

# Business Process Revolution

## Definition

As the telecommunications industry strives for speed in developing and introducing new technology and creating new services, the speed and quality of the internal processes that must actually deliver on these promises are often overlooked. Executives who realize that their organization's output is only as good as the engine delivering it have a secret weapon: business process revolution. Revolutionizing business processes will create a fast process environment and allow an organization to achieve frictionless operation. This marvelous management technology will dramatically improve results by tuning the process engine to its peak performance.

## Overview

In management meetings, are the following heard more often than one would prefer?

- "Continuing to change requirements is going to delay product introduction."
- "We can get the order, but we cannot ship it until next quarter."
- "If you are asking me to reduce cost, we are going to miss the schedule."
- "Our head count continues to rise, but we are not seeing the output increase."
- "Inventory increased again this quarter."
- "We need to get our people to work harder! Don't they understand the problem?"

If so, revolutionizing business processes can turn these staff-meeting bombshells into annual-report highlights.

Processes are the organization's mechanism of creating and delivering products and services to its customers. The efficiency of this mechanism is one of the key factors that determines overall corporate performance. Data indicates that when

an organization commits to an improvement program, it can reduce development time to market by 50 percent, increase net profit by 25 percent, and improve productivity by 20 percent.

Process improvement is a structured methodology that involves leadership commitment, objective setting, organizational empowerment, and accountability at all levels. Its success requires a thorough knowledge of the methodologies and tools of process improvement, along with the experience to apply them to each unique process target.

The objective of this tutorial is to present an overview of the methodologies and tools that make up business process improvement. Additionally, it will allow organizations to self-assess their need for a process revolution.

## Topics

1. Understanding the Need for Change
2. Performance Self-Assessment
3. Keys to Success
4. Business Process Improvement Methodology
5. Summary

Self-Test

Correct Answers

Glossary

## 1. Understanding the Need for Change

As humans, we all follow a common decision-making process: first we recognize, then we commit. We may commit quickly or slowly, and the intensity of our commitment may vary, but in any case, there must first be recognition and an understanding of why we need to commit. To commit to revolutionizing one's business processes, one must first understand what forces are driving the market.

### The Pace of Change

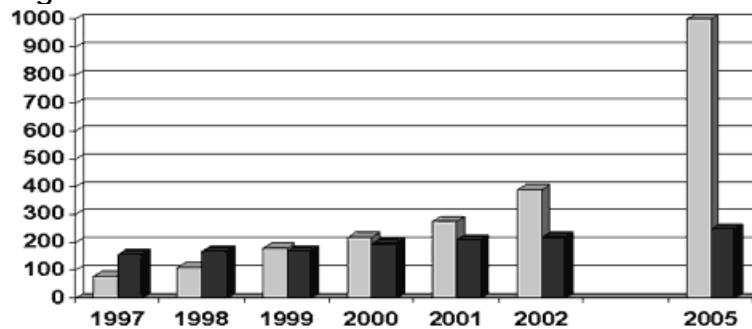
For a century, the telephone and its network have remained relatively constant. Over the years, it expanded but primarily existed for person-to-person voice communication. In the last two decades, the telephone business, led by fax, wireless telephony, and the Internet, has been anything but constant. Today, telecommunications is at the heart of the most dynamic innovation that has ever been seen in industry. Coupled with equally impressive advances in computer

technology, computer speed, and computer acceptance, these two industries are driving and revolutionizing not only how we communicate but also what we communicate.

Data has surpassed voice as the predominant media over the telecom network. E-mail volume surpasses post-office volume. A trip to the store is replaced by ".com-click." Intranetworked supply chains replace purchasing orders. Innovation, rapid time to market, worldwide access, and value to the customer are hallmarks of this revolution.

