

# Hollywood Secrets of Project Management Success

*James Persse*

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9780735625693

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## Chapter 1

# Know the System

*This is not a book about process improvement or about the adoption of any particular process model to power information technology (IT) businesses. But a look at the techniques used by Hollywood production companies to manage their projects will clearly show the value that process brings to the table. Motion picture production is a process-driven system, and it's been that way since about 1920. In the 90 years since, the entertainment industry has refined and matured this process so that today, not only is it common for an \$80 million, two-year project to come in on budget, on schedule, and according to script, but it's expected as well.*

*Things are different in the much younger technology industries. Software, systems, and hardware shops have yet to embrace process with the same enthusiasm or faith. Yet this is beginning to change. More and more chief information officers (CIOs) and senior managers are moving toward process-supported production methods. Industry support groups and organizations have responded in kind.*

*A look at the project management guidelines developed by the Project Management Institute and expressed in the Project Management Institute's (PMI) Project Management Body of Knowledge (the PMBOK) will show a very methodological approach to this aspect of production. Likewise, the requirements of the International Standards Organization's (ISO) 9001:2000 generic quality standard incorporate practices that can support quality management in IT shops, as well as on the factory floor. And a review of the Software Engineering Institute's (SEI) Capability Maturity Model Integration (CMMI) process framework will reveal a model for technology development that emphasizes consistency, repeatability, and continuous refinement. Technology management and improvement guides such as Six Sigma, Agile, and Information Technology Infrastructure Library (ITIL) are based on the same kinds of concepts.*

*The benefits of looking at Hollywood's studio production system in this context are readily identifiable. Both industries—the IT industry and the movie industry—share striking similarities in the life cycle of production. Because of these similarities, it's easy to observe firsthand the successful application of management concepts that have a direct impact on motion picture project success. With slight modification and adaptation, many of these practices can be integrated into IT shops, with expectations for similar success.*

*This opening chapter begins with an overview of the Hollywood system and shows how it ties in numerous ways to the life cycle of technology product development.*

## Two Percent Over, with a Lot of Explaining to Do

When you sit in Bill Fay's office, you know you're smack in the metaphorical middle of Hollywood, even though the office is in Burbank.

Bill is the president of Legendary Pictures, a production company in partnership with Warner Bros. Legendary's offices are in Building 26 on the Warner lot, a building that sits right in the shadow of the iconic Warner Bros. water tower. No steel and glass towers here—the compound is composed of cream stucco two- and three-story office buildings with Art Deco flourishes that radiate the heyday of 1940s studio production. When I arrive for my 10 o'clock meeting, the guard at Gate 4 checks me in, gives me a badge, and points to a parking space. Bill's office is on the second floor of Number 26. His assistant takes me up and shows me in. The exterior wall of the office is a long row of glass windows that look out on the water tower; the opposite wall is decorated with a series of movie posters that I take to be recent Legendary productions. The most prominent is a very large one for the picture *300*, a story about the battle of Thermopylae in 480 B.C. The movie, which mixes live action with extensive computer-generated imagery, was a huge hit for Legendary and Warner's. Bill tells me that this is one project he was especially pleased with—exactly on time, exactly on budget. At this interview, one of my first of many for this book, Bill begins to articulate how he and his people managed to achieve this outcome. The basic message echoes across all of those other interviews in almost the exact same way: The key, says Bill, is "the system."

People in Hollywood aren't bragging when they talk about "the system" like that, the way some IT people seem to be doing when they claim, for example, "We're CMMI Level 5 . . ." (which brings into question whether they really use the standard on a regular basis). In Hollywood, using the system is not a special achievement. It's a de facto management approach, one that all studios, all production companies, all independents adhere to—because it works. The Hollywood system is not 100 percent effective all of the time, and famous stories of the system gone haywire continue to be told. For the most part, however, it is a highly reliable way of conducting the business of movie making.

Hollywood, as we'll see throughout the chapters of this book, operates very much like the world of systems and software development. Both deal with amorphous products, both involve the use of specialized but integrated teams, both function under very real business deadlines and constraints, and both involve, to one degree or another, the use of "magic"—technical magic or creative magic. The U.S. IT industry is sized in the billions. The U.S. motion picture industry also is sized in the billions. The advantage Hollywood has—and one reason why it's been able to work out a manageable system—is simply one of age. The birth of the film industry can be dated to 1905 (the year the Lumière brothers presented the first public showing of short films in Paris), giving it about a century of learning that IT hasn't yet had. As Bill emphasizes, however, the system is not so much about controlling the magical, creative elements of film making as it is about managing the business aspects.

Here's how he paints the average motion picture project: To get a typical movie "in the can" takes about a year and a half of planning and work; it requires a talent pool (off and on) of about 200 to 300 people, spread across maybe 20 specialized teams; and it will need a capital investment (again the average) of about \$65 million. That doesn't include the costs of promotion and distribution later on. That's just to get the movie *made*. Another cycle of work and perhaps an additional \$35 million will get it on the screen.

When that much time, that many people, and that kind of money are involved, somebody somewhere better have some kind of system to manage it all. If you think about it, Bill says, you can see that the system is in place to ensure sound business practice across the life cycle of a picture project. He names five business attributes on which good practice is based: consistency, predictability, accountability, communications, and trackability.

**Consistency** By this Bill means consistency of vision, a common agreement, reached through communications and reviews, regarding the purpose, scope, and tone of the project. The system helps ensure that all key players and department heads (the production chief, the director, the star, the production designer, the prop master, and on and on) share this vision and have agreed to shape their efforts in pursuing and achieving this vision. (That's one reason why contracts flourish so in Hollywood; they capture that consistency of vision in writing.)

**Predictability** The system defines a preset work flow that can be mapped out, planned, and followed, thereby ensuring that essential work phases are not skipped and critical milestones are not missed or ignored. The schedules that drive productions are built around these phases and milestones. The budgets take into account the required system activities. The advantage of following a system like this is twofold. First, it should be possible to know on any day how well the project is proceeding according to plan. This knowledge is essential, given that a single day in production can cost \$200,000. It should then be possible to judge what needs to be done today and where the process needs to be tomorrow. Second, this predictability adds visibility into the project: Not only should the production head know this information, but everyone else can leverage it, too, from the studio production chief on down the line. The system is a map, and others can intelligently follow your progress across that map.

