

## Project Management

### 10 Steps to Avoid Project Failure

#### Operations Associates

Founded in 1993, Operations Associates is a leading independent consulting firm having executed nearly 1,000 projects from our inception. Our hands-on professionals average over 20 years of industry experience helping our clients grow profits and accelerate return on investment through operational excellence. We deliver **Optimized Business Processes and Systems** to lower your risk and accelerate your return on investment in people, equipment, systems, and facilities. To support business expansion and consolidation strategies, we deliver **Smart Manufacturing and Distribution Facilities** that reduce your capital investment, lower long-term operating costs, and improve service levels. Our success-based fees ensure partnering with our clients and result in a 97.8% customer satisfaction rating.

hands-on business solutions since 1993®

# Table of Contents

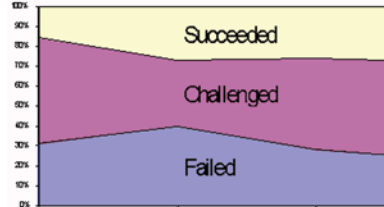
Introduction .....	1
Step #1 Define The Project Purpose .....	2
Step #2 Organize The Project Team .....	3
Step #3 Charter The Project .....	4
Step #4 Align The Project Team .....	5
Step #5 Plan The Detailed Project .....	6
Step #6 Control The Project's Processes .....	7
Step #7 Apply Systems Thinking .....	8
Step #8 Assess Project Risks .....	9
Step #9 Avoid Analysis Paralysis .....	10
Step #10 Control Scope Changes .....	12
Conclusions .....	13

## Introduction

Webster defines a project as *“something that is planned or devised; a large or important undertaking, especially one invoking considerable expense, personnel, and equipment.”* Projects come in many forms. At home, projects such as building a home, remodeling the kitchen, or taking a vacation are created for personal gratification or to satisfy family obligations.

In business, projects are launched for many reasons. One of the most important is to improve the financial condition of the company. Yet, despite this goal to improve company profitability, a large percentage of projects fall short of

business expectations or fail completely. The examples of projects not succeeding are endless. Companies design and implement:



- Facilities that are too large, or cost too much.
- Operations that fail to achieve the expected throughput and quality.
- Information technology that increases, not decreases, real operating costs.
- Supply chain projects that fail to increase inventory turnover and return on assets.
- Strategic projects, such as Lean and Six Sigma, that fall behind schedule and consume many more company resources than planned.

Studies estimate that only 80% of general projects and only 20% to 30% of IT projects achieve their stated goals. Results have improved slightly over a long period of time, but the overall success rates are still underwhelming. Given the poor success rate of projects across a broad swath of industries and areas of focus, one of the primary project goals for any company should be to increase the probability of project success. We've organized this Best Practices guide to help you significantly improve your chances of success. We hope that you find this guide to be a valuable asset in your efforts to improve your projects.

*The Robbins-Gioia Survey (2001)*  
*Standish Group CHAOS Report (2003)*

## Step #1

### Define The Project Purpose

Many technical people plan the project by focusing on the technical details without spending too much time analyzing the project's larger purpose. It is far more effective to plan with the end in mind. The project team, before planning any tasks, should ask two questions:

1. What will the project do for my company when completed?
2. How much are we willing to spend to achieve these results?

Answering these questions, a team can develop a project purpose statement, or the team's mission. The project purpose statement defines what the team is trying to achieve. It sets the course for the entire project<sup>1</sup>.

Have you ever been part of a project team that may have worked well together, maybe even succeeded on the project, but later realized it solved the wrong issue? This usually is because the team focused on the wrong project purpose. To avoid this, it's important to brainstorm many purpose statements, some broader, others narrower. Different purpose statements change the range of solutions available and can improve the overall results of the project. Narrower purposes are easier goals to achieve. They often take less time and fewer resources to implement. Yet they also may be less permanent or less strategic in their solution. Broader purposes are just the opposite: often open to more creative solutions, but possibly more risky or difficult to implement well.

Following a discussion about what the team is really trying to achieve, the team selects one of the purpose statements from among the options. The final selection will depend on what the team thinks it can achieve, given the resources at its disposal.

This approach aligns the team's purpose to the resources available. It helps ensure that the team is solving the problem at the broadest level possible and with the highest return on investment possible. It gets the project moving in the right direction from the start.

