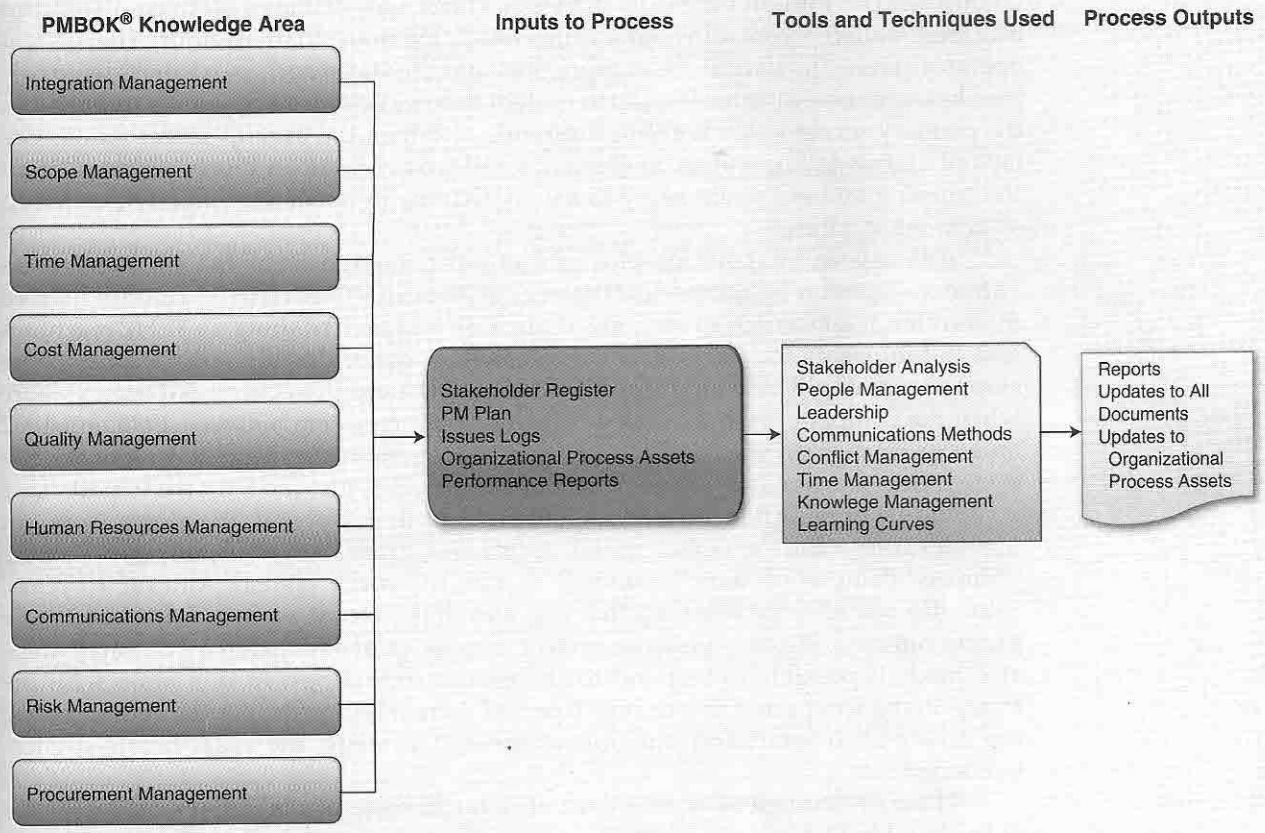
CHAPTER 12

Project Success



For projects to be successful, project strategy, project leadership, project management, and good communications are essential.

Learning Objectives

After reading this chapter, you will be able to:

- Discuss various project success variables
- Discuss success variables for customers, organizations, the project manager, and the project team
- Communicate effectively
- Understand the intricacies of people management
- Understand knowledge management in projects
- Understand learning curves and how they can be used in project success

On January 28, 1986, the Challenger space shuttle blew up 73 seconds after launch. The casualties included seven lives and $3 billion worth of equipment. The failure was due to a faulty sealing system, which allowed the exhaust flames from the solid-fuel rocket boosters (SRBs) to vent directly on the external tank, rupturing the tank and causing the explosion. The Roger Commission identified a breakdown in project communication as a contributing factor in the Challenger accident. The important information from Thiokol engineering regarding the SRBs did not find its way to the appropriate people at NASA who were in charge of the launch.

On August 14, 2003, the Northeast Blackout, a massive widespread power outage, occurred throughout parts of the Northeastern and Midwestern United States and Ontario, Canada. The blackout affected an estimated 10 million people in Ontario and 45 million people in eight U.S. states. One of the causes was a software bug that stalled a control room alarm system for more than an hour. The system operators were unaware of the malfunction, and the audio and visual alerts were neither heard nor seen. After the alarm system failure, unprocessed events queued up, the primary server failed within 30 minutes, and then the backup server failed. The lack of alarms led operators to dismiss a call from American Electric Power about the tripping and enclosure of a 345 kV shared line in northeast Ohio, which led to system-wide failure.[1]

A four-year, $100 million-plus project was being rebuilt by the air-travel reservation system run by Sabre Holdings Corp. The old system had 10 million lines of mainframe assembly language code. Using C++ and Java running on 17 HP machines and 45 Linux servers, the project was working successfully, but only because Sabre stopped running it as a big IT project. Some of the old projects attempted by Sabre when the company tried to overhaul its reservation system between 1988 and 1992 failed miserably. At that time, the project managers in the organization broke the system into manageable pieces to be built in parallel, just the way the experts said it should be done. After three and a half years of development, the pieces were put together into a finished system that didn't work well. A few weeks ahead of the promised completion date, Sabre had to junk the entire system. And for 10 years, Sabre did not attempt anything that big, and in the recent project, Sabre used agile programming and completed the project as a series of small steps. The small steps also made it possible to respond to changes in technology. In this project, all the things that are expected from a big IT project were missing: the grand, detailed plan; the divide-at-the-start-and-integrate-at-the-end strategy; the years-before-it-goes-live schedule.[2]

There are innumerable examples of failures; some of the famous ones are provided in Table 12-1.