**Accountability** With a project with 20 teams and 200 people and \$65 million on the hook, a lot of people must be accountable for a lot of different things. Slipping 10 percent over budget is a \$6 million slip, so it's helpful to know who did the slipping and why. The system builds accountability into every phase of production. The production system pays very close attention to job descriptions. Part of this comes from the union- and guild-based talent pools that provide the workers in the movie industry. But the point is that job definitions (which in the IT world can often be murky) are firmly in place across a production team. Each person undertakes a specific role, makes specific contributions, is allocated a specific portion of the budget, and regularly reports on his or her performance. This level of accountability allows

the producer's team to keep production targets always in focus, and to make appropriate adjustments and plan deviations when needed.

**Communications** Another big benefit of the system, as emphasized by Bill as well as many other producers I interviewed, is the way it promotes communication—both informal, casual communications and formal, binding communications. Producing, at its heart, is a communications job. In the same way, IT project management also should be largely a communications job. You can't manage well by working solely from paper reports at a desk remote from the action. You need to be engaged with the people who are performing the work, the large jobs and the small jobs. The Hollywood system promotes this engagement through well-established communication channels that facilitate reviews, approvals, discussions, and myriad forms of on-the-go decision making.

**Trackability** Finally, and perhaps of most importance (at least to the producers and studio chiefs), the system promotes regular and deep-reaching measures of progress. This progress tracking begins on day 1 and does not end until the lid on the can of the final cut is taped shut. The system brings with it daily "hot cost" reports (day-by-day expenditures), weekly cost reports, labor reports, schedule reports, scene completion reports, and call sheets for upcoming work: measurement, measurement, measurement, both up and down the chain. Rigorous adherence to this aspect of the system is essential; otherwise, people tend to run out and do their own things, unguided and unchecked. The end result can be a *Heaven's Gate* or a *Waterworld*, with people scratching their heads and asking, "Wasn't this Paul's office yesterday?"

Two features of these five attributes are noteworthy. First, they essentially translate to basic management techniques. As well-worn adages of Business 101, they're likely to be encountered, in some form or other, in just about any business enterprise. Second, the use of a system—any kind of a method or approach—to embed these traits into routine activities seems essential to the success of a business culture. And yet in my years in technology development, working in shops of all shapes and sizes, I have only rarely encountered development methodologies or process approaches of this kind.

Like many IT professionals, I've worked on technology projects run by capable managers and staffed with solid technical talent, and I've watched my fair share of these slip into an escalating spiral of cost and schedule overruns, some by well over 100 percent. Plenty of these stories abound—and they almost always come from system-less shops. When I tell a couple of these stories to Bill Fay, he shakes his head in disbelief. "That wouldn't fly in this business," he says. He explains that no able producer or competent production team would ever allow a project to drift so far off base. He mentions that all productions begin with a 10 percent contingency. Any time a project looks like it might have to tap into the contingency, bells go off, notifications go out, and analyses are made. And should a project come in at the end with a 2 or 3 percent overage of budget or schedule, someone will have a lot of explaining to do.

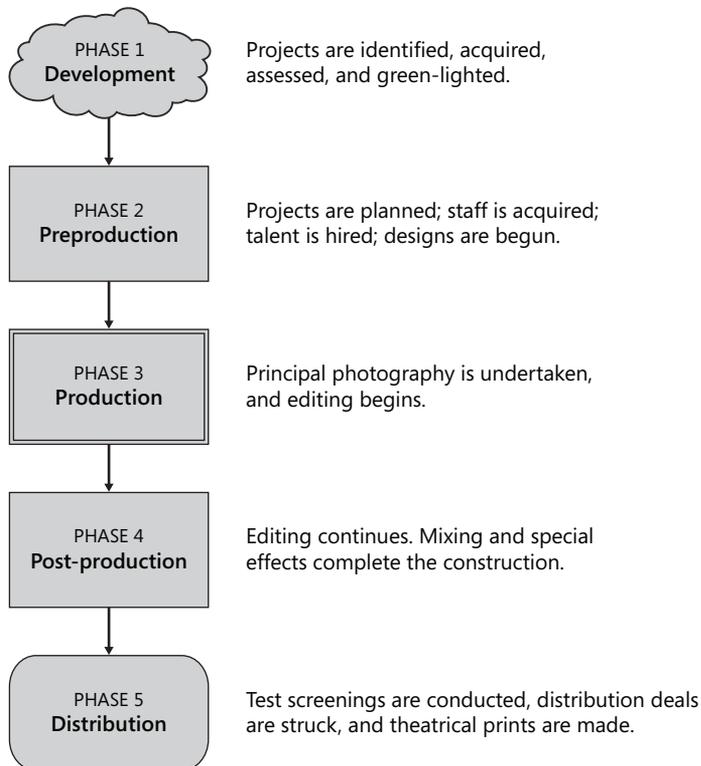
I do not mention to Bill that in the IT world, a 2 or 3 percent drift would be considered a wild success. Instead, I focus back on the system, because I've been caught with a different kind of surprise: The system he's been describing sounds like an apt framework for managing a technology project.

## The Hollywood System of Production Management

The Hollywood production system really is a formal system. It's not a buzzword or a cliché or a pseudonym for big studio clout. It's the established way of engaging in motion picture production.

The system consists of five separate and distinct phases, each one leading from and building on the previous. Whether you're Paramount, Warner Bros., Metro-Goldwyn-Mayer (MGM), Miramax, Parallel Entertainment, or Legendary Pictures, you use the system. Ask Bill Fay or fellow studio executives Pat Crowley, Marty Ewing, Michael Beugg, Amy Kaufman, and Clayton Townsend to describe the system, and you'll get the same answer each time.

Figure 1-1 depicts how the Hollywood system, with its five phases, is structured. These phases are discussed next.



**FIGURE 1-1** The shape of the Hollywood production system

## Phase 1: Development

The first phase in motion picture production is *development*, the activities a studio performs to develop a concept or idea into a producible product: the movie. Many people in the industry would argue that development is the most important stage in successful production. It is here that the product first begins to take shape, where its form and function are initially determined. If the initial assumptions and decisions are valid, the picture stands a better chance of meeting its market and audience potentials. But if the assumptions and decisions are off the mark, the picture may founder.

The most popular example of a project plagued by incorrect assumptions, cited by a few of the studio executives I spoke to, is the 1995 adventure movie *Waterworld*. In development, the producers decided that for the sake of verisimilitude the movie—about a world submerged by a single vast ocean—would be shot out on the ocean, not in a studio tank or a harbor. What they failed to take into account was picture continuity; from shot to shot the sea surface is never the same, so scene cuts often would not match. This led to delay after delay caused by waiting for appropriate conditions and reshooting. The producers also did not fully account for the engineering solutions required for a movie set to float. Sets sank. The wild budget and schedule overruns on *Waterworld* have since become the stuff of legend, and the movie's cool public reception served to reinforce the value of realistic decision making in the development phase.