<sup>1</sup>*Nadler and Hibino in their landmark book Breakthrough Thinking (1990) found that good problem solvers, only about 11% of the population, explore a range of purposes before deciding on a specific purpose and a course of action.*

## Step #2 Organize The Project Team

The purpose of organizing the project team is to increase the project's odds for success. One of the most overlooked early tasks on the project is to determine who should be involved. Often project managers accomplish this task in haste and without a lot of planning or forethought. The consequences of not considering who the project stakeholders are, or who would contribute value, will endure throughout the project and beyond. The best approach is to plan involvement as a separate, initial step at the start of the project. Just deciding who participates is not enough. Once assigned to the project, a member's roles also are important. Just as in baseball where each player has an assigned position and role to play, successful projects require each team member to know and execute their assignments. The number of players and the complexity of their tasks will tend to vary by project size and type, but every project should assign the following roles:

Level/Group	Ownership	Managerial	Technical
<b>Owner's Organization</b>	<b>Executive Committee:</b> <ul style="list-style-type: none"> <li>• "Project Board"</li> <li>• Strategic Focus</li> <li>• Provides Guidance</li> </ul>	<b>Project Manager:</b> <ul style="list-style-type: none"> <li>• "Project President"</li> <li>• Project Focus</li> <li>• Leadership &amp; Oversight</li> </ul>	<b>Technical Managers:</b> <ul style="list-style-type: none"> <li>• "Project Engineers"</li> <li>• Tactical Focus</li> <li>• Technical Details</li> </ul>
<b>Consultant</b>	<b>Client Sponsor:</b> <ul style="list-style-type: none"> <li>• "Project Auditor"</li> <li>• Strategic Focus</li> <li>• Counsel</li> </ul>	<b>Project Manager:</b> <ul style="list-style-type: none"> <li>• "Project Chief of Staff"</li> <li>• Project Focus</li> <li>• Advice &amp; Facilitation</li> </ul>	<b>Consultants:</b> <ul style="list-style-type: none"> <li>• "Project Engineers"</li> <li>• Tactical Focus</li> <li>• Technical Details</li> </ul>

At the beginning of the project, the project leaders must ensure that each team member is identified and assigned a specific role and responsibilities. One of the best ways to ensure that all members understand and commit to their duties is to develop a project charter and to align the team.

## Step #3

### Charter The Project


The first, formal deliverable from the project manager is the Project Charter. The Project Charter formally acknowledges the existence of the project. It describes the business need and overall purpose for the project, the project scope, and the project deliverables. It also typically contains a preliminary analysis of the return on investment and risk assessment.

There are two reasons for the project charter. First, it serves as a historical documentation of the business case at the start of the project. It serves as a touchstone for all team members throughout the remainder of the project. Second, it is a formal approval mechanism for the project. The project charter gives the Executive Committee confidence that the team has organized the project for success. The Executive Committee approves the Project Charter to authorize the project's formal start.

Elements included in the typical project charter include:

- Project Name
- Project Manager
- Proposed Project Team Members
- Background On The Situation Driving The Project
- Area Where Project Is To Be Implemented
- Project Description/Scope
- Estimated Capital Cost And Return (ROI or NPV)
- Rough Schedule
- Risk Factors/Discussion
- Assumptions
- Approval List And Signature Blocks

Recall the poor track record for many projects. The charter provides a mechanism for formal review of the project goals, initial plans, and business case. This review offers a "first, best chance" to get the project plan right (or kill it) before the company begins expending serious time, effort, and money on the project.

 Operations Associates	
Project Name:	Date:
Project Sponsor:	Department Submitting:
Project Purpose:	
Description of Environment:	
Description of Future State:	

## Step #4 Align The Project Team

The entire team must work together effectively throughout the life cycle of the project. Good communications throughout the project's life are fundamental to achieving this goal—especially important at the start. There are several techniques to align the team and collect the project's initial set of data. This is not just a team building exercise. Critical and creative thinking applied during the front-end of the project has a tremendous impact on the overall outcome.

When the project has a relatively small number of participants, the alignment simply may take the form of a meeting. An open, interactive meeting gives the project team its best chance to get the interpersonal and cultural aspects of the project established early, and to share project information.

For more complex projects, the alignment can take the form of "problem definition," a systematic process of gathering and organizing information. This is a three-step process. First the team interviews stakeholders individually to gather data. Then the team organizes the collected data into the categories of goals, facts, concepts, needs, and issues (although teams will create other categories as necessary). The final step in problem definition is to share the results with all stakeholders and solicit additional comments and other input. This is a powerful technique to jump-start the project.

The alignment meeting and problem definition methodology are two ways to align team members. Many companies have their own techniques and there are many books on the subject. Regardless of the technique used, it is critical for the team to participate in some type



of exploration and alignment process immediately after organizing the project. At this early stage in the project, an "alignment" significantly increases the project teams' odds for success by collecting project data, brainstorming ideas, and communicating the project culture. All of these are important and necessary early project activities.





can use to measure project performance. The project manager and estimators should strive to complete these estimates prior to final budget approval whenever possible. The risk management plan also may influence the budgeting process, and the team should think about including cost contingencies.

