time. Value-adding time represents the time that actually goes into performing a task. Elapsed time represents the time that passes between the apparent beginning and end of the task. The goal is to maximize the ratio, with 1 as the ideal.

**Waste** Work that neither adds nor enables value. This includes rework or redundant activities.

**Workflow diagram** A diagram representing the sequential flow of tasks and information in a business process. Workflow diagrams identify the way in which inputs are turned into outputs by a process. A workflow diagram often contains a lower level of detail than a process map.

**Acknowledgments**

*A number of people contributed to the creation of this handbook*. They include:

Mike Bumgardner, Houston

C. Robert Farwell, St. Louis

David Hillyer, Los Angeles

Alison Lueders, Raleigh

A. Barry Patmore, Los Angeles

Stephen M. Shapiro, Florham Park

Raymond Stacey, Los Angeles

Steve Stanton, Hammer & Co.

Julia Wishy, Los Angeles

In addition, the authors would like to thank the many Associate Partners and Partners who furthered the development of the concepts around Process Excellence. Their time and insight are greatly appreciated.

Editor: Peter Haapaniemi, Farmington, MI

Design: Randy Scott Design, Aurora, IL