All studios, production houses, and independent producers move through a development phase for their projects. Development of a project may take three or four months, or it may take a year or two. But to one degree or another, the development phase encompasses six common activities: market analysis, property analysis, concept development, script development, packaging, and financing. These activities are discussed next.

### Market Analysis

Studios don't develop movie projects because they have a romantic attachment to a particular theme or story hook. They move on a particular project because they understand the marketplace, they know what's been performing well, and they know how audience preferences are morphing; from this knowledge, they derive what might sell. The longevity of the genre film is evidence of the benefit of this kind of analysis: the western, the courtroom drama, the coming-of-age story, the romantic comedy, the fantasy. These are product formulas whose popularity rises and falls in the marketplace. Studios are in business in large part to understand how the market is changing. Their production decisions are based largely on how well a current idea fits perceived market demands.

## Property Analysis

For any given IT project, according to an adage in the technology world, the following decision will be necessary at some point: do we make, buy, or reuse? The preference, of course, is to reuse something the shop already has—it's cheaper. And if it worked well the first time, it'll probably perform well again. It's the same with the studio. Columbia Pictures, together with Marvel Enterprises, owns the Spiderman franchise. MGM owns the James Bond franchise. These are two very popular series, so if the studio already has an investment in that property, why not continue leveraging it? It's probably a safer bet than putting those dollars into a totally new superhero or international secret agent. Studios are highly aware of their existing properties, and they are always looking for the right market opportunity to recycle that successful character, story line, or landscape.

## Concept Development

Many studios and production companies employ “creative producers.” These professionals are not really producers in the business sense of production management. Rather, they work to develop unformed concepts and storylines into feasible production proposals. Often this concept may arise from a promising or popular book—would this translate into a good movie? Or it may take the form of an existing script that a writer's agent submits to a studio. Alternatively, it may be the potential of a popular performer to cross over from the stage into motion pictures. Whatever the catalyst may be, the job of the creative producer is to see whether the concept can grow from an attractive idea into a bankable project. Creative producers may work on any number of projects at once, often with a team of analysts working under them. If their results reveal a concept with solid entertainment value, the studio may move forward. If not, the project goes into a cardboard box to be set on a shelf somewhere, perhaps never to see the light of day again.

## Script Development

Two additional practices common to development (before financing) are script development and packaging. These activities can be carried out at any time during development, but they typically come about because a certain project carries with it solid market potential. The script may be the single most essential product that comes out of development. It is the foundation on which all subsequent decisions and activities are based. The script (for more on this topic, see Chapter 4, “Invest in a Solid Script”) not only will contain the developed story and concept lines but will also reflect the market and property characteristics that marked it as bankable.

## Packaging

With a draft script ready to go, the next step is to package it with known creative talent. Successful packaging is a near-guarantee that a project will move into production.

Packaging is the activity whereby the studio takes a script and attaches a “Name” to it, perhaps a well-known actor, or maybe a noted director. This packaging together of talent with script establishes the magnetism of a project—its ability to attract financing, press attention, and audience curiosity. Once a project has been packaged, the studio can derive an initial estimate of production costs and comfortably begin to explore investment channels.

## Financing

At the end of the development phase, here’s what has happened so far: A solid idea—derived either from an existing entertainment property or from a perceived market need—has been generated; that idea has been developed to see if it can sustain the weight of production; if so, a first-round script has been developed and circulated among potential creative partners. The bankability of the project has now been established. The studio can decide to finance it itself or to seek outside capital support, or both. Either way, a cost-benefit analysis (CBA) is then typically run to objectify the likely investment that will be required. Deals are struck, contracts are signed, and bank accounts are filled.

In the foregoing overview of development, the activities described seem to rely in large part on creative imagination and innovation. But the central focus, and the reason for the conduct of these activities, is a business consideration: market viability combined with production validity. Once financing is secured, the project can move forward.

## Phase 2: Preproduction

Studio executives and production chiefs like to emphasize the importance of the development phase. This emphasis is understandable, because it’s in development that most of the major studio-level decisions are made. But ask executive producers or line producers which state is most important, and you’ll probably get a different answer. They’re likely to say preproduction.

*Preproduction* is the planning stage of movie making. It’s where the details of shooting are carefully worked out. More than that, it’s the phase in which the production team is first brought together; where the tone, look, and feel of the movie are established; where performances are rehearsed; where milestones and deadlines are established. Preproduction anticipates and shapes the flow of production. And, as noted, because a typical shooting day on a mainstream movie set can cost upwards of \$200,000, the need to go in prepared is paramount. More often than not, bad planning leads to bad movie making.

Preproduction lasts from three months to a year (depending on the project), and it is awash in activity: staffing, planning, script refinement, casting, location, scouting, and design. These six major tasks of preproduction are described next.

## Staffing

In the software/systems world, each project is staffed with a set of key players: a lead architect or designer, a project manager, business analyst, database designer, lead programmer, test manager, technical writer, and user interface (UI) specialist. Hollywood has its own roster of key players, and these people are brought into the project during the early stages of preproduction. They are known as department heads—they lead the camera department, the sound department, the art department, make-up, costumes, and so on. The roles are well known: director, director of photography, production designer, location manager, editor, sound designer, costume designer. A key word here is “design,” because that’s really what these people do. They design very specific elements of the picture, in very much the same way that a technical team designs various aspects of, say, a software system. These people are brought on board under contract and given a span of time (for a major production, usually no less than three months) to shape their respective parts of the project.

## Planning

Planning is the major activity of preproduction. In the development phase, a general budget is established by one of the producers to kick the project into gear. Now that the project has been green-lighted, a detailed budget and schedule need to be put together. To do this, the producer, the unit production manager, and the first assistant director analyze the script, organize the scenes into a logical shooting order, and—through consultation with the available department heads—flesh out a shooting schedule and a production budget. Both of these documents are highly detailed. It’s not unusual for a production budget to run to 60 very full pages. Shooting schedules account for script progress by every one-eighth of a page.

A serious commitment is made by the studio and the producers to ensure the quality of these two planning activities. After all, the budget and the schedule that emerge will serve as a contract between all stakeholders in the project. These documents set risk limits for the studio. They designate performance expectations for the creative and management teams. They establish obligations for the performing talent. And because the parties involved all have the opportunity to give feedback during plan development and because they will eventually sign a work-for-hire contract tied directly to the budget and schedule, they all are expected to fulfill their commitments.