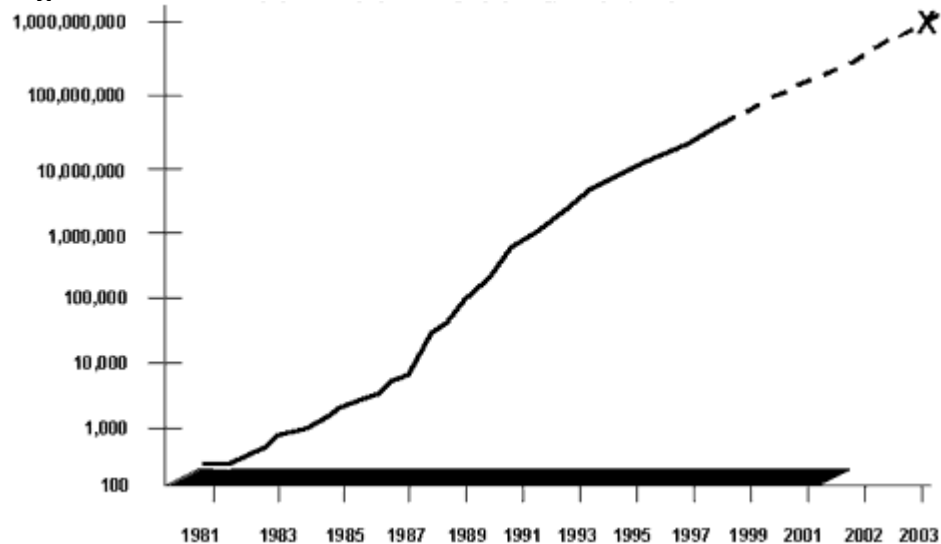
For example, network bandwidth has been growing at a rate of 36 percent per year. This rate is expected to increase to 43 percent. In 2005, bandwidth will have increased by 10 times over 1998 levels (see *Figure 1*).

Figure 1. Bandwidth Increase



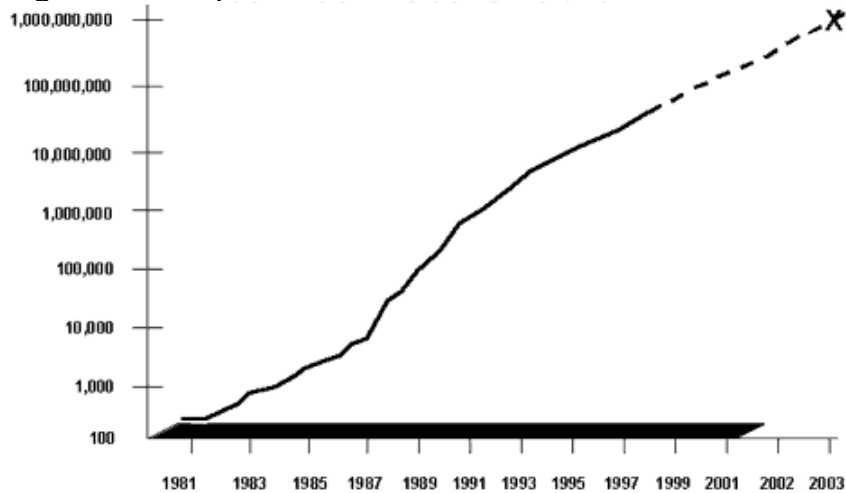
Certainly, the growth in data bandwidth is attributable to the popularity and value of the Internet. Fueling this bandwidth demand is the growth of Internet hosts. Hosts are expected to exceed one billion in the year 2003, which means that the number will increase by 10 times every 2 years (see *Figure 2*).

