CHAPTER 1

What Is This Thing Called Process Mapping?

I may not have gone where I intended to go, but I think I have ended up where I intended to be.

—Douglas Adams

Who Cares about Processes, Anyway?

Most companies spend a great deal of time each year developing strategic objectives and goals. High-level objectives are developed that reflect the overall strategy of the company. Business objectives are then developed at the department level to support overall company objectives. Goals are developed to measure the progress toward achieving particular business objectives. And every employee has individual objectives that support overall strategies.

In a perfect world, there would not be any conflicting goals. All department objectives would actually support the company objectives. Every employee would understand these goals and objectives and understand how the work he or she performs contributes to the achievement of those goals and objectives. The company's plans would be executed flawlessly and the story would always have a happy ending—the wooden company would become real.

However, such happy endings seem far too rare. Strategic objectives may be developed in isolation—from the top and communicated down. Department objectives may be self-serving and may not support strategic objectives. Department objectives may be in conflict with one another. Employees below the management level may not have any idea what the company's goals and objectives are or how the work they do contributes to the achievement of those objectives. People only see their own story—follow their plot—and have no idea what is going on around them. They do not always understand the company's or department's story, and certainly have no idea how they can help achieve that happy ending.

The accumulation of activities that takes place in each business process is what ultimately determines a company's success. So processes must be analyzed to ensure that they support key business objectives. Process analysis is particularly useful in ensuring the accomplishment of business objectives relating to customer service, efficiency, effectiveness, and profitability.

"Tell Me a Story": Analyzing the Process

A vital key to transforming a business is the complete understanding of the processes involved in it. This understanding is necessary for any change management approach to be of value, and it can be included in total quality management, Sarbanes-Oxley analysis, process re-engineering, International Organization for Standardization (ISO) certification, and even in developing a Baldrige Award–winning approach. But getting a handle on the processes is one of the more daunting tasks reviewers must face.

However, this task is not unlike the one Disney's animators faced. The animators had to find a way to transform the narrative Walt Disney had told them into a movie. Likewise, reviewers must find a way to transform the company's story into a concrete, tangible product that can be viewed, verified, and manipulated. To help understand that story, the reviewer needs a storyteller to bring the stories to life. The animators had Walt Disney; reviewers have the company's employees. Walt Disney knew Pinocchio's story inside and out. He would tell it to anyone who would listen. The company's employees know their stories just as well, and they are willing to tell the details of those stories to anyone who will listen—where things are going right and where the plot is not quite

so good. Each employee knows the job and knows the processes that are completed. These are movies that go on constantly in their minds. Although they often have not thought about it, they know the beginning, the transformation, and the end.

The challenge for any reviewer is to get that information and develop a finished product that anyone can look at and understand, not unlike a finished movie. This requires the reviewer to talk with that employee and learn each of the steps—each of the "scenes"—that make up that process. Process Mapping is the technique that helps the reviewer transform that employee's movie into a finished product that anyone can view and understand.

Benefits

We've already enumerated some of the more obvious benefits of Process Mapping, including better documentation of the review process, the ability to visually represent the process, and an overall view of the various aspects of the process. However, that only scratches the surface.

As previously noted, if the only step taken when developing Process Maps is to graphically document a process, then Process Mapping can become nothing more than glorified flowcharting. Instead, the Process Maps are part of a larger system. When all the steps of this system are used, there are additional benefits that may not be as readily apparent.

Holistic

In daily life, processes constantly come in conflict as the objectives of one process directly oppose the objectives of another. For example, every workday, millions of individuals climb into their cars to start the process known as going to work. For many, the primary objective of this process is to arrive at work at the proper time. If the individual feels that this primary objective may not be achieved, then speed is at a premium and other objectives fall by the wayside. This individual then runs into a significant conflict with another objective. Municipalities have developed a series of processes intended to ensure achievement of their primary objective related to safe travel. Speed limits, stop signs, and traffic lanes all work together to thwart the time-conscious traveler. The driver's objective (the need for speed)

comes in direct conflict with the municipality's objective (the need for safety).

In every aspect of our lives, every process is forced to interrelate with other, coexisting processes. The same is true in business. To meet the objectives of keeping shareholders, customers, and employees happy, executives and managers must juggle conflicting priorities—the objective of paying expenses comes in conflict with the objective of making a profit; the objective of keeping employees satisfied comes in conflict with reducing expenses; and the objective of making a top-quality product comes in conflict with the customer's objective of paying a low price.

Far too often, analysis is done "in a vacuum" without considering how these processes interrelate. Reviewers will talk to one person or one function and find what works best for that single perspective. As a result, the reviewers may focus on one set of objectives at the expense of another. This analysis in a vacuum far too easily provides benefits to one while taking from another.

Process Mapping provides a method for taking a holistic approach to this analysis. Before sitting and talking with people, the reviewer gains a full understanding of the process's objectives and how they interrelate with the company's overall objectives. The objective of each part of the process is also reviewed to ensure that it benefits some greater objective. And, when identifying and recommending changes, the reviewer will keep all these objectives in mind to ensure that the effect of this change is fully understood.

By looking at the whole picture and integrating the various parts, the reviewer sees not only what needs to be changed, but also how the proposed change will affect everyone. With an overall view, the benefits for one can be weighed against the detriments to another, and the ultimate good can be appropriately considered.

Employees' Buy-In

Too many reviewers come in with the mind-set that management must be pleased. Often, reviewers have preconceived notions of what they will find. And even if the reviewer is open-minded, the review is often done in isolation from the employees. Discussions may be held with management. There may be reviews of procedure. Files may even be reviewed. But the people actually doing the work are never brought into the picture.

Even if discussions are held with line personnel, the ultimate product may still be geared toward management or executives. Many reviewers obtain information on how things are supposed to be done, but they do not use the employee as a resource for understanding how things are *really* done or how they can be improved. And employees are not so slow-witted as to misunderstand what is happening. They recognize that reviewers are often in the room, but not listening.