## Script Refinement

Like business and functional requirements in the technical domains of the business enterprise, the script is likely to go through a series of revisions and refinements during preproduction. This refinement process may be to align its scope more closely to the budget or schedule, or to adjust parts of its storyline or character arcs to mesh better with the attributes of certain cast members, or simply to punch up parts that need to be stronger. The basic shape and essence of the script, however, will remain intact—that was the basis for moving forward in the first place. It is rare that a script will need—or be allowed—major rework once preproduction is under way. A script in that state runs counter to the needs for detailed planning and design work. If such rework is needed, preproduction is usually shut down, and the project may stall. In Hollywood, the explanation “the script is back in development” is a sign that the script and the project are in serious trouble. But that’s actually a sign of maturity in the enterprise: Management will not move ahead if the basic requirements of the project—as embodied in the script—are not ready to be realized.

## Casting

Primary casting of the movie’s stars usually takes place in the development phase, as part of packaging. But a movie also features other actors, in a variety of supporting roles. During preproduction, the production team, working with a casting director or a casting agency, will talk to interested parties, review resumes, hold auditions, and perhaps shoot some screen tests, all to fill the other roles for the picture. An adage in Hollywood states that casting is 80 percent of the battle. Get the right faces up on the screen, and the magic that the studio is looking for will come more naturally. A parallel in the world of technology development is building technical teams with the necessary skill sets. Armed with the right skills, they’ll be able to produce good work more quickly and with more predictable outcomes.

## Location Scouting

I was surprised to learn that one of the biggest expenses associated with any movie project is transportation. Every time a production unit has to hit the road, it’s like moving a small army to a new base camp, or moving a circus to a new town. That’s why location scouting is so important. Working with the other department heads, the location manager analyzes the script to get a feel for what locations will be needed. The idea is to compress the story’s needs into as few moves as possible, to condense the geographic spread into as small a landscape as possible while retaining the required look, feel, and verisimilitude of the story. Location scouting is similar to equipment acquisition and allocation in the technology industries. When IT projects begin, it’s helpful to procure the computing resources, development environments, and tools that will be needed to accommodate specific types and levels of technical work. If these resources are not ready when the team arrives, little productive work can be accomplished.

## Design

After planning, design may be the next most important job in preproduction. In IT vocabulary, the design of the project represents the technical solution for the requirements and the architecture that will express that solution. In the movie world, design includes the construction of sets, the creation of costumes, styles for hair and makeup, types of props, the tenor of the sound, the rhythm in the editing, the lighting and look of the visual images, and many other elements.

These decisions spring from the script and are guided by the chief creative manager, the director. His job is to synthesize all of these approaches into a single vision. It is critical that these decisions occur in preproduction; by the time production rolls around, a vast machine has been set into motion, and little time will be available for entertaining significant redesign considerations. Even more so, these design choices have been fed as raw material into the budget and schedule. Any big design changes, once agreement has been reached, could risk exceeding the established schedule and budget constraints.

## Phase 3: Production

*Production*—with its sound stages, exotic locales, lights, cameras, and hubbub of activity—comes across to most people as the truly exciting part of movie making. That may be true for the chief artists and performers, but for most of the other folks on the lot, it's the most prosaic. And in fact, that's the way it should be; that's the way the producers prefer it. The magic movie-making machine has now been turned on, and the producers want it to smoothly turn out a movie, just as planned. For research for this book, I was allowed on the sound stage of the upcoming romantic comedy, *He's Just Not That into You*. For about half an hour, watching a certain scene being shot, I did feel a bit of excitement. But after that it started to get very repetitious. Everything was so orderly; everyone had a job to do, and they didn't fuss about it—they just did it. It was clear that they were all parts of that well-tuned movie-making machine.

Four major activities—shooting, rough cut editing, production reporting, and adjustments—occur during the production phase. Let's take a quick look at each.

## Shooting

Shooting is the phase of principal photography, when the story is actually filmed. In Hollywood, a typical shooting schedule is 55 to 65 workdays. After many, many months of development and many, many months of preproduction, the team now has about three months to get the thing in the can. Using the schedules, teams, and designs established earlier, the production unit executes according to plan.

## Rough Cut Editing

While the shoot is still running, the editing team begins “testing” the quality of the output. Rushes (film sequences shot that day) are examined and assessed every evening (with the film director and the director of photography [DP]), and the team begins to cut the scenes together to ensure that the story itself is becoming a coherent whole and that all the necessary imagery is being accounted for. Later on, after production wraps, the director will join the editing team to prepare a final, nuanced cut of the picture.

## Production Reporting

Progress and expense reporting is a big job in movie making. It’s a big reason for why producers even exist. Although this reporting begins as early as development and preproduction, it really ramps up during the production phase. The reason is obvious: Production is the most expensive part of the whole endeavor. Investments are required in development, in preproduction, and in post-production—often significant investments. But the real money—up to \$500,000 a day—leaves the bank during production. Accordingly, production reports are constantly being generated and circulated: daily production reports (scenes shot, film stock exposed, and so on), script progress and continuity reports, daily hot cost expense reports, and weekly consolidated expense reports. And all are meticulously studied up and down the management and creative chains.

## Adjustments

Finally, an Agile-like quality is inherent in the production phase. This quality comes from the series of regular (and to-be-expected) adjustments that naturally affect any plan or project, no matter what the industry or what that industry produces. Change is a constant during the production phase: Scripts may be adjusted, locations may need to be shifted, cast members may need special accommodations, rising costs in one place may necessitate a reduction of costs elsewhere. That’s one of the reasons the producer’s unit (i.e., the members of the management team) always travels with the production team—because production requires ongoing project management. And it’s essential that this management be conducted in a very interactive, collaborative, and coordinated manner.

## Phase 4: Post-Production

Once production wraps, the project now moves into *post-production*. This is a period of usually between 16 and 24 weeks, during which all of the separate elements of the movie come together. The picture, dialog, sound effects, music, special effects, transitions, and titles are integrated into a seamless whole. And from this integrative process, the movie is born.

The three chief activities of post-production are final editing, mixing, and audience testing, as discussed next.

## Final Editing

During the actual shoot, the editing team examined shot footage and began assembling the shots into a rough cut. In the IT field, we'd probably call this kind of work integration testing. The intent up to this point has been to make sure that the right parts are being produced and that they will fit together in a logical order. When production wraps, the director will join the editing team to produce a final edit.

At this stage, the picture is cut into final form to establish rhythm, pace, texture, emotional drive, and story momentum. The final edit is one with all of the director's desired nuances accounted for.