Figure 2. Internet Host Growth



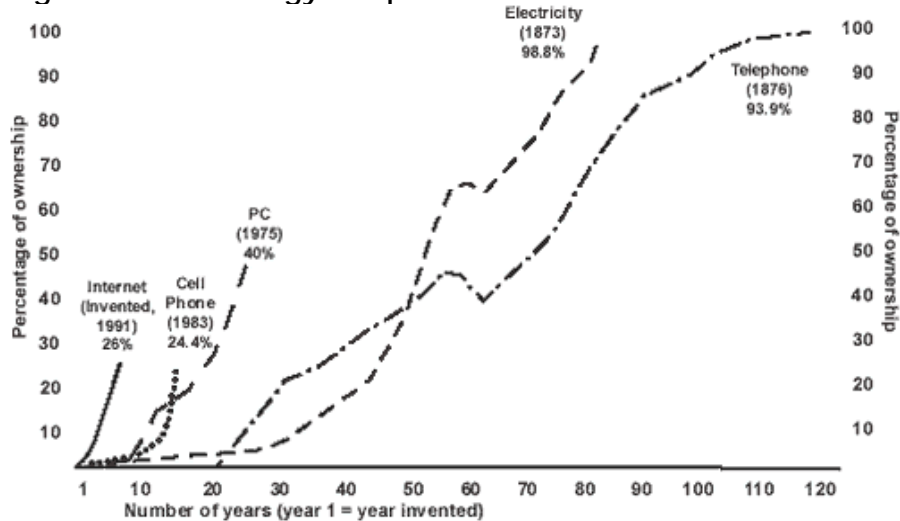
The personal computer (PC) makes the Internet real and available to millions of individuals and businesses. Without the PC, the Internet would be just so many packets of data used by a select few businesses. With processing speeds living up to Moore's Law and increasing at 60 percent per year, and with costs dropping to within the reach of millions of new customers, the computer is helping fan the Internet flame into a wildfire (see *Figure 3*).

Figure 3. PC Speeds



What does all this mean to the reader? The telecommunications industry is experiencing and driving change at an unprecedented rate, resulting in revolutionary new ways of communicating and conducting business. No statistic demonstrates this more than the rate at which new technology is being adopted. It has taken the Internet only 7 years to reach the level of adoption it took the telephone 35 years to achieve. This technology adoption rate, greater by five times, represents a critical issue for today's business leaders (see *Figure 4*).

Figure 4. Technology Adoption Curve



At this rate of technology innovation and adoption, can one's business afford to miss a technology cycle?

If the answer is no, there is a way to change one's business and accelerate it to run at or ahead of market speed: revolutionize it.

This revolution touches each process in the business engine that creates value for customers and stakeholders. If goals are set high, the following are some of the results to be expected:

- process-improve design and development to reduce time to market by 50 percent and introduce twice as many new products to market in the same time frame with the same resources
- never miss a technology cycle but, rather, compress it to one's advantage
- process-improve the order-fulfillment cycle by creating a seamless, frictionless process from order entry to invoice
- delight and amaze customers with how easy it is to do business with the company
- push top-line growth as a market leader
- improve cost per sales dollar dramatically by optimizing resource utilization
- satisfy investors with earnings growth

These are the results of revolutionary change. They are exciting, and the need for change is compelling.

## 2. Performance Self-Assessment

Before beginning the campaign, we must first determine where to begin. The following self-assessment is intended as a high-level look at the performance of the reader's corporate engine (i.e., the processes). The readers must score their answers to any or all of the questions in accordance with the directions, total their scores, average them, and evaluate against the criteria provided.

# Assessment

1. Engineering development projects are completed on or ahead of the original schedule and meet time-to-market windows.
  1. never
  2. less than 25 percent of the time
  3. less than 50 percent of the time
  4. less than 90 percent of the time
  5. more than 90 percent of the time
2. Product requirements are clear, documented, and seldom change.
  1. never
  2. less than 25 percent of the time
  3. less than 50 percent of the time
  4. less than 90 percent of the time
  5. more than 90 percent of the time
3. The development process (requirements definition to product availability) is well documented and followed.
  1. not documented
  2. partially
  3. poorly
  4. adequately
  5. exceptionally
4. Adequate development resources are available and assigned throughout the life of an engineering project.
  1. never
  2. seldom
  3. sometimes

4. more often than not
  5. always
5. The number of problems identified in the field (field trails and full availability) are which of the following:
1. excessive
  2. not getting better
  3. needs to be better
  4. acceptable
  5. nonexistent

Note: To self-assess the engineering development process only, readers should stop here, total their scores, average them, and proceed to the evaluation section.