Process Mapping allows a true buy-in to the completed product. Maps are developed in real time, and the employee can see exactly what is being recorded. They are developed in an interactive atmosphere that allows the employee to physically change what is occurring. Plus, it allows them to provide input on where the system can be improved. In our experience, we have gone back to offices where employees were excited about the process. They told new employees about the review that was going to be completed and looked forward to their turn to talk to us.

Despite the fears previously addressed, employees are still happy to have someone actually listen to them. They have a story to tell. That story can take up to eight or more hours of their life each day. And when someone actually listens, they are more than willing to share. We have had employees share ideas that changed the way processes worked throughout the company. They were willing to tell anyone who would listen—it is just that no one was listening.

One of the biggest mistakes we made when first implementing Process Mapping was something as simple as not sharing the finished product with all employees. We discussed the results with the manager and supervisors, giving them the completed maps. We left assuming that they would share the information. In short order, we heard from the employees that they were very upset. They wanted copies of the completed maps. Even those who had only a small part in the process were interested. It was a product they helped develop. They had ownership, and the owners wanted their product. Ever since, we always make a point of ensuring that all employees are provided with the final product.

Sense of Pride

The previous two benefits lead to the third benefit of Process Mapping. Many employees come to work and understand what

they do (their story). They take something, transform it, and make it something else. Some are lucky enough to actually interact with customers and see the effect of what they do. But many see only that input and output.

Process Mapping not only provides management with an overall view of operations, but also provides employees with a view of how their work adds value and how they are part of a team. The holistic approach allows them to see where their work comes from. They can see the steps that lead to the product they receive and understand the work that has gone before. They can also see why they are doing what they do. Each step in the process should lead to further steps in the map. Eventually, this should lead to a final benefit to the customer. Process Mapping is often the first time employees understand why they are doing the work they do. It helps them understand why a bothersome statistic they are required to generate is important to a report that drives future customer transactions. Or it may show why they should not use a certain code they thought would make things run smoother.

In the book *Gung Ho!,* Ken Blanchard and Sheldon Bowles talk about the "spirit of the squirrel"—the need for people to believe their work is worthwhile. They go on to state that *worthwhile* means that people must understand their work; it must lead to a well-understood and shared goal; and values must guide everything they do in their work. Basic to all of this is that people must understand how their work makes the world a better place.

For some jobs, this is easy. Doctors see their patients become healthier, pilots know they take people safely from one place to another, and politicians . . . well, let's not press it. Other jobs seem so menial or useless that people only think they are part of a cog that makes larger cogs. But looked at as part of a greater process, any job takes on meaning. On one level, the file clerk may only be pushing paper, but on another level, he is ensuring that paperwork is available when decisions must be made. On one level, the janitor handles trash and dirt, but on another level, he is ensuring that the people in the building can achieve their work at its highest level. On one level, the factory worker just puts rivets in metal, but on another level he ensures that the product meets customer specifications in order to achieve customer satisfaction. Process Mapping, done correctly, helps provide the information that will show employees the true value of their jobs.

During one review, we asked employees what their work accomplished. They were not able to tell us. In fact, they told us that when they asked their supervisor why they did the things they did, they were told, "You don't need to know." We showed them how their work fit in with the overall process. Not only did it provide them with a sense that their work accomplished something, but also it led them to suggest changes and elimination of paperwork that cut days off the processing time. Not bad for a bunch of clerks.

Customer-Driven

If a process leads to completion of an output that nobody wants, it is a waste of time—there is no customer. The successful analysis of processes must take customers into account, and that can be any level of customer. Maybe it is the primary customer—the one who buys the product; the one who purchases the car or insurance or legal advice. Or it may be an internal customer—the one who uses that output as their input to their process; the accounting department or the chief executive officer (CEO); or the next step in the production. Bottom line, any analysis must take the customer into account; it must be driven from the customer's perspective.

Possibly the most important benefit of Process Mapping is that it is customer-driven. To complete a Process Map, everyone must understand what is being delivered to the customer and why. Initial reviews with employees are established in a way that begins this process—the idea of identifying outputs and how they benefit a customer. Likewise, analysis of the inputs helps the reviewer understand whether the customer is getting a useful product.

In addition, evaluation of the process is meant to help ensure that the operation is as transparent to the customer as possible. And transparency is an important component of internal processes. Timely response is the hallmark of perfect customer service, and looking for efficiencies in a process directly affecting customers is a good start. But it is just as important to identify process-caused delays that should not be affecting the customer. For example, if administrative duties such as timekeeping cut into an individual's ability to provide customer service, a nonsupporting process is affecting the customers. And customers are much less willing to accept the excuse that there was a delay because of administrative issues. These are the processes that must become transparent to the

customer, and finding ways to create transparency (what they cannot see, they do not object to) should be the objective of any review. Process Mapping helps make that step.

What Can Go Wrong

As previously indicated, we will be including a number of the mistakes and pitfalls we have encountered as we have implemented Process Mapping projects. However, there are two overall issues to keep in mind—two basic mistakes that can undermine the entire project.

The first is the nightmare of a hidden agenda. Inherent within the benefits listed earlier is the need for trust—trust among all participants: management, employees, and the reviewers. Destruction of that trust will result in a failed project. The movie *Office Space* has almost reached cult status, primarily because people see their everyday lives in the problems and miscues shown in that particular office. Central to the problem are the Bobs—two external consultants ostensibly brought in to determine how things can run better, but with the real agenda of driving layoffs. (As one character notes, "Good luck with your layoffs, all right?") In the movie, every employee lives in fear of meeting with the Bobs, because they all know what is really going on. If you go into a Process Mapping project to carry out management's agenda, if you go in with preconceived notions, if the review is a foregone conclusion, then it will never succeed. You will only prove what you think you know, and there will be no trust (meaning no truth) in any of the work accomplished.

Closely paralleling the hidden agenda issue is the second issue—losing sight of the customer. Customers are central to the methods used in Process Mapping, and customers are where it all starts. If the outcome is more concerned about management, if it is more concerned about the shareholders, if it is more concerned about the consultants, then it will eventually fail. Each of these groups is important. But more important is to remember that long-term success is tied to the customers' satisfaction. As long as everyone has their eye on that prize, then the Process Mapping analysis has that much better chance of succeeding.