## Mixing

Mixing is really an extension of final editing. It is at this stage that all of the multiple presentation layers of a film are blended together. The images are cleaned up, dialog levels are honed and balanced, music is scored and laid in, sound effects are added, and special effects are cut in. In systems and software projects, this activity is akin to system testing after integration testing (i.e., the final edit) has been completed. The result is a final, compiled and integrated product, ready for test marketing.

## Audience Testing

A critical aspect of post-production is audience testing. It is also one of the most nerve-racking for the production team to endure. Audience testing is just what it sounds like: The studio's marketing folks rent out a theater and invite a crowd with what they consider to be the right demographic mix. Then they show the movie.

Afterwards the screeners hand out opinion cards with a series of questions that delve into what the viewers did or did not like about the picture. IT people can recognize this kind of polling as user acceptance testing in its most venerable form. Positive responses tell the studio it has a winner. Conversely, a high proportion of negative responses indicates the need for another round of editing, or the addition of some new elements, or maybe even the shooting of some new scenes.

The purpose of testing is not to praise or point out the failures of the production team. It is to establish a business basis for marketing the picture. The studio wants to put out a product that appeals to the audience as much as possible, so it will make any adjustments it can practically make at this point, given the potential return on investment (ROI), in order to capture, leverage, or maximize that audience appeal.

When the movie is as finished as it's going to get, it's ready for distribution.

## Phase 5: Distribution

A movie, which can take two years from conception to release, has only about two or three weeks in the theaters to prove its market strength. That period will reveal if the picture has “legs”—that is, if it will play successfully for weeks or months. Also established during this period is the likelihood that the picture will have a strong ancillary life in international markets, DVD sales, cable TV, and other outlets. This *distribution* phase includes three main activities: marketing and advertising, printing, and release.

### Marketing and Advertising

Software and systems development professionals appreciate the need to prepare the user community to work with the solutions they deploy into operating environments and data centers. This preparation process typically entails the development of orientation materials, user guides, maintenance guides, training materials, and so on, all designed to meet the needs of the various user communities. Hollywood does the same thing in preparation of its releases. Its marketing and advertising specialists design ad campaigns, theatrical trailers, posters, and other promotional materials that will communicate to the marketplace what the picture is about and what makes it worth seeing. This step is always a major consideration for any motion picture project. A studio can easily spend on promotion half what a picture costs to make, sometimes much more.

### Printing

Almost as expensive as advertising is the process of striking release prints. These are the copies of the movie that are shipped out to the theaters. A release print can cost about \$2,000. So if the plan is to open in wide release, say, in 2000 theaters, investment of another \$4 million or so in the project will be required. This high cost of printing is another reason why the system is so methodical in its focus on quality and detail. If the movie is a hit, those prints will have a productive circulation life. If it is not, the studio will have a lot of cans of film that no one really wants to see. And there’s no real residual value in those cans: Each is worth perhaps \$3 in aluminum and cellulose. It’s the same with software. Your IT shop can invest \$10 million in a project just to end up with some software stored on a \$30 jump drive. If no one likes the software, all you’ll have to show for it is a jump drive.

### Release

After the movie goes out to the theaters, it’s up to the audience to establish the real level of success. Now that the film has been released, the studio needs to wait for the box office results to start coming in. In this context, a difference between the film and software worlds is worth noting: professional success versus commercial success. If IT projects are professionally successful—that is, if they meet the customers’ needs within their constraints—then by

default they will be considered a business success, because they have addressed the business needs of scope, budget, and schedule. And although a movie (for any number of mysterious reasons) may not be a commercial success, under certain circumstances it may still be considered a professional success. If it met its own scope, budget, and schedule constraints, then it can at least be respected as a professional product. This possibility may not be a comfort to the investors, but it should be seen as a tribute to the system. Hollywood may produce many pictures that people consider “bad,” but it rarely puts out a picture that comes across, from a presentation viewpoint, as inept. Even the silliest movies tend to look pretty good. Rarely does a movie audience see sloppy craftsmanship. In large part, viewers have the system to thank for that.

It took Bill Fay of Legendary Pictures a little under an hour of his time to describe the Hollywood system to me. I could tell two things by his casual yet orderly explanation. First, he knows this process backwards and forwards, and the other producers who succeed in this business know it equally well. Second, it’s a real system, a living system, a practical, hands-on approach that’s put to the test every day.

That’s Bill’s high-level picture of motion picture production. When people refer to Hollywood as the “Dream Factory,” *factory* is just as relevant as *dream*. A factory in this sense may not be quite the same as a Campbell’s Soup facility housing a can-stamping machine. But the same kind of preset pathway is in place to foster repeatability, predictability, and consistency.

The first major theme of this book is that this methodology can be used to show technology shops that a process similar to the Hollywood system can indeed work to enhance efficiency and quality in industries that create products that are intangible in many ways. Such products include both movies, which are little more than light bounced off a reflective screen, and software or system schematics. By looking at the performance of production companies as reflected in their ability to work on budget, on time, and to spec, we might be better able to visualize a similar kind of performance for our IT shops.

The second major theme of this book is that we can actually take some of these production practices and, with slight modification or adjustment, directly apply them as management aids in our shops. To expound a little on this, let’s now move back to the world of corporate IT.

## A Similar Model for the Technology Industries

Most IT professionals who have developed systems and software, managed technology projects, or helped guide technology organizations understand the intricacies inherent in complex projects. Taxed resources, changing technologies, competing stakeholder agendas, evolving requirements—these are just a few of the elements that need to be successfully juggled across even a simple project’s life.

Many people cite this reality as a reason to avoid process. What they do in their shop, they maintain, is too unique for process to apply. Or process by definition is heavy and will weigh down performance and creativity. Or they just don't have the time to develop a process. Or systems development is more art than science (or engineering) anyway. And on and on.

The feelings that drive people to take those positions are understandable; healthy organisms, humans included, tend to resist change and to avoid the unknown. But the evidence shows that their reasoning is not valid. In fact, shops that operate without any formal system or development approach tend to exhibit three common traits:

- They rely on the efforts of highly talented persons—so-called heroes—to push work through.
- They push an overtime work ethic, a get-it-done-at-all-costs management style (that seems to be levied only on the line workers).
- They are due date-oriented—that is, they prefer cycles of rework, revision, and re-release over upfront planning and design activities.