Average Score:

6. Product delivery to the customer is on or ahead of customer specified schedule.
1. never
  2. less than 25 percent of the time
  3. less than 50 percent of the time
  4. less than 90 percent of the time
  5. more than 90 percent of the time
7. Inventory as a percent of revenue is which of the following:
1. increasing
  2. constant
  3. improving less than 20 percent
  4. improving less than 40 percent
  5. improving more than 40 percent
8. Business unit financial objectives (revenue, cost, profit) are achieved:
1. never

2. not always
  3. by cutting costs
  4. sometimes; two out of three is not bad
  5. consistently
9. Relative to competition, we are which of the following:
1. trying to catch up
  3. keeping even
  5. clearly the leader
10. Overall, I would say the company is addressing issues to make my job easier and help make me more productive.
1. strongly disagree
  2. disagree
  3. neutral
  4. agree
  5. strongly agree

## Evaluate Your Score

Average Score:

Using the average score, readers should evaluate themselves against the following:

- **greater than 4**—The reader is an innovative market leader who has the vision and leadership to benefit from the dynamics of the market.
- **between 2 and 4**—The reader is in need of business process revolution in one or more process areas. Improvements are needed to meet delivery commitments and remove friction between organizations and within processes to meet the reader's corporate objectives and improve customer satisfaction.
- **less than 2**—The reader must act immediately. Revolution may be the only salvation, but it must begin at once.

### 3. Keys to Success

If the reader's scores on the self-assessment indicated that a revolution is required, the reader has achieved the first and perhaps the most important success criteria: recognition that change is needed. Without this, commitment to change will not occur.

Commitment is the second key to success. All senior executives of the business unit must put their full support behind efforts to implement change. Revolutions need leaders who can establish the vision, provide direction, prioritize work, establish accountability, and make resources available.

The third key to success is to adopt a proven process improvement methodology, a tool that can deliver on the vision. Like a computer-aided software engineering (CASE), computer-aided design (CAD), materials resource planning (MRP), or enterprise resource planning (ERP) tool used to support a corporate function, a process improvement tool must be adopted to support change. Because process improvement is one of the most important tasks a business unit will undertake, one must make sure that one is armed with the right weapon.

The next section outlines a methodology that can be used to implement a successful business process revolution.

### 4. Business Process Revolution Methodology

As with all other endeavors, selecting the right tool for the job will make the job easier and produce better results. Business process revolution is not about using universal process templates or packaged processes. These, by their very nature, can only produce a copy. They can never produce the innovative industry-leading process engine required of a market leader.

The correct process revolution methodology requires a toolkit that has the capability of dealing with the many unique process issues in each company. It identifies the processes critical to a company's success. It systematically defines how success will be measured so that everyone will know when it has been achieved. The toolkit comprehensively identifies nonvalue-added efforts as well as obstacles that impede success and provides the means to eliminate them. The correct process revolution tool also continually challenges and reinforces commitment as the environment around it changes.

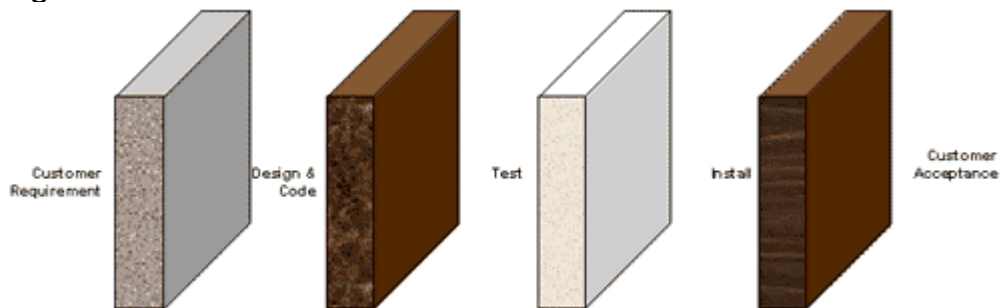
## Business as a Process

As discussed earlier, internal processes are the engines that produce the products and services of a company. A process simply involves the steps that must be accomplished to complete a task. For example, the steps in a process to develop a software product might be the following:

- identify customer requirements
- design and code
- test
- install
- confirm customer satisfaction

In companies that have long time-to-market cycles, this process typically functions as shown in *Figure 5*.

Figure 5. Obstacles Inhibit Smooth Process Flow



Obstacles exist between the process steps. Overcoming these obstacles takes time and effort in the daily functioning of this process—effort that can be better spent elsewhere.

When the obstacles are removed, the process flows smoothly, as shown in *Figure 6*.

Figure 6. Seamless Process Flow



Transition from step to step is seamless and effortless. Obstacles do not exist, and the time to deliver the product to market is reduced.

To see a business as a process is to recognize that individual process steps are linked and dependent on each other for success. Dramatic improvement will only occur when the individual process steps and the links between them are the focus of improvement efforts. Often, the largest obstacles exist between process steps, at the links, requiring a holistic process view and cross-functional cooperation to effect improvement.

## Measuring Success

The cliches are well known: "If you don't measure it, it's just a hobby;" "If you don't measure it, you can't improve it." They ring true, however, when applied to initiatives intended to revolutionize business processes. The process improvement toolkit provides a method of defining the steps in a process and, therefore, the boundaries—which are key measurement points.

Selecting the right measure is directly linked to the criteria used to select and characterize the critical processes. That criteria is the need to improve the results delivered by the processes. Results are the first category of measures. They are the high-level metrics (EPS, revenue, return on investment [ROI], customer satisfaction, etc.) that are essential to the business. However, because they are at a high level, focusing improvement efforts on them is equivalent to trying to swallow an elephant whole. This is why a second category of measures, drivers, is the correct focus of improvement efforts.

Drivers are called such because they are the measures that, when improved, drive improvement in results. Drivers are selected at a level in the process that is actionable by the team tasked with improvement. They are designed to reflect changes made in the process in near-real time. It is important to note that one driver measure is not sufficient to characterize process improvement, as one measure can be too easily manipulated. For example, project cycle time can be shown to improve by reducing feature content of the product. However, features are essential to customer satisfaction. Therefore, both cycle time and feature content are drivers to be measured in this project example. In many cases, multiple drivers are required to have a truly comprehensive measurement program. Examples of drivers are time, yield, requirement stability, and cost.

As crucial to the success of process improvement efforts as is the right selection of measures is the setting of improvement goals. As Yogi Berra said so eloquently; "You've got to be careful if you don't know where you're going, because you might not get there." Goals allow companies and individuals to measure success and progress toward it.

Remember, however, that this is a revolution. Revolutions are not waged for incremental improvements. The American Revolution was not fought for a lower tea tax; it was fought to change the way an entire country was governed. When

setting goals to accomplish revolutionary process improvement, one must make them aggressive.

There are several ways to determine what the right aggressive goal should be. One way is to set it at a level equal to the best process performance achieved in emergency or fire-drill scenarios. The reason for this is that in these situations, obstacles tend to be knocked down, and everyone pulls toward a common objective. Unfortunately, the obstacles go back up as soon as the emergency is over. Other ways to set goals include determining what it takes to meet customer expectations or what is needed to best the competition. Whatever method is used, remember that the objective is to cause a revolution in how business is conducted.