The Process of Process Mapping

Somewhere out there, someone has an idea for a great movie. It may be the next *Ben-Hur*, or it may be the next *Plan Nine from Outer Space*. But in that person's mind, it is a great movie. Everybody

thinks they have an idea for a great movie. Of all those great ideas, a small percentage is actually put on paper. Of all the ideas that are put on paper, a small percentage are picked up and read by someone who can do something. Of all those that are read, a small percentage are purchased. And, surprisingly, for all the ones that are purchased, only a small percentage is actually produced. And by the time the idea goes from one person's idea to being captured on film, the person with the original idea may not recognize the finished product.

Once a script is accepted, it gets changed. It gets researched and changed. It gets storyboarded and changed. It goes into rewrite and gets changed. It goes into filming and gets changed. It gets edited and gets changed. Sometimes it gets tested by focus groups and gets re-edited—and changed. The story that is "the movie" evolves as the many people working on it come to a better understanding of what the story is.

A company's processes go through numerous changes, too. As a result, the understanding of those processes is changed. The CEO and executives have one idea of the processes, the managers and supervisors have another, the line personnel have a third, and the person who first imagined the processes that would be "the company" probably would not recognize the finished product.

Just as the storyboard is used to anchor a visual understanding of a movie's changes, the Process Map is a visualization of the changing understanding of the process. When all is said and done, the Process Map should bring together everyone's understanding of the story to show the "real" process.

The steps that go into changing the map to reflect reality are what make the map effective. These steps are process identification, information gathering, interviewing and map generation, map analysis, and presentation.

Process Identification

We know intuitively what a process is. We think we know what the start and end points are. We think we know where the process resides and who the owners are. And we think we know what is important and what is not. However, until we really dig in and find these answers, we are only fooling ourselves.

A scriptwriter sits down thinking the plot will fall into place. However, the characters have their own ideas. Many writers talk about how they knew exactly where the story was going to go, but

the characters had a different idea. As the story develops, the good writer allows the characters to determine an outcome that is true to their spirit. That final script looks nothing like the original idea, but it is a better script because it is true to the characters.

Presupposing what makes up the process leads to the same false results that occur from forcing characters to act—well, out of character. The reviewer must sit down with the people who know how the processes work and learn the story. But the reviewer needs to do more than just get their story. The reviewer helps them begin to understand that their story is only part of the overall movie. Just as a good writer must think about the audience, a good reviewer must think about the customer. This means taking a trip through the customer's eyes and seeing the triggers that interact with the customer.

Data Gathering

Digging deeper into the process, we must understand the information that is available. This information may be in statistical reports, it may require talking to specific people, and it may simply mean spelling out what the process does. But if we jump into Process Mapping without all information necessary, we can easily miss what is important.

A scriptwriter must have a basic understanding of the subject before writing. The more the writer "guesses" at what the real facts are, the more the viewer's suspension of disbelief is tested. Think about *2001: A Space Odyssey*. In the entire movie, based on what was known at the time, there was only one scientific error (and it is not the zero-G toilet—that was based on evidence available at the time). As the scientist experiences free fall shuttling from the Earth to the space station for his briefing, he sips on liquid food through a straw. After the liquid is sipped, it falls back into the container. Weightlessness would not allow this to happen.

Now think about *Plan 9 from Outer Space*. People who are killed in one scene show up in later scenes (and they are not the zombies), scenes that have nothing to do with the movie are included, and headstones in the obviously fake graveyard are knocked over by people brushing into them. Ignoring facts shatters what little credibility the movie might have had.

Okay, it may be unfair to compare a megabudget movie to one shot on a shoestring, but you can think of examples of your own—a

soda bottle visible in a scene from *Cleopatra,* a watch on a gladiator's wrist in *Ben-Hur,* and the fact that Krakatoa is west of Java (not east, as the movie title says). Factual data are the key to suspension of disbelief.

For Process Mapping, factual information is the key to sustaining belief. The reviewer must have the facts at hand and be able to use them. This will keep the reviewer from going down roads that are unimportant. It also helps the reviewer understand the information being received through the mapping. Finally, and maybe most importantly, it provides credibility to the reviewer.

Interviewing and Map Generation

Once the basic information is in hand, the reviewer actually starts making the map, but this process is not done in isolation. It is a give-and-take interaction that makes the maps living, breathing items. Every interviewee has input and, if desired, a hands-on opportunity to make the map. And every interviewer is one of the artists building the final product.

After a script is done, it is time for the rest of the players to become involved. As we have already discussed, the storyboard provides the medium to begin translating that story. But the director has ideas, the producer has ideas, and the actors and actresses have ideas. The filming of the movie is the time when the words on paper transfer from the storyboard to the film. As each person provides input and change, the storyboard changes. When the film is "in the can," the storyboard may not look at all like the original script.

Each person has an idea of what the process looks like. They know their stories and expect them to match everyone else's stories. The map and interviews help build on those stories until there is a final product that, although it might not match the original map or the original stories, does represent the final, real process.

Analyzing the Data

This has been happening since the project was first undertaken. Even the first discussions should provide the opportunity for analysis. During one recent review, we began by talking to the head of the department. He told us that, although the processes were the same, the two sections were doing them differently because the heads of those sections each thought that was the better way to do it. Later,

while talking to the head of a third department, she stated that she bypassed the mechanical system and used her own spreadsheets. The initial analysis is accomplished. A major problem has been identified. The only question left is why.

Editing the movie starts when the script is being written. No scriptwriter submits a first draft. If so, it will be rejected every time. Changes are made during the writing process, during the negotiation process, during the filming process, and, most important, during the editing process. In fact, the editing process is what really brings it all together; this is where the final storyboard is brought to film, where the final product is really completed, ready for the world to see.

Analysis has been going on throughout development of the maps, but only at the end can the full effect be seen. The reviewer can look at the entire picture, seeing the full interactions, identifying the most significant delays, and determining the effectiveness and efficiency of the entire process. This is where the final product and final report come together for all the world to see.