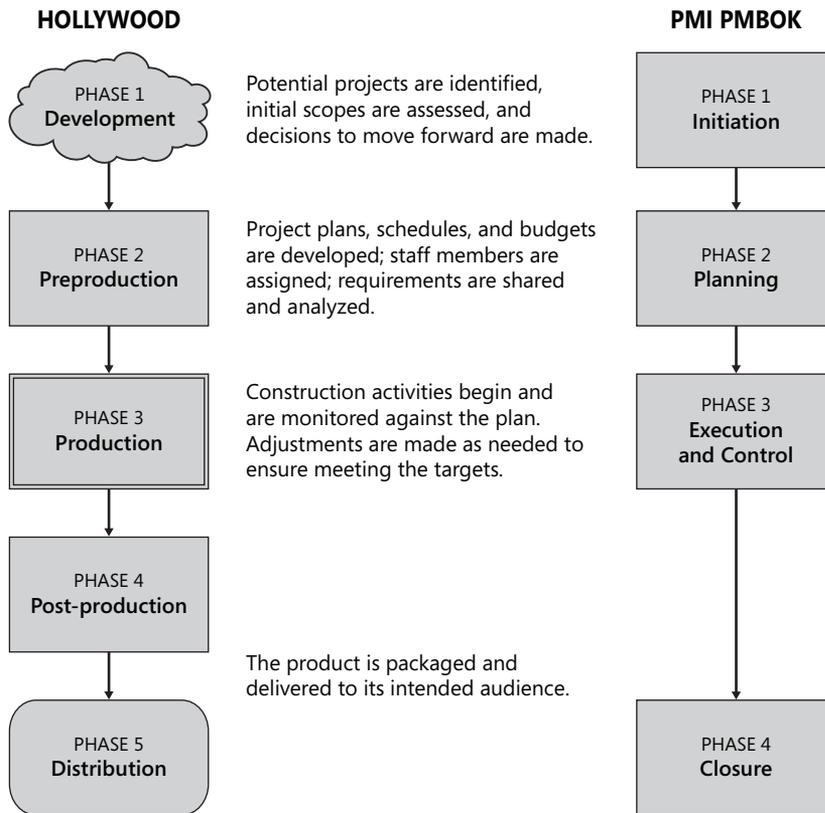
If you managed a bakery shop that way, you probably wouldn't be in business long. Same for a tailor shop, or a doctor's office, or a coat hanger factory. Likewise for a motion picture project. Yet many, maybe even most, technology shops in corporate America run without any kind of system. In my years of consulting with small, large, and in-between technology organizations, I have found this condition to be curiously prevalent. It's especially strange because what would never fly in, say, the shipping and receiving unit of a business enterprise, too often makes it through that company's IT unit without notice. Even if we set aside the amount of money invested in IT budgets, the pressures of taxed resources, changing technologies, competing stakeholder agendas, and evolving business requirements are specific enough reasons for adopting process.

The answer to this challenge of fostering process and control in a business environment of change and uncertainty in part already exists for corporate American IT.

Readers who are educated in general business management disciplines or perhaps have earned the Project Management Professional (PMP) certification from the PMI, or who are familiar with quality standards such as CMMI, ITIL, Agile, and ISO 9001, or those who work in true engineering shops, will readily recognize the principles of the five-phase motion picture production system just described. That's because it has a lot in common with the classic system development life cycle (SDLC) the software world knows well. Even more so, it practically mirrors the management phase approach supported by the PMI for structuring projects. These PMI phases (the technical term is "process areas") are initiating, planning, executing, control, and closure. Projects are planned, managed, and monitored around these phases.

For the remainder of this chapter, I'll use this approach, with my own "deployment phase" added in, to begin tying motion picture production practices to practices recommended for adoption in technology shops to manage IT projects more effectively.

Figure 1-2 shows the relationship between the phases of the Hollywood system and the phases that the PMI's PMBOK describes for organizing the processes that control project management.



**FIGURE 1-2** The Hollywood production system and the PMBOK phases

## Phase 1: Initiation

The *initiation* phase in the IT world can work very much like the development phase in the entertainment world. The chief goal here is to identify projects that will contribute to the business mission of the enterprise and then provide resources for those projects to take shape. In the Hollywood system, studios look at market trends, assess their current portfolios, appraise available concepts, develop scripts, package the script with stars, and then set financing in place. The IT world could benefit by adopting similar practices. Three such development-like practices are business analysis, project development, and project scoping, all of which probably should be implemented at the upper management level. These practices, summarized next, can be used to shape the strategic direction and tactical focus of a development organization.

## Business Analysis

In corporate America, sometimes it seems that IT projects get pushed into production on the basis of either the “decibel principle” (whoever yells loudest) or the “density principle” (whoever can throw the most weight around). CIOs and their executive staffs often find that they are viewed by external business units as *producers* of products (i.e., solutions), rather than *shapers* of products. Accordingly, they are expected to deliver whenever called on, often caught downstream of the initial decision to act. That line of separation, however, is not a productive one to follow. The business side of business and the technology side of business have become so integrated that there are no “sides” anymore, and well-thought-out technology solutions are essential to continued business success.

Business units, therefore, should work up front in partnership with their IT shops to explore potential opportunities, assess their costs and benefits, weigh impacts on the existing portfolio, and then establish a protocol for project selection. (For some practical guidelines in this area, see Chapter 2, “Know Your Properties,” and Chapter 3, “Establish Green-Light Rules.”)

## Project Development

Once a movie gets the green light, it goes on the studio’s production sheet as an official in-the-works project. An executive producer is then assigned to get the thing in shape. This same sequence is required when the enterprise selects an IT project to undertake: The organization at large needs to demonstrate its commitment to the project; this usually takes the form of capital investment. Then the sponsor needs to be identified, who typically is a business manager that will facilitate the exchange of work between the business specialists and the technology specialists. Two documents should emerge from the initial interactions between those parties. The first is a project charter, a formal description of the purpose and reach of the project. The second is the beginning of what might be called a script: a first draft of the business requirements, which will be used to guide the project. (For some practical guidelines in this area, see Chapter 4.)

## Project Scoping

By the end of Initiation, the organization may have appointed a specific project manager (or perhaps a program manager) to begin scoping the project. Based on the business analyses conducted as described, together with the charter and the business requirements, the major boundaries of the effort can now be established. Here the size, general cost, relative schedule, and release dates are documented; from these boundaries, detailed project planning can begin. (For some practical guidelines in this area, see Chapter 5, “Time Box the Projects.”)

## Phase 2: Planning

The *planning* phase described in the PMBOK is just like Hollywood's preproduction phase. The goal here is to work out the details of project activities so that the effort can be tracked and controlled in an efficient manner, to meet the project's initial boundaries of scope, cost, and schedule. Three events should occur in some form at this stage of an IT project: business and functional requirements development, plan development, and staff acquisition.

