

12

Project Implementation, Closure and Evaluation

CHAPTER OVERVIEW

In this chapter, we will focus on three important areas: project implementation, closure, and evaluation. After studying this chapter, you should understand and be able to:

- Describe the three tactical approaches to information system implementation and installation: (1) direct cutover, (2) parallel, and (3) phased, as well as compare the advantages and disadvantages of each approach.
- Describe the processes associated with project closure to ensure that the project is closed in an orderly manner.
- Identify the four different project evaluations or reviews: (1) individual performance review, (2) postmortem review, (3) project audit, and (4) evaluation of the project's MOV.

GLOBAL TECHNOLOGY SOLUTIONS

The party was winding down as Tim Williams and Kellie Matthews sat alone at a table and watched the band pack up its instruments and sound system. It was getting late and only a few other GTS employees and their guests remained. The company had rented a stylish banquet room in a local hotel to mark the conclusion of the Husky Air project. The event allowed Tim and Kellie the opportunity to formally recognize and thank each member of the team for the hard work over the last several months. During a ceremony before dinner, Tim gave each member of the project team a small gift to commemorate Global Technology Solutions' first successful project. In addition, several humorous certificates were given out to keep the occasion fun and lively. The dinner and the band were excellent, and everyone had a great time.

As Tim and Kellie sat at the table, Kellie raised her glass in the air, "Well, here's to the first of many successful projects."

Tim raised his glass as well, "And here's to a great party."

GTS was growing. The company had successfully completed its first project and now two new projects were scheduled to start in a few weeks. Moreover, one of the Husky Air team members, Van, had been promoted to project manager for one of the upcoming projects. To support this growth, three new employees had been hired and were scheduled to start the next week.

The glasses clinked, then both Kellie and Tim sipped from their glasses. "It was a lot of work, but a lot of fun," reflected Tim.

Kellie smiled, "Don't forget we still have a few things to wrap up before it's really over. I have to meet with each member of the team next week to make sure that all of the project documents and deliverables are organized and archived. You'll be pretty busy finishing up each team member's evaluation. Then there are these two new projects that we have to start thinking about. And, don't forget, we still have to meet with Husky Air's management in a couple of weeks to assess how well the project met its MOV."

"Okay, okay!" laughed Tim. "I didn't want to turn this into a business meeting. For once, let's leave work at the office."

"You're right," laughed Kellie. "Let's leave it at the office. However, I think our little party was a success. We may have even started a new tradition for GTS."

Tim smiled, "I could get used to this. It was kind of stressful at times, especially towards the end, but completing the project and having this party has helped everyone feel good about themselves and the work they did."

By this time the band carried away the last amplifier, and one could sense that the wait staff wanted to clear the last of the remaining tables and go home. It was clearly time to leave. Kellie and Tim stood and started walking towards the door. As they put their coats on, Kellie turned to Tim and gave him a quick hug. "It has been a real pleasure starting this company and working so closely with you," she said. "No one in our family would have thought when we were kids that we'd work this well together."

Tim returned the hug. "I never thought that I'd ever get along with my sister this well either."

As they headed toward the elevator, Kellie reminded Tim, "Don't forget about dinner at Mom and Dad's house tomorrow night. Mom expects us around six, so don't be late again."

Tim shook his head as the elevator door opened. "Geez, do you always have to act like my older sister?"

Things to Think About:

1. What is the purpose of bringing closure to a project?
2. Why is it important to evaluate the project and the team's performance?
3. Why should the project's MOV be evaluated some time after the project is implemented and some time has passed?

INTRODUCTION

The topic of change management was introduced in the previous chapter and focused on preparing the people within the organization for the upcoming change and, more importantly, the transition that will occur as a result of the change. Understanding the human element or the "soft side" of IT project management is critical for ensuring that the individuals or groups within the organization will accept and adapt to the new information system implemented by the project team.

In this final chapter we will concentrate on three important areas—project implementation, closure, and evaluation. **Project implementation** focuses on installing or delivering the project's major deliverable in the organization—the information system that was built or purchased. The implementation of the information system requires a tactical plan that allows the project team to move the IT solution from a development and test environment to the day-to-day operations of the organization.

In general, implementing the product of an IT project can follow one of three approaches. These approaches are (1) direct cutover, (2) parallel, or (3) phased. Each approach has unique advantages and disadvantages that make a particular approach appropriate for a given situation. Subsequently, understanding and choosing an appropriate approach can have a profound impact on the success or failure of the project.

As discussed in Chapter 1, a project is a temporary endeavor undertaken to accomplish a unique purpose. This means that a project has a definite beginning and a definite end. Once the information system is implemented, the project manager and team must prepare for terminating, or closing, the project. Closing a project includes organizing and archiving project documents and deliverables, performing an audit and assessment of the project, documenting lessons learned, evaluating the performance of the project manager and team, releasing project resources, and closing all project-related accounts.

For a project to be closed successfully, the product of the project must be formally accepted by the project sponsor or customer. Not all projects, of course, are successful; however, a number of administrative tasks must still be completed. In such cases, it is necessary to assess whether any salvage value exists, and, more importantly, to understand the nature and reasons why the project was not successful.

Once the project is closed, the project manager should evaluate each project team member individually in order to assess and provide feedback to the individual about his or her performance on the project. In addition, the project manager and project team should meet to conduct a postmortem review of the project. The outcome of this review should be a set of documented lessons learned and best practices that can be shared throughout the organization.

In addition, the project should be reviewed by an impartial outside party. An audit or outside review can provide valuable insight on how well the project was managed and on how well the project members functioned as a team. The auditor or audit team should also determine whether the project manager and team acted professionally and ethically.