Of course, projects do succeed. Successful projects have many criteria, factors, and variables in common. Table 12-2 illustrates several projects that were completed successfully.

We saw in Chapter 1 six criteria for project success: scope, cost, time, resources, performance, and value. No doubt, controlling these criteria is a necessary to a project's success. The project controls need to be in place during the progress and execution of projects. There are many other variables that also lend themselves to successful projects and are the foundation of project success; they are illustrated in Figure 1-3. For projects to be successful, the foundation is project strategy, project leadership, and project management. Project leadership and project management in projects are essentially the art and science of management that include various cultural, environmental, organizational, and personal variables. We will discuss such organizational, leadership, and project management variables in this chapter.

TABLE 12-1 Famous Project Failures

Name	Year	Probable Cause of Failure
Mars Polar Lander	2000	Failure of middle management
Hershey ERP Implementation	1999	Lack of training, mismanagement
Motorola, Iridium	1999	Misjudged competition and wrong technology
Ariane 5 Missile	1996	Incorrect reuse of software, faulty scaling up
Superconducting Supercollider	1995	Cost overruns, failure to maintain public support
Denver Baggage Handling System	1993	Poor project management, complex technology
Hubble Space Telescope	1990	Lack of system testing
GE Rotary Compressor Refrigerator	1986	Inadequate testing of new technology
Chernobyl Nuclear Power Plant	1986	Bad design, bad risk management, cost cutting
IBM PC	1983	Failure to discover customer needs
War in Vietnam	1967–72	Scope problem, micromanagement
Edsel Automobile	1958	Failure to discover customer needs
Titanic	1912	Poor quality control

TABLE 12-2 Famous Successful Projects

Name	Year	Probable Cause of Success
Several Successful Products, Buildings, Systems	1980-present	Good project management practices
The Shuttle Project (NASA)	1981	Value; technology innovation; planning and execution
Project Apollo (NASA)	1969	Value; technology innovation; planning and execution
Project Mercury (NASA)	1962	Value; technology innovation; planning and execution
Mt. Rushmore	1941	Project leadership, unique value
Hoover Dam	1935	Engineering; Organizational and political skills of project champion
TVA (Tennessee Valley Authority)	1933	Value; planning and execution
Empire State Building	1931	Competitive nature; Great planning
Model T Ford	1908	Combination of innovation, quality, and re-invention of manufacturing process
Waldorf Astoria Hotel	1897	Understanding of customers and market

PROJECT SUCCESS VARIABLES IN PROJECT PROCESSES

As discussed in Chapter 2, there are nine project knowledge areas in PMBOK known knowledge areas. Each one of these knowledge areas contains many activities, and the success of a project depends heavily on the successful implementation of these activities and their processes. In this section, let us discuss some of the success factors as seen from a knowledge areas point of view.

Integration Management

One of the major problems with project success is a lack of clear project definition. The project definitions and all other project documents need to be revised periodically to reflect any changes that may have been made. Such revisions need to be managed with version control to maintain the changing baseline document. The knowledge in process assets needs to be validated and verified periodically to ensure accuracy so that it may be used by other projects.

Scope Management

The scope of a project has to be accurate and elaborate with no ambiguity. Poor scope definition and underestimation of the complexity of projects and their interdependency with other projects or with existing services or products causes projects to fail. Scope creep, or changes in scope as a project progresses, is a sign of customer, user, or sponsor dissatisfaction. This may be avoided by understanding the position of the stakeholders, holding regular meetings, and involving customers and users during project execution.

Time or Schedule Management

A failure to identify and define all the activities required for a project as well as not scheduling them with enough time to complete activities will make it very difficult to meet the project deliverables on time. The resulting delays can cause increasing anxiety in the sponsors, which can result in the termination of a project. Moreover, if activities are poorly scheduled, bottlenecks can be created as human resources are unevenly loaded into the project schedule, thus creating stress and inefficiencies during the progress of a project. The schedule needs to be modified constantly, monitored, and controlled. The time taken to meet the activities has to be regularly recorded and monitored. The schedules have to be regularly reported to stakeholders.

Cost Management

Budgets have to be properly taken into account in a project for budgeting and estimation purposes. The project costs have to properly recorded and communicated with stakeholders. Costs have to be monitored and controlled until financial closure. Improper and inadequate costing of projects during planning may mean early termination due to lack of money. Even if a project is correctly budgeted, proper care needs to be taken to ensure that there are no abnormal cash outflow issues like not spending wisely and carefully.

Quality Management

All projects call for regular quality checks, quality assurance tests, and remedial actions. The quality requirements of the project have to be seriously pursued by all team members in order to gain satisfaction from customers and users.