### Requirements Refinement

Hollywood's projects always begin with a script, even though it may undergo a series of revisions over its life. But a script is always the starting point. Technology projects need the same kind of starting point. Without some baseline set of requirements, it's difficult to plan, manage, or monitor a project. For this reason, the job of eliciting and documenting business and functional requirements tends to be an upfront consideration. The process of requirements development, however, does pose something of a conundrum: How can the requirements be defined until the project is under way? But how can requirements development be managed unless it's part of the project?

Two good solutions are possible here. One is to treat the requirements definition activities as a project unto itself, with a fixed amount of time and resources in order to establish a baseline. The other is to use the available business requirements as a benchmark for initial scope, plan from there, and then provide for appropriate change control. Either way, the process starts off with a picture of what the end product probably should look like. The alternative strategy—and it's the one many shops are drawn to, probably because it gives the impression of rapid progress—is to simply jump ahead into the unknown, trying to formulate a plan in the absence of solid expectations or common understandings. (For some practical guidelines on scope management, see Chapter 6, "Strip Board the Script.") The importance of developing a realistic, formal plan becomes obvious.

### Staff Acquisition

Hollywood production teams hire on department heads during preproduction. Technology projects should likewise appoint key team members during the planning phase. The reason for early staff acquisition is twofold. First, it can take time to identify and connect with the right resources. Talented, competent people are essential to the success of any project. A process will never replace that need; it complements it. Second, adequate staff preparation is essential. In all probability, the project manager has reached this stage with an objective, a charter, some set of requirements, and some initial planning data. It now becomes important

to identify these “department heads”—the lead designers, lead business analysts, database administrators (DBAs), whatever expertise and talent the team may be composed of—and involve them a couple of ways. They can use this time for orientation, for familiarizing themselves with the demands of the project, for thinking about possible approaches and technical options. The project manager also can solicit planning data from them, such as time and resource estimates, the kind of expert insight that will make the plan realistically achievable. (For some practical guidelines in this area, see Chapter 7, “Staff to the Genre.”)

## Plan Development

Planning is just as important for technology projects as it is for movie projects. The big costs of an IT project come during execution, when the designers are designing, the coders are coding, and the testers are testing. A thorough and realistic plan will help the project manager control this capital- and resource-intensive phase of project work. Budgets, schedules, and logistics need to be worked out in detail, preferably with input from the project’s key stakeholders. As the saying goes, if you fail to plan, you plan to fail. Together with the project charter and the requirements, the project plan should be seen as the project’s chief management tool, the yardstick that will be used to measure and gauge performance across the entire life cycle. (For some practical guidelines in this area, see Chapter 8, “Budget to the Board.”)

## Phase 3: Execution and Control

The “real” work of the project is now ready to be implemented. The team assembles and begins working out a technical solution to the business need. This is the focal point of resource and capital expenditures, and it’s where most of the visible work gets done. This phase of *execution and control* can be considered the equivalent of the shooting stage of film making in the Hollywood system. Three major management activities occur here: design, development, and testing; change control; and progress and performance reporting.

### Change Control

As with a movie production team, change will be inevitable for a technology production team. Change may come from any number of sources: requirements, human resources, facility use, and so on. The key is to not see change as disruptive but as a necessary component of solution realization. Change becomes problematic only when it’s out of control, when it is effected without coordinated purpose. Rampant and disjointed change can sink any project into a morass of budget, schedule, scope, and quality slippages. To help prevent such problems, project management should ensure that a proper form of executive-endorsed change control is in place for the project. The protocols set aside for this process should allow for the orderly submission of change requests, the evaluation of change impacts, and a manner of scoring or weighting the approval of change requests. (For some practical guidelines in this area, see Chapter 9, “Sign on the Dotted Line.”)

## Design, Development, Testing

Design, development, and testing constitute the main work of execution, the production phase counterpart for technology shops. Alternatives are evaluated, solutions are designed, designs are implemented, documentation is prepared, testing cycles are run, and so on. This three-pronged activity represents the heart of any project, and it's typically where the most focused work takes place. If the project has been well planned and is being intelligently monitored and controlled, it should be a somewhat predictable phase, too. Most of the major business and management decisions should have been made by now. The major stakeholders should be in close agreement regarding what the project is all about and how to reach its goals. What's left is for the building blocks to be set in place. Because most technology shops are really good at technology, the kinds of problems that impede project success are usually not technology problems. Rather, they are scope, commitment, and communication problems. Prepare well, monitor well, control well—if the project manager focuses on these tasks, then the technical folks should find themselves free to productively focus on their tasks and not have to deal with the ad hoc push and pull found in ill-managed environments. (For some practical guidelines in this area, see Chapter 10, "Stick to the Script," and Chapter 11, "Work to the Call Sheets.")

## Progress and Performance Reporting

As noted by Bill Fay, producing is a "walking-around" type job. In other words, you can't do it well solely from behind an office desk. You've got to actively communicate.

IT project managers have that same responsibility. Communication should be a proactive, ongoing ingredient to all project activities. From communications comes information, and from information comes an understanding of where the project teams stand in relation to progress and performance. That's the kind of reporting all project participants need—upstream and downstream—to appropriately focus their activities. Progress reports are akin to general status reports. They typically summarize schedule, budget, and resource utilizations against predefined benchmarks. Performance reports complement these by summarizing performance data as related to predefined performance and quality targets. Both are extremely useful when it comes to charting the ongoing course of the project. (For some practical guidelines in this area, see Chapter 12, "Ante Up the Completion Bond," and Chapter 13, "Manage the Hot Costs.")

## Phase 4: Closure

*Closure* is considered to represent the contractual end of the project, the point at which all work has been completed and all commitments have been met. Paperwork is now complete, and resources can be released to move on to new project work. Three activities typically take place around the time of closure: user acceptance testing, resource release, and a review of lessons learned.

## User Acceptance Testing

Hollywood tests its movies with test audiences before releasing the final version into theaters. The technology world does this kind of testing too. IT people call it *user acceptance testing*. After unit testing, integration testing, system testing, and regression testing (if required), the users are asked to take a look at what the IT shop has created. The idea is for them to work with the system and confirm that it really does meet their business needs and that it is solid enough to go into production. If the users agree that those conditions are met, the development team can move forward and package the product for release. If some important bugs or other problems are discovered, some rework may be needed.