Presentation

Putting all the process definition, data gathering, interviews, map generation, and analysis together should result in a final report. This is the product the reviewer has been working to build, and it is the product that management wants to see.

Eventually, a movie is shown to an audience. That proves its ultimate value. All the writing and research and storyboarding and filming and editing have led to this product. If it is successful, it is used and used again. And the results of that work are successfully apparent to the audience.

Eventually, a report of the process under review is provided. This can be written, oral, or anything that grabs the audience's attention. But all the process identification, data gathering, interviewing, mapping, and analysis have led to this product. A successful map is used many times. And a successful mapping project will lead to more. And the results of that work are successfully apparent to the audience.

Process Defined

Before getting into the details of a Process Mapping project, we want to examine how processes can be subdivided to better understand

how they are constructed. And to do that, we need to ensure that we all have a similar understanding of what we mean by *process*.

Life is a complex intertwining of processes. Every action we take is a mixture of inputs, actions, and outputs—the classic definition of "process." Some of these processes are simple: The input is an old piece of paper, the action is wadding and dropping, and the output is trash disposal. Other processes are infinitely complex. The input is raw materials, the action is the combination of those materials into a product, and the output is the space shuttle. Others seem simple, but are infinitely complex. The input is sound, the action is hearing, and the output is enjoyment of a fine piece of music.

It is important to understand that more than an action occurs, however. A better term for what happens is a *transformation*. If the process does not transform the input, nothing has happened. The output is the same as the input, and there is no real need for the process. Sometimes, this discovery is the most surprising part of evaluating a process—and the most valuable.

To fully analyze and understand processes, there must be a system for classifying and understanding the actions within the overall process. This requires breaking a single process into the various elements that make up that process. The reviewer can then drill down as needed, getting into the details that make up a process. Even a simple process like throwing out the trash can be broken down into simpler elements.

Each section of a process is really a smaller process. And when that section is broken down, it too is a process. And, possibly, the sections of that process are another process, as are the sections of that process, and the sections of that process, and so on. As this drill down takes place, a reassessment of the inputs and outputs should also occur to ensure that true value is being added. In this way, the particular parts of the process can be evaluated, just as the overall process can be.

Drilling Down the Movie

To understand how these processes can be subdivided, let's return to the movies. To better understand the story that is being told within a movie, there already exists a systematic way of drilling down the parts of the movie so the individuals involved in its creation can understand how it is put together.

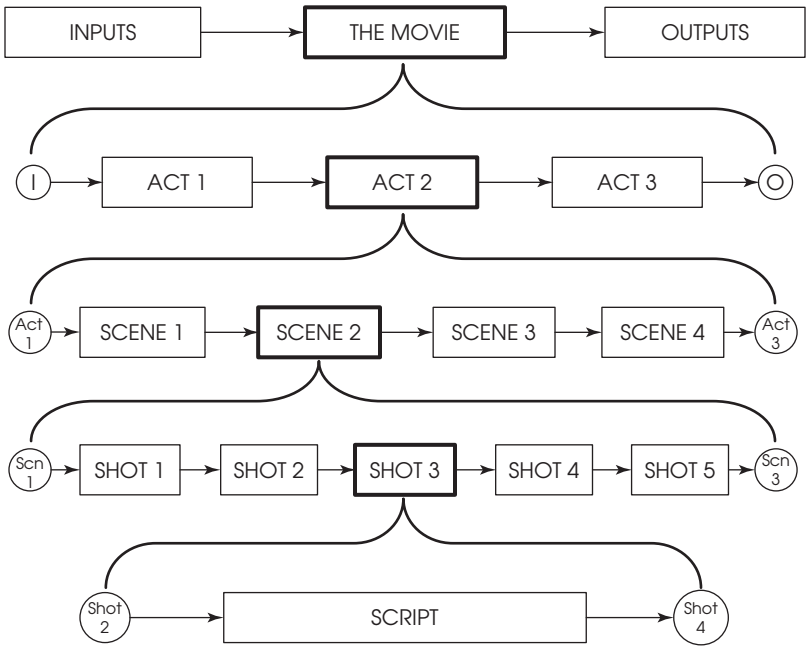
Movies are broken down into acts. Each act has an overriding theme or point to it that helps support the overall movie. Each act is then broken into scenes. Again, individual sections that help support the individual acts. Each scene has individual shots, which help support the tone of the scene. Finally, there is the actual script, the specific words and directions that make up the movie.

Exhibit 1.1 shows how this drill-down might look.

The Movie

Think about the classic movie *Psycho*. (Warning—minor spoilers alert. No, we won't give away the ending. But some of the movie's details are about to be included.) There is the overall movie about Marion's misappropriation of funds and the events that transpire when she meets Norman Bates. This is actually a process. There is an input—a sum of money and a young girl (Marion) who acts on an opportunity for theft. There is a transformation—people's lives are changed after Marion meets Norman Bates, especially Norman's

Exhibit 1.1 Drilling Down the Movie



and Marion's lives. And there is an output—Norman's final run-in with the police and the shocking surprise. The movie is the process.

Acts

Each movie or play is broken into various levels to better facilitate an understanding of the action that is to occur. Movies are composed of a number of acts—usually two to four. These are the major subsections of the movie that represent overall structure. *Psycho* might be broken down into the following acts:

Act I: The opening theft and flight from Phoenix.

Act II: Marion's meeting and interaction with Norman.

Act III: The search for Marion by her sister and the detective.

Act IV: The final confrontation with Norman.

Each of these acts can further be viewed as an individual process (or movie) with an input, a transformation, and an output. The input comes from the prior act and the output goes to the next act. Using Marion's initial meeting with Norman as an example, the input is a young girl and her arrival at a strangely empty hotel, the transformation is the subsequent discussions with Norman that begin to reveal his character, and the output is a body left in the trunk of a car that is dumped in a swamp. You can also see that the output of the first act (Marion's flight) leads to this act, as the output from this act (a dead girl) leads to the third act.