## Knocking Down the Obstacles

So, in what state is the implementation process? The process and process steps are characterized, the measures are in place to drive results, and the goals seem almost unattainable. What stands between today's performance and the goals are obstacles. These obstacles must be removed to enable processes to operate at the target level. To remove obstacles effectively requires a disciplined, methodical approach. The approach is outlined as follows:

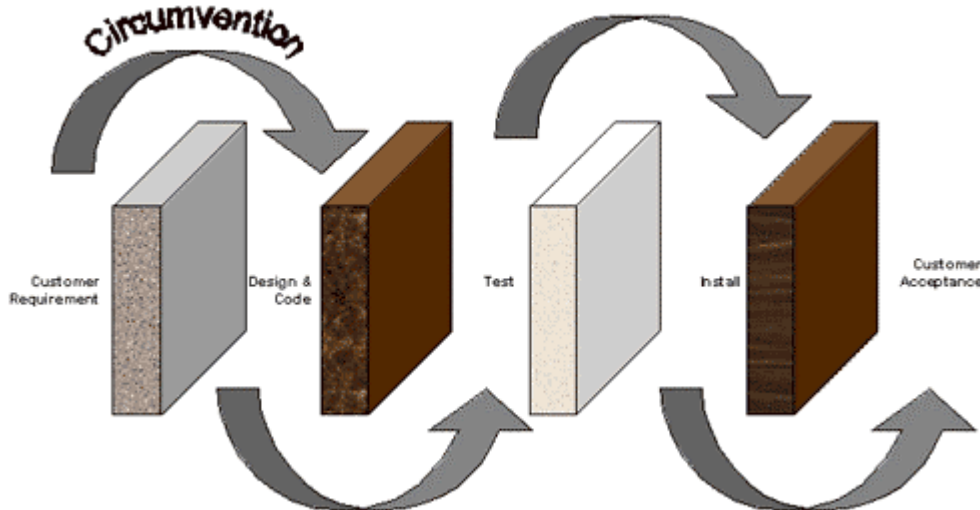
1. From the measures, identify the gap existing between current performance of the process and the goal. This is the opportunity gap. As obstacles are removed from the process, the gap will close.
2. Identify the obstacles in the process that prevent it from operating at the goal.
3. Prioritize the list of obstacles to be removed. It is important not to try and fix everything at once. Work on those that have the most impact on the measure and are easiest to remove first.
4. Assign a small team of those most familiar with the issue to remove the obstacle. Clearly communicate what the obstacle is, the scope of the team's responsibilities, and the time allowed to complete the task.
5. Monitor the performance of this small team to ensure that they are making progress.
6. Subsequent to removal of the obstacle, review the measure to see if the removal action improved the measure and progressed toward the goal.
7. Repeat steps one through seven until all obstacles are removed, and the process is at the desired performance level.

One thing to note in this approach is that even though obstacles are being removed, measures may not show any improvement. This can result from removing obstacles that were not truly obstacles in the process or from having the wrong measure. The correction of this problem requires a reassessment of the measure and the prioritized obstacles.

There is one last interesting issue to consider relative to obstacles. In the workplace, ways to accomplish tasks will often be found in spite of the obstacles. To do this, processes and systems that circumvent the established processes are installed because they work when the processes do not.

However, processes that circumvent obstacles must also be removed (see *Figure 7*). In the optimized process they are now nonvalue-added efforts. To quote Peter Drucker, "There's nothing so useless as doing efficiently that which should not be done at all."

Figure 7. Processes That Circumvent Obstacles Must Also Be Removed



## 5. Summary

"Revolution: a fundamental change in the way of visualizing something."

In this tutorial, the argument is made that the telecom and computer industries are changing so rapidly that, if a company cannot keep pace, it may not be in business long. The way to keep pace or, better yet, set the pace is through a comprehensive program of business process revolution. To accomplish this requires recognition of the need for change, a commitment to change, and a proven toolkit of change methodologies.