The project's real success will be determined by the project sponsor or customer. In this text, the project's overall goal was defined as the MOV, or measurable organizational value. The MOV must be clearly defined and agreed upon in the early stages of the project. Unfortunately, the project's true value to the organization may not be discernable immediately following implementation. It may take weeks or even months after the information system is implemented, but an evaluation must be made to determine whether the project was successful, as defined by its MOV.

The remainder of this chapter has three sections. In the next section, we will look at three approaches for implementation. This section will be followed by one that describes the processes required to formally close a process. Finally, the last section will look at evaluating the project team and the project as a whole.

PROJECT IMPLEMENTATION

At some point, testing is complete and the project team and project manager then become responsible for ensuring that the information system is transferred successfully

ERP IMPLEMENTATION IN 10 EASY STEPS?

1. Ask the board of directors for an arbitrary but large sum of money (\$300 million should suffice).
2. Give half of the money to consultants. Ask them to select an appropriate ERP package for your company. Consultants will audit your business processes for six months and then select SAP, which they happen to sell.
3. Form cross-functional implementation teams. Hold meetings.
4. Reengineer all your business processes to match the software model.
5. Give the other half of the money to the consultants.
6. Install the software.
7. Train end users repeatedly.
8. Cross your fingers.
9. Turn on the software.
10. If you're still in business, immediately return to Step 1 because it's time for an upgrade.

SOURCE: From Derek Slater, ERP Implementation in 10 Easy Steps, *CIO.COM*, April 1, 2001, http://www.cio.com/archive/040101/tl_erp.html.

from the development and test environment to the operational environment of the sponsor or customer's organization. This transfer requires a tactical approach, and it can be a stressful time for all the stakeholders involved. Choosing an inappropriate implementation approach can negatively impact the project's remaining schedule and budget. In general, the project team can take one of three approaches for implementing the information system. These approaches include (1) direct cutover, (2) parallel, and (3) phased.

Direct Cutover

The direct cutover approach, as illustrated in Figure 12.1, is an approach where the old system is shut down and the new system is turned on. In general, a target, or *go live*, date is agreed upon, and the new system simply replaces the old.

This approach can be effective when quick delivery of the new system is critical or when the existing system is so poor that it must be replaced as soon as possible. Direct cutover may also be appropriate when the system is not mission critical—i.e., the system's failure will not have a major impact on the organization. It is important, however, that the new system be thoroughly tested so everyone is confident that few, if any, major problems will arise.

Although there are some advantages to using the direct cutover approach, there are also a number of risks involved that generally make this the least favored approach except in a few, carefully planned situations. Although the direct cutover approach can be quick, it may not always be painless. You might think of this approach as walking a tightrope without a safety net. You may get from one end of the tightrope to other quickly, but not without a great deal of risk. Subsequently, there may be no going back once the old system is turned off and the new system is turned on. As a result, the organization could experience major delays, frustrated users and customers, lost revenues, and missed deadlines. The pressure of ensuring that everything is right or having to deal with problems and irate users or project stakeholders can create a great deal of stress for the project team.

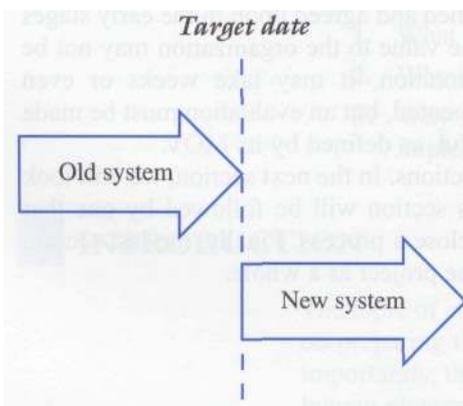


Figure 12.1 Direct Cutover

Parallel

As Figure 12.2 illustrates, the parallel approach to implementation allows the old and the new systems to run concurrently for a time. At some point, the organization switches entirely from the old system to the new.

The parallel approach is appropriate when problems or the failure of the system can have a major impact on the organization. For example, an organization may be implementing a new accounts receivable package. Before switching over completely to the new system, the organization may run both systems concurrently in order to compare the outputs of both systems. This approach provides confidence that the new system is functioning and performing properly before relying on it entirely. Although the parallel approach may not be as stressful for the project team as the direct cutover approach, it can create more stress for the users of the system. The users will probably have to enter data into both systems and even be responsible for comparing the outputs. If the new system performs as expected, they may be willing to put up with the extra workload until the scheduled target date when the new system stands alone. If, however, unexpected problems are encountered, the target date for switching from the old to the new system may be pushed back. The extra workload and overtime hours may begin to take their toll and pressure for the project team to "get on with it" may create a stressful environment for everyone involved.

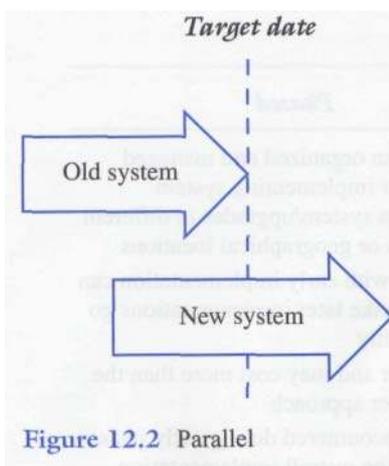


Figure 12.2 Parallel

Phased

Following the phased approach, the system is introduced in modules or in different parts of the organization incrementally as illustrated in Figure 12.3. For example, an organization may implement an accounting information system package by first implementing the general ledger component, then accounts payable and accounts receivable, and finally payroll.