Any process must add value, and any section of a movie must add to the final conclusion. In this case, Norman and Marion's meeting brings to conclusion the events in Marion's life and sets the foundation for her sister's search. Accordingly, a true transformation has occurred.

Scenes

The next level is the scene. Each act is composed of a number of scenes. Just as the acts are subsections of the movie, the scenes are subsections of the act and represent the overall flow of that act. Act II of *Psycho* (Marion's meeting and interacting with Norman) might be broken into the following scenes:

Scene 1: Marion checks into the hotel.

Scene 2: Marion comes over for a snack.

Scene 3: Norman watches her in her room.

Scene 4: The infamous shower scene.

Scene 5: Norman cleans up.

These can be seen as little movies that come together to build the final movie. And, just as with each act, these can be seen as little processes. The input for the shower scene is running water and an unsuspecting girl. The transformation is from life to death. And the output is a body. Again, the input comes from the previous scene (Norman's and his mother's reaction after Norman talks with the girl), and the output leads to the next scene (a body can raise questions and must be disposed of). The scene adds value by providing the impetus for the search that occurs in the next act, and it begins to show the characters' twisted minds. The obvious transformation of Marion's death is accompanied by the transformation of the movie into a deeper mystery.

Shots

Each scene is composed of a number of shots. These are the actual images that make up the movie. As with the previous levels, they are the subsections of each scene, representing the flow of that scene. In the shower scene, for example, Alfred Hitchcock used almost 50 shots from as many as 20 different camera angles. These included shots of Marion's feet, shots of her turning on the shower, shots of a mad person with a knife, and a final shot that pans back from Marion's lifeless eye.

Again, each of these is a small process. While not profound, a well-crafted movie needs every one of them to establish its purpose and mood. At first blush, the number of shots Hitchcock used might seem excessive. But people who watch the film do not notice the number of shots. Instead, they are wrapped up in the action captured in those shots. And each shot has its own input and output. The input for the final shot is the eye of a dead girl. The transformation actually occurs inside the viewer—the realization that we have seen Marion's last breaths. And the output is the dead body. Again, the previous shot's output provides the input for this shot. And the output provides the input for the next shot and, in this case, the next scene.

This shot adds a finality to the scene that would not have existed otherwise. It provides the transformation described and, as with the

items described previously, propels the movie to the next level. The shot adds many levels of value.

The Script

Finally, there are the actual words that make up the shots, the scenes, the acts, and the movie. These are a written representation of what is supposed to occur. In some scenes, those words are the dialogue. In other scenes, the words are the camera instructions, such phrases as "hard cut to face" or "dissolve to shower" or "fade to black." For the final shot in the shower scene, the script might read:

> FADE TO:
> MARION'S eye. Camera slowly pulls back as image turns
> showing face. As full face begins to come into view, stop turn.
> Continue pull back until full face in view.
> HARD CUT TO NEXT SCENE.

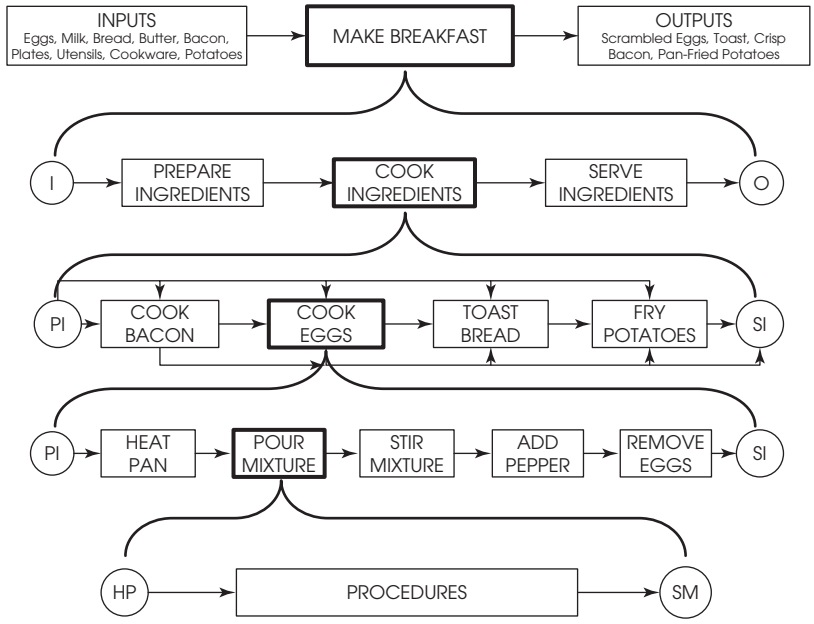
Ultimately, words and direction cues build to make the final movie we watch. However, the organization of these words is built around the various subsections of the movie—the acts, scenes, and shots. Likewise, it is these sections that are storyboarded to help the producers, directors, editors, and everyone else involved understand the direction of the movie. The storyboard helps synthesize the script into graphic images.

Business Processes as Movies

To fully understand processes, they must also be broken down into manageable segments. This approach allows a more detailed analysis of the parts that make up that process. The subsections used to organize and understand movies work well in a business environment. And, just as with movies, this substructure makes Process Mapping (storyboarding) that much easier.

To help understand these subsections, we will take a look at the process of making breakfast (see Exhibit 1.2). At first blush, this might seem to be a trivial process, but even the analysis of something this mundane could be an evaluation if it were completed at a hotel or restaurant to identify an existing snafu in the food production unit.

Exhibit 1.2 Making Breakfast



The Process

First, we need to understand making breakfast as a process. The input is the ingredients that go into making a breakfast (e.g., eggs, milk, bread, butter, bacon, plates, utensils, and pans). These ingredients go through a transition we call making breakfast. The output is the finished breakfast (e.g., scrambled eggs, toast, crisp bacon, and pan-fried potatoes). (This is not a particularly healthy breakfast.)

Units

The first subsection (equivalent to a movie's acts) is the unit. These are the major subsections that make up the overall process. This breakdown can be made based on location (home office, field office, branch office), type of work (building, testing, installation), stages of work (preparing, cooking, serving), or any other logical subset. The intent is to provide the best understanding of what makes up the process.