Alignment and involvement of the project team with the users at this point are crucial. To forgo this step and move directly into production risks implementing a solution that may not address the right problem. Worse still, it may inadvertently introduce new problems. But worst of all, skipping user acceptance testing sends a silent message to the business community—that the technology folks place little value on their relationship with technology products. This message will serve only to push the two parties apart when the goal is to work closer and closer together. When addressed as a key item right from the start of a project, user acceptance testing can serve as a tool to foster close relationships between business and technology teams. (For some practical guidelines in this area, see Chapter 14, “Cut as You Go,” Chapter 15, “Edit to the Investment,” and Chapter 16, “Study the Test Cards.”)

## Resource Release

At this point, the project manager probably is ready to formally release the project’s team members. This may sound like a trivial clean-up step, but it’s actually quite important, especially in larger organizations. A formal, prescribed release activity will help notify business units and teams across the organization that particular people are now free for assignment elsewhere. This coordinated control of resource availability lends itself to more effective planning and coordination on upcoming projects.

## Lessons Learned

The last step in closure is usually to conduct some form of a “lessons learned” session. Sometimes this is called a *postmortem*, a term appropriate, perhaps, for failed projects. The idea is to congregate the project’s major stakeholders and take an objective and critical look at performance. What went well on this project and how can that be carried over to other projects? Were there any trouble spots? And how can similar problems be avoided in the future? This activity is one geared to continuous improvement, and it’s valuable for any organization that wants to consider itself conscious, that wants to succeed by shaping its destiny, not merely reacting to it. These lessons are taken from the key stakeholders and then shared with other members of the organization. If there is a management system in place that guides how projects are run, then these lessons can be used to make the process better.

By this continuous cycle of work and examination, the organization can be expected to grow stronger over time. (See Chapter 17, “Count the Box Office.”)

The hypothetical technology system just described, based mainly on the PMBOK with some other sources added in, is designed as a project management process that incorporates those five business attributes—consistency, predictability, accountability, communications, and trackability—of the Hollywood system used by motion picture production companies. The essence of this process can be summarized as the first lesson of this book.



**Lesson 1:** Establish a project management system that the enterprise can use to identify, estimate, plan, manage, monitor, and measure technology projects in ways that further the business missions of the company.

## Management Objective: The Project from the System

At the time of this writing, Legendary Pictures has five new movies slated for release: *Where the Wild Things Are*, an adaptation of Maurice Sendak’s classic children’s story; *Dark Knight*, a new Batman adventure; *10,000 BC* (probably without the furry mini-skirt); *Kung Fu*, a big-screen remake of the 1970s hit TV show; and the Halloween omnibus, *Trick R Treat*. That’s a full docket for any production company, as Bill Fay readily acknowledges. A quick take on the numbers (using my estimates), based on what’s been presented in this chapter, suggests a necessary commitment of approximately 1500 workers with an operating budget of maybe \$600 million.

That’s about the size of the entire IT operation at many well-known companies, including Home Depot, Kohl’s Department Stores, Macy’s South, Coca-Cola Enterprises, Jonson Controls, Kraft Foods, and the Ralph’s Grocery Store chain.

In other words, Bill is running his own technology shop, the only difference being that his “technologies” are centered on entertainment tools. The company’s previous releases—*300*, *We Are Marshall*, *Superman Returns*, *Batman Begins*—delivered on their investments. Bill gives a due amount of credit for that success to the studio production system. This approach, from carefully assessing the marketplace, to selecting viable properties, to developing them with talent, to producing them under careful controls, is a proven method to maximize the enterprise’s ROI. Nothing is guaranteed, of course, but applying this business approach is certainly safer than simply putting Christian Bale in front of the camera and then looking for the “on” button.

No one in Hollywood—no professional, at least—would think about running a production company or a production unit in the absence of the established system. Likewise, it’s hard to imagine a CIO running an American IT operation in the absence of some type of similar

management system or process approach, be it light or heavy, externally developed or homegrown. The size, complexity, and reach of IT are just too vast these days to operate with an on-the-fly or do-it-down-line attitude. Yet that's often what happens. And I suspect that working without such a system in place is more the rule than the exception.

I have been consulting with technology shops for 15 years. I have worked with all types of organizations across an array of disciplines, but most of my clients have been large shops attached to Fortune 500 companies. Unfortunately, such shops are the very ones in which the tactics of program and project management tend to be delegated well below the levels of executive and upper-level management, with little visible support from either level. Failure to adequately address this need for a management process is a risky way to do business, and it's often a recipe for trouble. A brief but telling example follows.

## Case in Point: Modernization Project at the Internal Revenue Service

Around 1998, the Internal Revenue Service (IRS) engaged in a project to update its aging file-keeping computer system with modern technology. It brought in a prime contractor and got to work. The contractor's approach was to throw bodies and enthusiasm at this huge initiative but failed to include an overall project management strategy. This omission was unfortunate because, looked at up close, the project was a complex integration of related subprojects. The IRS, for its part, was not adept at pushing a different, perhaps preferred approach, or at anticipating the management demands inherent in such complex IT projects. This initiative, then, was christened not so much with a strategy as with faith—faith that both parties would see the work through. In hindsight it's easy to see the risk both parties had opened themselves up to. And it's easy to trace that risk to the inevitable fallout. The project went forward, but after years of work, progress was practically nil. The original budget had been set at \$8 billion, but by the time \$1 billion had been spent, the production teams were already at a 40 percent overage. All five of the subprojects that made up this huge uber-project were over budget and behind schedule. In fact, the project was so far behind schedule that the contractor was notified that unless its performance improved, the government would have no choice but to fire it.<sup>1</sup>

At that point, the IRS and the contractor both had to scramble, and in such situations, the smart tack is to scramble together (to avoid embarrassment as much as anything). Project scope was drastically scaled back; the once-big vision was narrowed to include far more modest aspirations. A series of tight controls and audit points was then introduced as oversight to this diminished domain. The work went on. I don't have any data tracking the project after that. Trails from these kinds of big government contracts have a way of going cold when things go wrong. A safe assumption, however, in the absence of a Freedom of

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<sup>1</sup> David Johnson, "At I.R.S., a Systems Update Gone Awry," *New York Times*, December 11, 2003.

Information Act request, is that the level of waste involved would cause the board of directors of even the largest business enterprise to blanch in horror. Further dissection of this project probably would identify many causes for its problems of efficiency and progress failure, but a good bet is that each of them stemmed from a central lack of a cohesive approach to the work—from the lack of a system to guide activity. The bulk of this book works from this perception, that IT shops can derive tangible benefits from the use of a project management system. Upcoming chapters will look at some practices, proven to be effective, that can be considered for inclusion in such a system.