The phased approach may be appropriate when introducing a software system to different areas of the organization. When upgrading an operating system, for example, the IT department may perform the upgrade on a department-by-department basis according to a published schedule. In this case, a target date for each department would be set to allow each department to plan for the upgrade accordingly. A phased approach may also allow the project team to learn from its experiences during the initial implementation so that later implementations run more smoothly.

Although the phased approach may take more time than the direct cutover approach, it may be less risky and much more manageable. Also, overly optimistic target dates or problems experienced during the early phases of implementation may create a chain reaction that pushes back the scheduled dates of the remaining planned implementations.

Table 12.1 provides a summary of each of the three implementation approaches discussed.

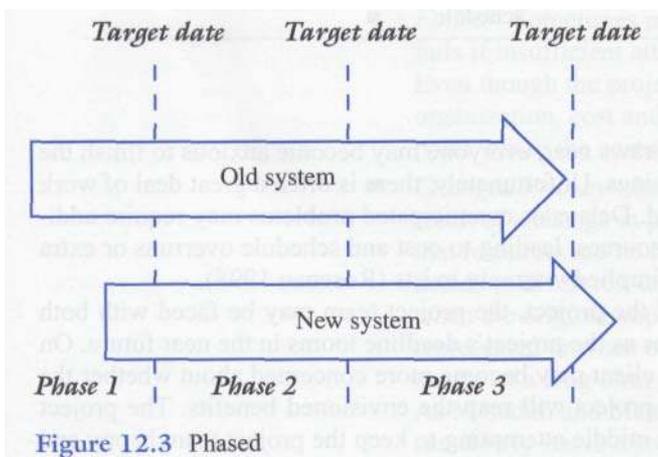


Figure 12.3 Phased

IMPLEMENTATION PROBLEMS CONTRIBUTE TO FEDEX PILOT'S STRIKE

A new scheduling system at Federal Express got its pilots so riled up that it may have been a major reason for them to go on strike. Although the packaged software was installed successfully at several other airlines, the problem appears to have been the up-front planning process. Tony Hauserman, communications chairman for the 3,200-member Pilot Associate Union, said, "The system was extremely disruptive, we weren't consulted before it was implemented and they said they'd run parallel tests on it before it went live—but they didn't." In fact, the poorly implemented system has helped to bring the union members closer together as the company and union were in the midst of contract negotiations. A spokesperson for FedEx explained that the system didn't "roll out the way we wanted to," but added that the company was addressing the problems pointed out by the pilots. Interestingly, TWA uses the same system but tested the system for a year before it

was turned on. Moreover, TWA engaged representatives from the pilots' union from the beginning and performed parallel testing as well. The problem at FedEx, however, was that the system utilized a flight schedule optimizer that could string together the most efficient routes and schedules that would allow the pilots to get out of and then back into their home airport. Unfortunately, the FedEx pilots were caught off guard because the past union contracts were not written with strict enough rules about layovers, route preferences, and time away from home. As a result, high-tech software can make negotiations between employees and their companies more complex.

SOURCE: Adapted from Stewart Deck, System Implementation may Contribute to Pilots' Strike at FedEx, *Computerworld*, October 26, 1998, <http://www.computerworld.com/news/1998/story/0,11280,33157,00.html>.

Table 12.1 Comparison of Implementation Approaches

<i>Direct Cutover</i>	<i>Parallel</i>	<i>Phased</i>
<ul style="list-style-type: none"> • Implementation can be quick • Can be risky if system is not fully tested • Places more pressure on the project team 	<ul style="list-style-type: none"> • Provides a safety net or backup in case problems are encountered with the implementation of the new system • Can increase confidence in the new system when output of old system and new system is compared • Takes longer and may cost more than direct cutover approach • Places more pressure on the users of the system 	<ul style="list-style-type: none"> • Allows for an organized and managed approach for implementing system modules or a system/upgrades in different departments or geographical locations • Experience with early implementation can guide and make later implementations go more smoothly • Takes longer and may cost more than the direct cutover approach • Problems encountered during early phases can impact the overall implementation schedule

As the end of the project draws near, everyone may become anxious to finish the project and move onto other things. Unfortunately, there is often a great deal of work that still needs to be completed. Delays or unanticipated problems may require additional time and unbudgeted resources, leading to cost and schedule overruns or extra unpaid effort, especially if an implied warranty exists (Rosenau 1998).

During the final stages of the project, the project team may be faced with both time and performance pressures as the project's deadline looms in the near future. On the other hand, the sponsor or client may become more concerned about whether the time and money spent on the project will reap the envisioned benefits. The project manager is often caught in the middle attempting to keep the project team happy and on track, while assuring the project sponsor that all is well.

ADMINISTRATIVE CLOSURE

Although all projects must come to an end, a project can be terminated for any number of reasons. Gray and Larson (2000) define five circumstances for ending a project: normal, premature, perpetual, failed, and changed priorities.