The process of making breakfast is probably best understood based on the stages of the process. These stages might be Prepare Ingredients, Cook Ingredients, and Serve Ingredients. Just as we saw each act of the movie as a smaller movie, each unit can be seen as a smaller process. For example, the input for Cook Ingredients is the prepared ingredients (the output from the prior unit), the transformation is the application of heat and other stimuli to the prepared ingredients, and the output—edible food—becomes the input for the last unit, Serve Ingredients. Any process must add value to be a true transformation. In this instance, value is added by taking raw food and making it into an edible—and hopefully tasty—dish.

Tasks

Just as each act of a movie is broken down into scenes, each unit can then be broken down into tasks. Determining the tasks that make up a unit is done in much the same way as described for units. However, it is less likely to be dependent on location and more likely to begin focusing on the actual work.

The unit Cook Ingredients might be broken down into the tasks of *cook eggs, cook bacon, toast bread, and fry potatoes.* Again, each is a small process that uses output from a prior task or unit and produces output to the next task or unit. It is interesting to note that these tasks are not dependent on any of the other tasks in this unit. *Cook eggs* does not require input from *cook bacon* and does not provide an output to *toast bread.* While a very simplistic example, this is the type of analysis that can take place during Process Mapping.

The input for *cook eggs* would be the mixed eggs. This would come from the first unit, Prepare Ingredients. The transformation would be the cooking process. The output would be scrambled eggs and would provide the input for the last unit, Serve Ingredients. This process adds value by taking raw eggs and transforming them into edible eggs. Therefore, there is a true transformation occurring.

Actions

Each task can then be broken down into various actions. These are the equivalent of the shots that make up each scene in a movie. Moving from units to tasks, the description becomes more focused on actual work done by the individuals. Actions reinforce this focus with descriptions that are more closely related to individual work.

The actions for *cook eggs* might include heat pan, pour mixture, stir mixture, add pepper, and remove eggs. (Note that we have tried to use two-word descriptions for these actions. This is a fundamental approach when developing Process Maps, so it is a good idea to practice doing so now.)

Once again, each of these actions can be considered a very minor process with its own inputs, transformations, and outputs. The input for pour mixture would be a container holding mixed eggs and other ingredients already added. The transformation is the act of transferring the contents from the container to the pan. The output is the mixture sitting in the pan. Customer value has been added during the process, because cooking the eggs cannot be accomplished without this transference. Therefore, there is a true transformation and a true process.

Procedures

The final stage is the actual words. With a movie, this is the script. With a process, it is the procedures. These are written descriptions of how each action is completed. Often, it is the way things are supposed to be done. Pouring the mixture might be composed of the following procedures: "Take the container in your right hand, grasping it between the thumb and fingers. Hold the container above the pan. Slowly tilt the container until the mixture begins pouring into the pan. Continue tilting until all contents are in the pan. Place the container on the counter."

But just as with a movie script, there is room for interpretation or improvisation. Looking at the directions, the following questions might arise. If I am left-handed, do I have to use my right hand? How high above the pan should the container be held? How fast should I pour the contents? Good employees know there is room for interpretation. They may even find better ways to do something than the basic description. Less able employees might see instructions and assume that, despite being left-handed, they must pour with the right hand.

It is also impossible to write down everything that must be done. Accordingly, much procedure is passed down from worker to worker over the years through oral tradition. This lends itself to misunderstanding and the use of procedures that have no basis in need.

During a review, we tried to understand how a certain document was used in the process. We continued to ask for the form by name—the "Journal for Unearned Premiums." Employee after

employee gave a dumbfounded stare. Finally, while describing how we thought the form was used, a light went on for the employee who gladly stated, "Oh, you mean the greenies!" Oral tradition, describing the green form as "greenies," had long taken over the official procedures, which called them the "Journal for Unearned Premiums."

Employees' interpretations and misapplication of these instructions speak to the root of what is occurring in a process. The good employees are adjusting these procedures to the needs of the situation. The employees ingrained with the "it's a rule, so I'll follow it" mentality are busily using their right hand when they are left-handed or, even worse, sitting waiting for someone to tell them how fast to pour the mixture. And, to make things easier, we will not discuss the companies who insist that better ideas should not be accepted because they are not in procedure or, even worse, think these should go through a committee before being accepted.

That is one of the purposes of the hierarchy of processes. To fully analyze the overall process, the reviewer and the employees must understand the interrelationships of the sections within the process.

As you will see when Process Maps are developed, they allow you to identify the processes that exist on their own and those that rely on other processes. You can see how one unit leads to another, how one task leads to an action, and how they all work together to the final product.

A Real Business Example

Making breakfast is an interesting example, but it does not lend itself to deep analysis. To get a better feel for the hierarchy of processes and its uses, we will use a more realistic business example—Payment by Check Request. This scenario is used throughout the remainder of the book, so this is a good time to get acquainted with it (see Exhibit 1.3).

The first thing to notice based on this description is that the process we are examining is really a unit of another process. Payment by Check Request is a unit of *Expense Payment*, the basic units of which are Payment by Check Request, Travel Expense Report Payment, and Purchase Order Payment. Likewise, Expense Payment is a unit of *General Disbursements*, which might include Payroll, Expense Payment, and Refunds. Ultimately, every process is a subset of the overall process that is the company.

Exhibit 1.3 Expense Payment Process

Travel expenses are reimbursed through *expense reports*. These reports are prepared by the traveler, approved by the traveler's supervisor, and processed through the payables departments—field office and home office.

Purchase order expenses are all those that require preparation of a *purchase order*. These are required for all purchases over $5,000 and all repairs over $2,500. They are prepared by the purchaser, require two to five approvals, and are processed through the purchasing department.

This scenario focuses on *all other* expenses. These are paid through use of a Check Request. Portions of this part of the expense payment process have been centralized in the home office disbursements department to increase efficiency and to reduce costs. Other functions are handled by the local payables departments (one in the home office and one in each of the 11 field offices). The company has committed to having all requests completed within 48 hours.