The toolkit of business process revolution is composed of three primary tools:

- understanding of business as a series of linked interdependent processes
- measures of process performance at the result and driver level
- skills to knock down the obstacles that prevent a process from operating at its optimum level

Creating a revolution in one's own company leads to the rewards that fast processes and short time to market bring: the thrill associated with high productivity, an enthusiastic workforce, and the enormous benefits associated with the position of a market leader.

## Self-Test

1. The secret weapon executives employ to revolutionize business processes and meet or exceed the speed of the market is to \_\_\_\_\_.
  - a. add employees to get more done
  - b. downsize
  - c. lecture on the need to do more with less
  - d. start a business process revolution
2. Organizations committed to process improvement can reduce product development time to market by \_\_\_\_\_.
  - a. 10 percent
  - b. 25 percent
  - c. 50 percent
3. It took the Internet \_\_\_\_\_ years to reach the same level of adoption achieved by the telephone in 35 years.
  - a. 7
  - b. 13.5
  - c. 21

4. Three keys to the success of a business process revolution are all but which of the following?
  - a. recognition
  - b. commitment
  - c. proven methodology
  - d. automation
5. Business process revolution requires that the business be viewed as a set of linked processes that are dependent on each other for their own and the company's success.
  - a. true
  - b. false
6. Drivers and results are the two types of measures required in a process improvement program.
  - a. true
  - b. false
7. Dramatic and revolutionary process improvement requires the removal of \_\_\_\_\_.
  - a. overhead
  - b. excess people
  - c. obstacles
  - d. layers of management
8. The largest obstacles in a process exist \_\_\_\_\_.
  - a. with the people
  - b. in other departments
  - c. between process steps
  - d. with senior management

9. The way to determine the right aggressive goals for a process is to \_\_\_\_\_.
- a. use the best performance achieved in an emergency
  - b. determine what is needed to meet customer expectations
  - c. determine what is needed to best the competition
  - d. all of the above
10. Processes installed to circumvent obstacles must also be removed.
- a. true
  - b. false

## Correct Answers

1. The secret weapon executives employ to revolutionize business processes and meet or exceed the speed of the market is to \_\_\_\_\_.
- a. add employees to get more done
  - b. downsize
  - c. lecture on the need to do more with less
  - d. start a business process revolution**
- See Definition.
2. Organizations committed to process improvement can reduce product development time to market by \_\_\_\_\_.
- a. 10 percent
  - b. 25 percent
  - c. 50 percent**
- See Overview.
3. It took the Internet \_\_\_\_\_ years to reach the same level of adoption achieved by the telephone in 35 years.
- a. 7**

b. 13.5

c. 21

See Topic 1.

4. Three keys to the success of a business process revolution are all but which of the following?

a. recognition

b. commitment

c. proven methodology

**d. automation**

See Topic 3.

5. Business process revolution requires that the business be viewed as a set of linked processes that are dependent on each other for their own and the company's success.

**a. true**

b. false

See Topic 5.

6. Drivers and results are the two types of measures required in a process improvement program.

**a. true**

b. false

See Topic 4.

7. Dramatic and revolutionary process improvement requires the removal of \_\_\_\_\_.

a. overhead

b. excess people

**c. obstacles**

d. layers of management

- See Topic 4.
8. The largest obstacles in a process exist \_\_\_\_\_.
- a. with the people
  - b. in other departments
  - c. between process steps**
  - d. with senior management
- See Topic 4.
9. The way to determine the right aggressive goals for a process is to \_\_\_\_\_.
- a. use the best performance achieved in an emergency
  - b. determine what is needed to meet customer expectations
  - c. determine what is needed to best the competition
  - d. all of the above**
- See Topic 4.
10. Processes installed to circumvent obstacles must also be removed.
- a. true**
  - b. false
- See Topic 4.

## Glossary

### **CAD**

computer-aided design

### **CASE**

computer-aided software engineering

### **ERP**

enterprise resource planning

**MRP**  
materials resource planning