- *Normal*—A project that ends normally is one that is completed as planned. The project scope is achieved within the cost, quality, and schedule objectives, although there probably was some variation and modification along the way. The project is transferred to the project sponsor, and the end of the project is marked with a celebration, awards, and recognition for a good job well done by those involved. As you might suspect, this is an ideal situation.
- *Premature*—Occasionally, a project team may be pushed to complete a project early even though the system may not include all of the envisioned features or functionality. For example, an organization may need to have a new system operational—with only a core set of original requirements—to respond to a competitor's actions, to enter a new market early, or as a result of a legal or governmental requirement. Although there is pressure to finish the project early, the risks of this decision should be carefully thought through by all the project stakeholders.
- *Perpetual*—Some projects seem to take on a "life of their own" and are known as runaway, or perpetual, projects. These projects never seem to end. Perpetual projects may result from delays or a scope or MOV that was never clearly defined or agreed upon. Then, the project sponsor (or even the team) may attempt to add on various features or functionality to the system, which results in added time and resources that increase the project schedule and drain the project budget. Some runaway projects result from an organization not making the appropriate decision to "pull the plug" on an unsuccessful project. The decision to terminate a project is not an easy one if egos and perhaps even careers or jobs are on the line. This phenomenon may also occur when the project has a high payoff to the organization and when admitting to failure is strongly against the corporate culture (Keil 1995). No matter what the cause, project resources are eventually drained to a point where a potentially successful project becomes unsuccessful (Nicholas 1990). Attention to defining and agreeing to the project's MOV, the project scope processes, and timely project reviews can reduce the risk of perpetual projects.
- *Failed*—Sometimes projects are just unsuccessful. In general, an IT project fails if insufficient attention is paid to the people, processes, or technology. Even though the project's MOV may define the project's value to the organization, cost and schedule overruns may drain the project's value to a point where the costs of completing the project outweigh the benefits.
- *Changed Priority*—In some circumstances, a project may be terminated as a result of a change in priorities. Financial or economic reasons may dictate that resources are no longer available to the project. Or, management may decide to divert resources to higher priority projects. This change can happen when the original importance or value of the project was misjudged or misrepresented or when organizational needs or technology change over the course of a long-term project. Some projects are "terminated by starvation." As Meredith and Mantel (2000) describe it, successive budget cuts over time can slowly starve a project budget to the point where it is ended but the termination is masked. Senior management may not want to admit that it had

KNOW WHEN TO SAY WHEN

Identifying the lost-cause IT project is not an easy task. Constant attention to project metrics and an intuitive understanding of the business are required. But, once a lost-cause project is identified, it is important for the organization to shut it down quickly and efficiently. Terminating a project should be an option at each stage or phase of the project. For example, Petrotin, a former subsidiary of Texaco, has about twenty-five IT projects underway that it scrutinizes closely. In the last two years, the company shut down two projects for different reasons. Pulling the plug on these projects before implementation saved the company money and the IT department's credibility. Raj Kapur, vice president of the Center for Project Management in San Ramon, CA, believes that once the decision to kill a project is made, the next set of steps is critical. The company should first put together a cancellation plan that carefully considers all of the project stakeholders and budget implications. For instance, there may be legal ramifications if the project involves contracts with vendors, suppliers, or even customers. The human resources department should also be consulted as soon as

possible if terminating the project means letting people go. The next step, according to Kapur, is to inform all the key people associated with the doomed project, especially the project champion and the project manager, before a public announcement is made. Afterwards, the project team should try to salvage as much work as possible. For example, code and testing methodologies may be saved. It is also helpful to debrief the team and have new assignments ready for them. Robert Wourms, an IT consultant, suggests that a report about the failed project should be written to document the lessons learned from both a business and technology perspective. IT managers should also be trained on how to detect a failing project as early as possible. Often project managers take their projects to heart and want to see them through to the end. But, it is better that the IT manager be able to make the call before the CFO tells him or her to kill the project.

SOURCE: Adapted from Mark Hall, *Dead in Its Tracks*, *Computerworld*, March 18, 2002, <http://www.computerworld.com/managementtopics/management/story/0,10801,69115,00.html>.

championed a failed project or that a project will be unsuccessful in meeting its goals. The project budget receives a large cut or a series of smaller cuts. The result is that the project will eventually die and the project resources will be reassigned, even though the project is never officially closed.

Ideally, a project is closed or terminated under normal circumstances. The project achieves its desired goal and objectives. The project sponsor is delighted with the project's product and shows his or her delight by paying for the invoiced project work on time and contracts for more work in the future. Unfortunately, closing a project does not often happen this way. As J. Davidson Frame (1998) points out, the project manager and team should be prepared to deal with the following realities:

- *Team members are concerned about future jobs.* Often the members of the project team are borrowed from different departments or functional areas of the organization. Once the project is finished, they will return to their previous jobs. For consulting firms, the project team members will move from one project to the next as part of their career path. Regardless, as the project nears its end, these project team members may begin to wonder what they will do next. For some, there will be a rewarding life after the project—for others it may mean looking for new jobs. For many it may mean disrupting a close-knit relationship with other members of the project team (Meredith and Mantel 2000). Therefore, project team members may become preoccupied with moving on with their lives and the project at hand may become a lesser priority. As a result, the project team members may not focus on what has to be done to close the project, and wrapping up the project may be a challenge.