The requester completes a Check Request (form #1292) online. The form requires the payee's name and address; amount; budget codes; and (if applicable) tax ID information. In addition, if the check is to be returned to the requester, manual form #1293 (*Return to Requester*) must also be completed and included with the supporting documentation. Once completed, the requester submits the request electronically. Upon submission, a check request reference number is immediately e-mailed to the requestor. This is used to reference all further transactions relating to this request. Once the reference number is received, the requester faxes all supporting documentation to the Documentation Center, where the documents are scanned into the system. The reference number must be on each document. The requester then notifies his or her immediate supervisor that a request has been submitted and provides the reference number.

Upon notification that a request has been completed, the immediate supervisor will check the system to determine whether supporting documentation has been posted. Once the documentation is online, the supervisor will indicate approval. This review is intended to ensure that the request is completed correctly and to verify that supporting documentation matches the request. In addition, if the check is to be returned to the requester, the supervisor must approve an additional section of the check request. If the request is for more than $1,000, a second-level approval (the supervisor's supervisor) is required. The immediate supervisor will advise of the need for a second approval by e-mail. In the event either approver feels there is a problem with the request, they will notify the requester that additional information is required.

Once all approvals are complete, the last person providing approval will notify the local payables department via e-mail.

Twice daily (at 9:00 A.M. and 2:00 P.M.) the local payables clerk processes all requests. The clerk verifies that all required sections are completed, that they are completed correctly, and that all required approvals are present. The verification process includes comparing support to the request, verifying proper coding, and ensuring proper authority. In the event that there is an error, the requester is notified via e-mail. The clerk then approves the form to show the review has been

completed. At that point, copies of all requests and supporting documentation are printed out and filed, by date reviewed, with a five-day hold-file. When the batch is complete, an e-mail is sent to the home office check issuers listing all requests.

There are three home office disbursement check issuers. One of these handles home office requests and those from one of the field offices. The other two check issuers handle five field offices each.

At 1:00 P.M., the issuers each print out the e-mails listing the requests, sign on to the check issuance system, and access the check request system. Each request is reviewed to ensure that the approvals clerk has approved the request. Two of the check issuers maintain a log listing those requests that do not have the clerks' approval. The third check issuer (the one handling home office expenses) prints out copies of the requests which have not been approved by the local approvals clerk and maintains them in a file. The required information is then entered in the check issuance system. A copy of each check request is printed out upon completion. Once all checks are completed, the issuer enters the print command and then signs off the system. The physical checks are printed at this time.

The check printer is maintained in a locking cabinet in a centralized location within view of most employees. The home office disbursement supervisor keeps the key for the cabinet and the key used to enable the printer. At 1:00 P.M., one of the issuers notifies the supervisor that the check issuance is about to start. The supervisor will enable the printer, then relock the cabinet. The treasurer maintains backup copies of the keys.

Once the checks are printed, each issuer gives the copies of the check requests to the check retriever. When all three issuers have turned over the copies, the retriever notifies the supervisor, who unlocks the cabinet. After the retriever gets the checks from the check printer, the supervisor disables the printer and relocks the cabinet.

The retriever processes checks in field office code number order. The home office is code 01, the southwest office is 02, the northwest office is 03, and so on. She matches each check to a request. The retriever enters the check number on the request and then initials it. The initialed copies of check requests are filed by date, in check number order. All exceptions (a check with no request or a request with no check) are set aside to be researched later. As each office is completed, the non-exception checks are bundled for overnight delivery. Those offices not completed are given priority handling the following morning. Overnight deliveries are required in the mailroom by 3:00 P.M.

Research of missing items is usually completed first thing the following morning. For requests with no checks, the retriever verifies in the system that no payment was made. The request is then returned to the issuer, who processes it in that day's batch. If the review in the system shows that a check was ordered, the request is marked "Stop Pay/ Reissue" and returned to the issuer. These are also processed with that day's requests.

For checks with no request, the retriever verifies with the issuer that there is no request. If the request cannot be found, the check is voided in the system, "Void" is written across the physical check, and it is stored in a separate file with other voids.

Checks are received in the field office at approximately 10:00 A.M. the day after shipping. Home office checks are hand delivered to the payables clerk

(*Continued*)

Exhibit 1.3 (Continued)

at approximately 8:00 A.M. The payables clerks open the package and pull the appropriate day's folder from the hold file. Each check is matched to a request. The clerk verifies that the amount and payee are correct; enters the check number on the original request; and initials the request to show that the check was received.

If the check is to be mailed directly to the payee, the clerk prepares an envelope and routes the payment to the mailroom for delivery. If the check is to be returned to the payee, the clerk completes the delivery log. This log includes the check number, the check amount, the requester's name, and the requester's department.

Once all checks have been recorded, the clerk hand delivers those checks that are to be returned to the requester. The clerk takes the check to the requester or an authorized individual in the department. The check is delivered, the clerk signs the log, and the requester (or authorized individual) signs for receipt.

If the clerk has a request for that day but no check, the request is returned to the folder. At the hold-file date, the clerk prepares the Check Locator Form (#1922) and e-mails it to home office disbursements. This includes all information necessary for home office disbursements to locate the check. A copy of the form is printed out and put in the hold-file established for that day.

When a check locator form is received in home office disbursements, it is set aside for the following day. The next morning the issuer reviews the system to see if the check was issued. If it has not been issued, a new check is issued using the check locator as support. If it has been issued, the check locator form is e-mailed to the field office with any necessary information.

When the check locator is received by the field office with an indication that the check was already issued, the clerk will verify that the check was not received. If not received, the clerk will complete a stop pay form and prepare a new request. When the new request and stop pay are received in home office disbursements, the check issuer will verify that the check has not cleared, process a stop payment in the system, and issue a new check using the stop-pay form and the new check request as support. If the review shows the check has now cleared, the check issuer will obtain documentation from the bank to determine if an Affidavit of Forgery will be required and a potential fraud should be reported (using the Potential Fraud Form–#1099).