Some project teams would rather not create a detailed project plan, but remember: "To fail to plan is to plan to fail".

## Step #6 Control The Project's Processes

At the start of the project, it is important to create Standard Operating Procedures (SOP) to:

- Further align the team
- Speed the start-up of the project
- Quickly formalize working relationships
- Maintain project communications
- Document key decisions

SOPs are generally applicable to all projects. It's best to have a set of corporate standards so that as people move from project to project they don't have to relearn new procedures, which can negatively affect productivity, quality, and project control. The project manager should review the company's SOPs and determine their applicability. If he/she decides the project will require supplemental procedures, deletions, or revisions, these changes are noted as exceptions (rather than revising the entire procedure). The final step is to provide a copy of the SOPs to each project team member for review. Below is a list of just a few of the possible components of the project procedures:

- Progress Report - The reporting of the project status, schedule, action items, and issues or concerns.
- Communications Records - Documentation of key meetings, conference calls, conversations, and e-mails to keep all team members informed of the latest information.
- Documentation Standards - The methods to maintain and organize key project documents and deliverables.
- Action Item Lists - A managed list of key tasks required of team members.

- Communications Procedures - A formal list of which team members receive what information and the preferred form of communication.
- Risk Plan - The formal documentation of the anticipated project risks and the associated actions the team will take to address those risks.
- Quality Control and Audit - The techniques used by both the consulting and client organizations to judge the quality of the work product including work standards, client satisfaction surveys, and documentation control.
- Project Plan Review - The periodic analysis and review sessions to maintain the overall schedule and budget.
- Formal Deliverables Sign-off - A list of key deliverables, and whether they require a formal sign-off.
- Scope Change Control - Processes for identifying, documenting, and controlling scope of work changes.

Project procedures are not glamorous, but they play a key role in starting the project off quickly, efficiently, and correctly.

## Step #7 Apply Systems Thinking

Once management initiates the project, the project team soon will consider new and sometimes very different concepts and ideas. These new ideas are critically important. Yet, project teams frequently fail to consider the full ramifications of the changes they're making, or assume that integration doesn't matter.

In the early days of the computer industry, the engineers used to call adding some hardware or software functionality without integrating it into the main system, "hanging a bag on the side of the computer." How often have you seen someone try to implement a change in a company by hanging a bag on the side of some corporate system? It happens all too often.



The experienced project team asks how the project outcomes will affect (and be affected by):

- The company's culture and norms
- Installed technology
- Management systems
- Organization structure
- "Human systems" (employees, recruiting, retention, compensation, training, etc.)
- Outside stakeholders
- Company financial structure
- Customer and sales/marketing systems

Experienced project leaders know that it's important to assess how the new design will integrate into the existing operations. They then plan to implement any new changes as seamlessly as possible with those existing systems to avoid project failure. This planning should be a formal part of the project.

## Step #8 Assess Project Risks

Phase of Project	Cost of Changes	ROI of Changes
Idea Generation	Very Low	Very High
Conceptual Design	Low	High
Detailed Design	Medium	Medium
Implementation	High	Low

Risk is high at the start of any project, but the ability to mold the outcome also is high. An important step early in the project is to assess risks and plan contingencies if necessary.

Assessing risk means the team has to forecast likely project outcomes, both good and bad. Most assessments of risk are informal and not documented or communicated well. Therefore, it becomes important to ask formally:

- "What could go wrong with our plan?"
- "What are we missing? What are the holes in the plan?"
- "What problems are we seeing now, but are not reacting to properly?"

An even more formal way to assess risk is to use "Failure Modes Effects Analysis," or FMEA. The FMEA methodology for evaluating risk comes out of the quality engineering profession. It was initially used in the aerospace and automotive industries. It's a method by which the project team brainstorms things that could go wrong on the project or with the design, and then envisions what the result or effect of that failure would be. The project team then assigns three numbers to each failure mode and effect:

- An occurrence number (how likely is this to happen, on a scale of 1 to 10?)
- A severity number (how severe are the effects, on a scale of 1 to 10?)
- A detectability number (how likely is it that we will catch and prevent the failure before it happens, on a scale from 1 to 10?)

Multiplying the three numbers together on each line results in the "Risk Priority Number," or RPN. Higher RPN's represent more risk to the project.