- *Bugs still exist.* Testing the information system is an important process of systems development. However, software quality testing may not find all the defects, and certain bugs may not become known until after the system has been implemented. The appearance of these problems can be frustrating and stressful to all the project stakeholders. Unless these defects and bugs are promptly addressed and fixed, the project sponsor's satisfaction with the project team and the information system may become an issue.
- *Resources are running out.* Resources and the project schedule are consumed from the project's earliest inception. At the end of the project, both resources and time remaining are usually depleted. As unanticipated issues, problems, or challenges arise, the project manager may find that adequate resources to deal with these events effectively are not available. The project manager may find his or her situation aggravated if management decides to cut or control the project's budget.
- *Documentation attains paramount importance.* Information technology projects have numerous documentation requirements. They require project, system, training, and user documentation. Under ideal circumstances, the time to write documentation is built into the project plan and completed throughout the project. Many times, however, documentation is put off until the end of the project. As the end draws near, documentation becomes increasingly important. As a result, documentation may require more time and resources to complete, or shortcuts are taken to remain within the current project constraints.
- *Promised delivery dates may not be met.* Most projects experience schedule slippage. This slippage may be due to poor project management, implementation risks, competitive requirements, or overly optimistic estimates. A project will require a certain amount of resources and a certain amount of time to complete. Any misjudgment concerning what has to be done, what is needed to complete the job, and how long it will take will result in a variance between the planned and actual schedule and budget.
- *The players may possess a sense of panic.* As schedules begin to slip and project resources become depleted, various project stakeholders may experience a sense of alarm. The managers or partners of a consulting firm may worry that the project will not be profitable or satisfactory to the customer. The sponsor or customer may worry that the information system will not be delivered on time and within budget or provide the expected value to the organization. Moreover, the project manager and team may also be worried that the project will not be successful and the blame will rest squarely on their shoulders. As the sense of panic increases, the chances for an orderly closeout grow dim.

Regardless of whether a project ends normally or prematurely, it is important that an orderly set of processes be followed in order to bring it to closure. A good close-out allows the team to wrap up the project in a neat, logical manner. From an administrative view, this procedure allows for all loose ends to be tied up. From a psychological perspective, it provides all of the project stakeholders with a sense that the project was under control from the beginning through to its end (Frame 1998).

Project Sponsor Acceptance

The most important requirement for closure under normal circumstances is obtaining the project sponsor's acceptance of the project. Delivery, installation, and

implementation of the information system do not necessarily mean that the project sponsor or client will accept the project's product. Since acceptance depends heavily on the fulfillment of the project's scope, the project manager becomes responsible for demonstrating that all project deliverables have been completed according to specifications (Wysocki, Beck et al. 1995). Ancillary items, such as documentation, training, and ongoing support, should not be afterthoughts. These items should have been included in the original scope of the project. Any attempt to renegotiate what is and what is not part of the project work at this late stage of the project can create ill feelings or hold up payment by the client (Rosenau 1998).

Rosenau (1998) observes that there are two basic types of project sponsors. *Shortsighted* sponsors tend to view the project as a short-term buyer-seller relationship in which getting the most for their money is the most important criteria for accepting the project. This view often leads to an adversarial relationship if the sponsor attempts to renegotiate the project scope or price at the end of the project.

Knowledgeable sponsors realize that they have an important stake in the outcome of the project. As a result, they will be actively involved throughout the project in a constructive manner. As Rosenau points out, knowledgeable sponsors may ask tough questions during project reviews, but their objective is not to embarrass the project team or manager, but to ensure the success of the project. Instead of an adversary trying to get the most in a "win-lose" situation, the knowledgeable sponsor will negotiate intelligently and in good faith.

Regardless of whether the sponsor is short-sighted or knowledgeable, the project manager and team can improve the likelihood that the project will be accepted if they (1) clearly define the acceptance criteria for the project at the early stages of the project, and (2) document the completion of all project deliverables and milestones.

A clear definition of the project deliverables is an important concern for project scope management (discussed in an earlier chapter). Yet, defining and verifying that the project scope and system requirements are accurate and complete is only one component. Having scope change procedures in place that are understood by all the project stakeholders also ensures that everyone has the same expectations concerning what will and what won't be delivered at the end of the project.

The IT project methodology incorporated in this text also focused on managing the project based on phases that focus on specific deliverables. Project milestones ensure that the deliverables are not only complete, but completed right. Documenting each deliverable and milestone throughout the project provides confidence to the project sponsor that the project has been completed fully.

The Final Project Report

In general, the project manager and team should develop a final report and presentation for the project sponsor and other key stakeholders. The objective of the report and presentation should be to give the project sponsor confidence that the project has been completed as outlined in the business case, project charter, and project plan. By gaining this confidence, the sponsor or client will be more likely to formally accept the project that will allow for a smooth termination of the project.

The report may be circulated to key stakeholders before the presentation in order to get feedback and to identify any open or unfinished items that need to be scheduled for completion (Rosenau 1998; Buttrick 2000). Once finalized, the final project report provides a background and history of the project. The report should include and discuss the following areas at a minimum:

- Project Summary
 - « Project Description
 - « Project MOV
 - '-« Scope, Schedule, Budget, and Quality Objectives
- Comparison of Planned versus Actual
 - ¹ Original Scope and history of any approved changes Original scheduled deadline versus actual completion date Original budget versus actual cost of completing the project *> Test plans and test results
- Outstanding Issues
 - » Itemized list and expected completion
 - » Any ongoing support required and duration
- Project Documentation List
 - » Systems Documentation
 - « User Manuals
 - * Training Materials
 - Maintenance Documentation

The Final Meeting and Presentation

If the project manager has been diligent in gaining the confidence of the project sponsor, the final meeting and presentation should be a simple, straightforward affair. Buttrick (2000) suggests that the final meeting is useful for:

- *Communicating that the project is over.* By inviting key stakeholders to the meeting, the project manager is formally announcing that the project is over. This action not only provides a sense of closure for those close to the project, but also for the organization, as well.
- *Transferring the information system from the project team to the organization.* Although the information system may have been implemented and is being used by the organization, the final meeting provides a formal exchange of the project's product from the project team to the organization. Unless some type of ongoing support is part of the contractual agreement, this transfer signals that the project team will not be at the client or sponsor's site much longer.
- *Acknowledging contributions.* The meeting provides a forum for the project manager to acknowledge the hard work and contributions of the project team and other key stakeholders.
- *Getting formal signoff.* Finally, the meeting can provide a ceremony for the sponsor or client to formally accept the information system by signing off on the project. A space for signatures could be part of the final project report or part of some other contractual document.