If the local payables clerk receives a check for which there is no request on record, the check is marked "Void," and a Void Check Form (#0086) is completed. The check and the form are returned to the home office in the next overnight shipment. When received in the home office, the check issuer voids the check in the system and stores it in the void check file.

In the event that the check retriever is unavailable after 1:00 P.M. (absent or detained with other business), the backup is another clerk within the department who is not a check issuer. In the event that a check issuer is out for one day, the work is held until the following day. If the issuer is out for more than one day, the other issuers pick up the additional work. Backup for the payables clerk in the field offices depends on the office. Some use the supervisor, some use another clerk in the department, and some do not designate a backup.

This is a good reminder that the process, units, and associated levels are really defined by the reviewer. The primary process under review provides the base point for further defining the units and lower levels. Keep in mind that the reviewer may have decided to do this review of Expense Payments after identifying it as a unit (or possibly even a task) associated with a broader process within the company. But now it is time to evaluate Payment by Check Request by itself, so it becomes the primary process.

The Payment by Check Request process begins with a bill. This is the most usual form of input. The transformation that occurs is the completion of a request leading to a payment. The final output is the check delivered to the payee.

The process might be broken down into the three units based on location: Field Office Prepares Request, Home Office Prepares Check, and Field Office Delivers Check. Each unit is a process in which the output from the prior item provides the input for the next item. Since the first unit is Field Office Prepares Request, the input for this unit is the same as the overall process—the bill. The transformation is the completion of a request that meets home office requirements. The output is the original and photocopy of a properly approved check request.

The Field Office Prepares Request unit might be broken down into four tasks: *complete request, approve request, verify request*, and *mail request.* These subsections are starting to be based more on people than on location. However, the location issue is still important in that there is a task for the employee, one for the supervisor, and two for the disbursements section. The input for the *approve request* task is the check request. However, depending on the disposition of the final check, the input could include a *return to requester* form. The transformation is the bestowing of authority on the request form. The output is an approved form.

The *approve request* task has a number of actions associated with it, including some decision items. It starts with a decision—"Is check request correct?" If not, return request. If so, approve request. Then another decision—"greater than $1,000?" If not, mail request. If so, send to superior and the superior will approve request, then mail request. You can see from the description that the breakdown now is totally function-specific, and each continues to have a basic input and output. The input for the *approve request* task is the completed request. The transformation is the review and approval of the request. The output is the approved request.

Take note of the use of a verb-noun approach in the task and action descriptions. As mentioned before, this is the way maps are eventually generated. Sometimes it can be tough, but it is good to get into the habit as soon as possible.

Finally, there is procedure that underlies every action. In some cases, this may be straightforward, as in "The individual giving final approval to the expense will submit the form to the disbursements clerk." Other procedures may not be as explicit. For example, "All amounts over $1,000 must be approved by a second level" does explicitly indicate the approval, but it implicitly indicates that a decision must be made (is the amount greater than $1,000?).

This is the act of drilling down, finding the processes within the processes. The degree of drill down is at the discretion of the reviewer. Likewise, the reviewer determines how broadly the overall process should be defined. But, whatever that level, an understanding of the layers of the process is a prerequisite of understanding the full process.

Recap

The first step in understanding the value of Process Mapping is understanding the reasons for process evaluation in the first place. Ultimately, quality process evaluation is intended to ensure that all processes are in alignment with key business objectives. In particular, these should focus on customer service, efficiency, effectiveness, and profitability objectives.

The ultimate value of Process Mapping is in getting employees to tell their story—the stories that make up the movie that is the company. Process Mapping is a way of recording these stories in a way that documents the movie.

Four major benefits can be obtained from using the entire system of Process Mapping. First, it is a holistic approach that helps explore the interrelationships of processes. Second, it is accomplished in a way that gives all employees—from executives to line personnel—buy-in to the finished product. Third, it helps employees understand how their work adds value and instills additional pride in their work. Fourth, it focuses on the customer and how that person sees the company.

As mentioned before, Process Mapping is more than making a map; it is the whole system that results in a successful project. The steps in that system are process identification (learning what makes up

the process under review); data gathering (learning what exists within the process and with whom we will be involved); interviewing and map generation (learning and recording the actions within a process); analyzing the data (learning what can be done to make the process better); and presentation (showing others what we have learned).

To understand process analysis, processes themselves must be understood. A process is an input, a transformation, and an output. The transformation is the important part. Just as a movie can be broken down into acts, a process can be divided into units. Acts can be broken down into scenes, and units can be broken into tasks. Scenes can be broken down into shots, and tasks can be broken down into actions. Finally, the script of a movie provides the actual words that are the movie. Likewise, the procedures of a process are the words that make up that process.

Key Analysis Points

Analysis is the key to success for Process Mapping, so it cannot be isolated to any one stage. Later, there is a discussion of analysis as a final step of the Process Mapping system. However, since analysis is ongoing, each chapter identifies some key analysis points that were brought forward during the chapter.

No Transformation: No Need

For a process to be truly effective, some transformation must occur. Transformation implies a change to an input. If there is no change, why does the process exist? Look for processes in which no real transformation occurs and eliminate them.

Analyze the Written Descriptions

Policies and procedures hold the basic information on how a process should go. Some are too detailed. Others are too vague. Take a close look at these documents, and determine whether enough latitude is available to allow people to get their jobs done. Also ask for those handwritten instructions—the ones that the employees really used to learn their jobs.

(*Continued*)

Keep Alert for Oral Traditions

Listen closely to the stories that are told about how people learned their jobs. There may be an excellent procedure manual, but it is too detailed and boring. Instead, the employees learned their jobs by swapping stories. This oral tradition (sometimes written down in the handwritten instructions described previously) is the actual way the world works. Until you know about the "greenies" (the common reference name of a form or report), you will be the one talking a foreign language.

You Define the Process That Defines the Project

The ultimate process is the company. Within it are numerous processes that support the main process. Defining the level of process helps define the overall review project. By defining that process, the limits of the project are also defined.