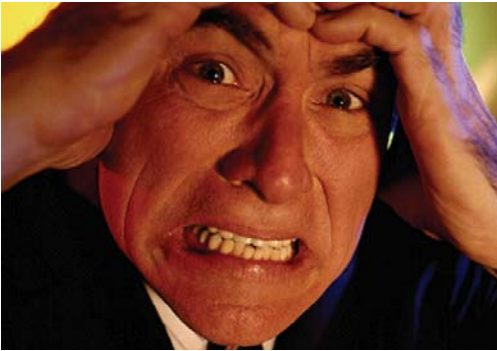
So some of the best ways to address risk are:

- Anticipate it by envisioning alternative scenarios
- Listen for early indications of abnormalities
- Respond quickly to minimize damage

## Step #9 Avoid Analysis Paralysis

When a project starts off too slowly (as is more likely to happen than starting too fast), it's often because of analysis paralysis. Over-analyzing the situation, the team never moves the project forward. They simply bog down in the analysis. It is a trap to assume you must collect all the data on all aspects of the project. This often leads to delays and cost over-runs. We've seen this trap befall project teams frequently. Teams should be judicious in their data collection and be wary of "analysis paralysis." It is a good first step during the Alignment (Step #4) to decide just what data is important and what you can ignore. To determine the relevance of particular data, ask two, similar questions:

- "How is this information going to help me address my project purpose?"



- "Will this information lead to identifying, selecting, and implementing a project solution?"

There also are many other reasons why a project might go slowly: an aversion to risk, a team with an overly developed attention to detail, internal politics and approvals, lack of internal resources, or even personal likes and dislikes (people like doing things they are good at). Any of these can play a role.

The key is for the project manager to recognize this and take corrective action. The team should be asking itself, "Are we analyzing only the data necessary to answer the questions that pertain to us achieving our project purpose?"

So how fast should you go? How fast can you go? If the leader moves too quickly, people feel left out and proper due diligence doesn't get done. If the team moves too slowly, the project can stagnate and the costs rise. The management team has to use experience to judge how fast is just right.

## Step #10 Control Scope Changes

Of all the project control tools presented, scope change control may be the most important, especially to the financial impact and schedule of a project. The project's scope of work drives all the work tasks that the team must perform. Many projects start with "fuzzy" scopes of work, which lead to "scope creep." The project charter and detailed project plan (Steps #3 and #5) are two tools used to turn fuzzy scopes into clear work plans. Below are some of the tools to successfully control project changes:

- Break the project into manageable phases or subprojects. A project phase should be a specific length of time to ensure the project team has end targets. The easiest way to control scope is to control the number of hours (and people) that can charge to a project.
- Insist that each phase be given a fixed price estimate. If the team can't determine a fixed price, then break the project into even smaller phases. At some point, the project plan will be defined well enough to reduce the risk of change.
- Review each phase as a separate deliverable. Many projects keep moving forward without ensuring that they are generating value. Formal reviews allow the project team to ensure that they are managing and completing the scope of work. The team should review the original project charter and project plans at the conclusion of each phase.
- Create a formal scope change control document that project managers review at key meetings. If this document gets too long, the project manager should reevaluate the charter and the management techniques the team is using to control the project.



## Conclusions

Every project should start with a solid economic justification. No project is worth an undetermined, large sum of cash (we only wish it were so). So careful planning of the return on investment (ROI) as the project starts, and monitoring of that ROI during the project execution, is an important component of good project management.

Less clear, however, is whether the project will actually deliver that value. Validating the value of the project's worth is (or should be) an ongoing effort to ensure that the company is getting what it is expecting and what it is paying for. Operations Associates has found that typical projects focus on one of the following value goals:

- Reduced Costs
- Reduced Inventory / Increased Turns
- Improved Capacity
- Improved Customer Service
- Reduced Order Lead Time
- Improved Quality (Products, Data, etc.)
- Improved Safety
- Increased Working Capital Turns

Based on the lessons learned by Operations Associates, through executing nearly 1,000 projects since 1993, the project management best practices that we've outlined in this publication help you with this task of delivering value. These techniques, plus a well-developed technical plan, won't guarantee success, but failing to apply the lessons in this publication will increase the chances for failure. These "soft" and "hard" techniques are a combination of technical considerations, communications tools, organizational planning methods, data collection and analysis approaches, creative thinking, leadership skills, and team building.

Companies often assume that anyone can be a project manager and that it takes few specialized skills. Nothing could be further from the truth. To paraphrase an old saying, "experience and cunning (with good project management tools), will easily win out over youth and exuberance."

Operations Associates wishes you continued success on your projects. If you'd like more information on how we apply project management, or if you'd like us to conduct our one-day seminar on "Advanced Project Management" for your project team, please contact us.

experienced professionals

success-based fees

turn-key responsibility

independent solutions

award-winning customer satisfaction

**Operations Associates**

[www.operationsassociates.com](http://www.operationsassociates.com)

800.860.4902

864.752.2300

PO Box 27135

Greenville, South Carolina 29616

1148 Woodruff Road, Suite 200B

Greenville, South Carolina 29607