Closing the Project

Once the project is accepted by the sponsor or customer, a number of administrative closure processes remain. These last items can be difficult because the project manager

or team may view these administrative items as boring or because they are already looking forward to and thinking about their next assignment (Gray and Larson 2000). Unfortunately, administrative closure is a necessity because once the project manager and team are officially released from the current project, getting them to wrap up the last of the details will be difficult. The requirements for administrative closure include:

1. Verifying that all deliverables and open items are complete.
2. Verifying the project sponsor or customer's formal acceptance of the project.
3. Organizing and archiving all project deliverables and documentation.
4. Planning for the release of all project resources (i.e., project team members, technology, equipment, facilities, etc.).
5. Planning for the evaluations and reviews of the project team members and the project itself.
6. Closing of all project accounts.
7. Planning a celebration to mark the end of a (successful) project.

PROJECT EVALUATION

The question on everyone's mind throughout the project is, Will this project be successful? However, different stakeholders will have different views of success. For the project team members, it may be gaining valuable experience and feeling that their work will have a positive impact on the organization. For the project manager, it may be leading a project that will be profitable to the firm or a promotion to a larger and more visible project. On the other hand, the client or sponsor may view project success in terms of organizational value received after the project is implemented.

Therefore, four types of project evaluations should be conducted. There should be (1) an individual review of each team member's performance, (2) a postmortem review by the project manager and project team, (3) an audit of the project by an objective and respected outside party, and (4) an evaluation sometime after the project is implemented to determine whether the project achieved its envisioned MOV.

Individual Performance Review

The project manager should conduct an individual performance review with each project team member. Although the project organization may have its own process and procedure for conducting reviews, the project manager should focus on the following points:

- *Begin with the individual evaluating his/her performance.* Evaluating someone's performance can be an emotional experience. Even with the best intentions, being critical of someone can put her or him on the defensive. Instead of beginning an evaluation with a critique of the individual's performance, it is usually more effective to begin by asking how *that person* would evaluate her or his performance. Surprisingly, most people are more critical of themselves. This opening provides an opportunity for the person doing the evaluation either to agree or to disagree with the individual's self-evaluation and to point out several positive aspects of the person's performance. This system creates a useful dialog that provides the individual with more useful feedback.

- *Avoid "why can't you be more like....?"* It is easy to compare individuals. Unfortunately, comparisons can have a counter effect. First, the person that you exalt may not be the shining star you think they are. Second, others may become jealous and look for ways to discredit or disparage the individual. Keep in mind that people are different and should be evaluated as individuals.
- *Focus on specific behaviors, not the individual.* When discussing opportunities for improvement with a person, it is important to focus on specific behaviors. For example, if a project team member has a habit of consistently showing up late and disrupting team meetings, it is important not to focus on the individual (i.e., why are you so lazy and disrespectful?), but on how showing up late to team meetings is disruptive. Often people do not realize how their behaviors affect others.
- *Be consistent and fair.* Being consistent and fair to everyone is easier said than done. The person conducting the evaluation should be aware of how decisions concerning one person may affect the entire group. Also, be aware that people talk to one another and often compare notes. Therefore, making a decision concerning one person may set a precedent for others. Having policies and procedures in place and sticking to them can mitigate the potential for inconsistency and the perception that the evaluator is not fair with everyone.
- *Reviews should provide a consensus on improving performance.* The purpose of conducting a review or evaluation with each project team member is to provide constructive feedback for individuals. No one is perfect, so understanding where an individual can improve and how they might go about improving is important. The individual and the evaluator should agree on what areas the individual needs to improve upon and how the organization can support this endeavor. For example, the individual and the evaluator may agree that the team member should improve his or her communication skills. The evaluator may then recommend and provide support for the person to attend a particular training class.

The meeting can serve to help prepare the individual to move on and accept the psychological fact that the project will end (Gray and Larson 2000). And, in most cases, the project manager could use this meeting to discuss the project team member's next assignment.

Postmortem Review

Shortly after the final project report and presentation are completed, the project manager and project team should conduct a postmortem review of the project. This should be done before the project team is released from the current project. It is more difficult to get people to participate once they are busy working on other projects or if they no longer work for the project organization. Moreover, memories tend to become clouded as time passes. Thoroughness and clarity are critical (Nicholas 1990). The formal project summary report should focus on the project's MOV and the project management knowledge areas. The focus of this review should include the following:

- *Review the initial project's MOV.* Was the project's MOV clearly defined and agreed upon? Did it change over the course of the project? What is the probability that it will be achieved?

- *Review the project scope, schedule, budget, and quality objectives.* How well was the scope defined? Did it change? How effective were the scope management processes? How close were the project schedule and budget estimates to the actual deadline and cost of the project? Were the quality objectives met? How well did the quality management processes and standards support the project processes?
- *Review each of the project deliverables.* How effective were the business case, the project charter, the project plan, and so forth? How could these deliverables be improved?
- *Review the various project plans and Project Management Body of Knowledge (PMBOK) areas.* The team should review its effectiveness in the following areas:
 - project integration management
 - » project scope management
 - « project time management
 - « project cost management
 - « project quality management
 - project human resources management
 - project communications management
 - project risk management
 - « project procurement management »
 - organizational change management «
 - project implementation
- *How well did the project team perform? Were conflicts handled effectively? Did the team suffer any morale problems? What main challenges did the team face? How well did they handle these challenges? How well did the members function as a cohesive team?*

The discussion and recommendations from the postmortem review should be documented. In particular, the project manager and team should identify what they did right and what they could have done better. These lessons learned should be documented so that they can be shared with others in the organization. Moreover, best practices should be identified and become part of the organization's IT project methodology.

Project Audit

The individual performance and postmortem reviews provide an important view of the internal workings of the project. In general, these reviews are conducted between the project manager and the project team. To provide a more objective view of the project, an audit or review by an outside party may be beneficial for uncovering problems, issues, or opportunities for improvement. Similar to the postmortem review, the auditor or audit team should focus on how well the project was managed and executed. This may include the project plans and Project Management Body of Knowledge areas described in the previous section, as well as the underlying project management and systems development processes outlined in the organization's IT project methodology. In addition, the auditor or audit

team should assess whether the project manager and team acted in a professional and ethical manner.

As Gray and Larson (2000) suggest, the depth of the audit depends on the organization's size, the importance and size of the project, the risks involved, and the problems encountered. The audit may involve the project manager and the project team, as well as the project sponsor and other key project stakeholders. In addition, the third party auditor or audit team should:

- Have no direct involvement or interest in project.
- Be respected and viewed as impartial and fair.
- Be willing to listen.
- Present no fear of recrimination from special interests.
- Act in the organization's best interest.
- Have broad base of project and/or industry experience.

The findings or results of the project audit should be documented, as well as any lessons learned and best practices.

Evaluating **Project** Success—The **MOV**

The MOV, or measurable organization value, was defined at the beginning of the project. It provided the basis for taking on the project and supported many of the decision points throughout the project life cycle. Often, the MOV cannot be readily determined at the close of the project. Many of the benefits envisioned by the implemented system may require weeks or even months before they are realized.

Although the different project stakeholders and players may have different views as to whether the project was a success, it is important to assess the value that the project provides the organization. This review may be conducted by several people from both the project sponsor or client's organization and the organization or area responsible for carrying out the project. In particular, this review should focus on answering and documenting the following questions:

- Did the project achieve its MOV?
- Was the sponsor/customer satisfied?
- Was the project managed well?
- Did the project manager and team act in a professional and ethical manner?
- What was done right?
- What can be done better next time?

Before conducting this evaluation, the consulting firm or individuals representing the project should be sure that the information system delivered has not been changed. Often when an information system is handed over to the project sponsor, the users or support staff may make changes. It is not uncommon for these changes to have unintended adverse affects. Care should be taken to ensure that the system being evaluated is the system that was delivered (Nicholas 1990).

The evaluation of the project's MOV may be intimidating—it can be the moment of truth as to whether the project was really a success. However, a successful IT project that brings measurable value to an organization provides a foundation for organizational success.

CHAPTER SUMMARY

This chapter provides closure for both this text and for managing an IT project. Throughout the project life cycle, processes to support both the project and development of the project's product—the information system—have been discussed. These processes are important for managing the project from its inception right through to its conclusion.

Once the information system has been built or purchased, it must be adequately tested in order to make installation of the system go more smoothly. However, implementation requires a tactical approach for ensuring that the information system is transferred efficiently and effectively from the project environment to the day-to-day operations of the organization.

Three approaches to implementation were discussed in this chapter. The first approach, called direct cutover, provides the quickest means for implementing the system. In general, the old system is turned off and the new system is turned on. This approach can be risky if the system has not been thoroughly tested. As a result, it can put a great deal of pressure on the project team to "get it right" the first time, especially if the system supports a mission critical function of the organization.

The parallel and phased approaches are less risky alternatives, although implementation may take longer. The parallel approach requires that both the old system and new system run concurrently for a time until there is enough confidence that the new system is working properly. At some point, a switch is made from the old system to the new system. The parallel approach can be stressful for the users of the system because they may be required to provide input for both systems and then compare the outputs.

The phased approach may be appropriate when implementing an upgrade or modular system in different departments or at different geographical locations. Under this approach, implementation takes place over phases according to a published schedule. Experience gained from early implementations can make later implementations go more smoothly; on the other hand, any unanticipated problems can create a chain reaction that pushes back the entire implementation schedule. Choosing and implementing the correct implementation approach can have a significant impact on the project schedule and budget.

Once the information system has been implemented, the project manager and team must plan for an orderly end to the project. Projects can be terminated for a variety of reasons, but a project must be properly closed, regardless of whether the project ends successfully or

unsuccessfully. Ideally, the project is closed under normal conditions—that is, the project scope is completed within reasonable modifications to the original schedule, budget, and quality objectives. Delivery or installation of the information system does not necessarily mean that the project's sponsor or customer will accept the project. Therefore, closure must focus on providing both proof and confidence that the project team has delivered everything according to the original business case, project charter, and project plan.

A useful way to gain acceptance is the development of a final project report. This report provides a history of the project and outlines how each deliverable was completed and meets the standards of the client or sponsor. The report should also address any open items or issues so that they can be completed within a reasonable time. This report can serve as a foundation for the project team's final meeting with and presentation to the key stakeholders of the project. This meeting not only provides closure for the project, but also serves as a communication tool for informing the stakeholders that the project has been formally accepted and, therefore, is coming to an end.

Several processes for closing a project were discussed in this chapter. They include closing the project accounts, releasing or transferring project resources, documenting lessons learned, and archiving all project documents and deliverables.

Before a project is completely terminated, it is important that several reviews or evaluations be conducted. These evaluations include a performance review between the project manager and each project team member. A postmortem review with the project manager and the entire team should include all of the project deliverables, project plans, and, in general, the various project management body of knowledge areas. Lessons learned should be documented and best practices identified.

The performance reviews and postmortem should provide preparation for the project audit. In this case, a respected and objective third party should review all of the project deliverables and processes to assess how well the project was managed. The auditor or audit team should also focus on the specific challenges the project manager and team faced and how well they addressed these challenges. The professional and ethical behavior of the project manager and project team should be examined, as well.

The concept of a project's measurable organization value (MOV) has been a central theme in this text. The MOV provided a basis for deciding whether to invest in the project and guided many of the project decisions

throughout the project life cycle. Although different stakeholders may have different views of project success, the overall guiding mechanism for determining whether the project was a success is the project's MOV. Unfortunately, the organizational value that a project provides may not be readily discernable immediately after the information system is implemented. Even if it

takes place weeks or months after the project is officially closed, an evaluation as to whether the project has met its MOV must still be conducted. This evaluation should involve various key stakeholders. This moment of truth may make some people anxious, but it provides the necessary means for determining whether the project has brought any real value to the organization.

| REVIEW QUESTIONS

1. What is implementation?
2. Describe the three approaches to implementing an information system.
3. What are the advantages and disadvantages of the direct cutover approach?
4. What are the advantages and disadvantages of the parallel approach?
5. What are the advantages and disadvantages of the phased approach?
6. Describe the various scenarios for project termination.
7. Why might an organization terminate a project prematurely? What are the risks?
8. What is a perpetual project? Why might an organization be reluctant to terminate a project that many would consider unsuccessful?
9. Why would senior management cut a project's budget without officially terminating the project?
10. Why might some project team members be reluctant to see the end of a project?
11. Why can the end of a project be stressful for many of the project stakeholders?
12. Why is the sponsor's acceptance of the project important to project closure?
13. How can the project manager and project team facilitate the project sponsor's acceptance of the project?
14. What is the difference between a *shortsighted* and a *knowledgeable* project sponsor? How can making this distinction help the project manager during project closure?
15. What is the purpose of the final project report?
16. What is the purpose of the final meeting and presentation?
17. Describe some of the steps for administrative closure.
18. What is the purpose of the project manager conducting a performance review with each member of the project team?
19. What is the purpose of conducting a postmortem review?
20. What is the purpose of a project audit?
21. What criteria should be used to choose a project auditor or auditing team?
22. What is the purpose of evaluating the project's MOV?
23. Why would it be difficult to evaluate whether or not a project achieved its MOV shortly after the information system is implemented?
24. Why should any lessons learned from project evaluations be documented?
25. Why would evaluating whether a project achieved its MOV make many project managers and teams anxious? Why should it still be done?

EXTEND YOUR KNOWLEDGE

1. Suppose you are the project manager for a mid-sized consulting firm. You have been leading a team of twelve consultants who have been working three months on a six-month project for your firm's largest client. You have managed two projects in the past for this client, and both of these projects were successful. In fact, the client has asked that you personally lead the current project. Your relationship with the client's Chief Information Officer (CIO)

has been excellent. Unfortunately, that CIO left the company two weeks ago to start a blues band. Her replacement has just been hired, and your meeting with the new CIO this morning did not go well at all. The new CIO figuratively shredded a status report that you had prepared. Moreover, the CIO seemed to have little understanding of the technology being used to develop the system and complained that the prototypes of the user interface that

your team had developed were "too hard to understand and use." Just before leaving his office, the new CIO mentioned that this project was costing way too much money and taking too long to complete. Given the state of the economy, some cuts to project's budget and schedule may be forthcoming.

- a. Given the situation, do you think this project will survive?
 - b. Terminating this project prematurely would have a major impact on the profitability of your firm. What could you do to save either the project or the long-term relationship with this client?
2. Suppose that a client has complained that your organization has allegedly acted in a manner both unprofessional and unethical. While investigating these

allegations, senior management has asked you to draft a one-page statement to guide your organization's behavior. How could this code be monitored to ensure that all employees comply? You may use the World Wide Web (WWW) or any other resources as reference, but be sure to cite your references. 3. Using the WWW or any other resources (e.g., you could interview a project manager), write a summary of a company's experience implementing an Enterprise Resource Planning (ERP) system. Was this implementation successful? Why or why not? What were the major challenges? Did the implementation go according to plan? What lessons did the organization learn from this experience? Be sure to include your reference(s).

BIBLIOGRAPHY

- Buttrick, R. 2000. *The Interactive Project Workout*. London: Prentice Hall/Financial Times.
- Frame, J. D. 1998. Closing Out the Project. In *Project Management Handbook*, edited by J. K. Pinto. San Francisco, Calif.: Jossey-Bass: 237-246.
- Gray, C. F. and E. W. Larson. 2000. *Project Management: The Managerial Process*. Boston: Irwin McGraw-Hill.
- Keil, M. 1995. Pulling the Plug: Software Project Management and the Problem of Project Escalation. *MIS Quarterly* (December): 421-47.
- Meredith, J. R. and S. J. Mantel, Jr. 2000. *Project Management: A Managerial Approach*. New York: John Wiley.
- Nicholas, J. M. 1990. *Managing Business and Engineering Projects: Concepts and Implementation*. Upper Saddle River, N.J.: Prentice Hall.
- Rosenau, M. D. J. 1998. *Successful Project Management*. New York: John Wiley.
- Wyssocki, R. K., R. J. Beck, et al. 1995. *Effective Project Management*. New York: John Wiley.