A Calculated Gamble

Overcoming resistance to risk management

by Payson Hall

INFO TO GO

This is the first of a two-part series on risk management. Join us next issue when Payson Hall puts theory into practice in "Knowing the Odds."

- All projects are gambles. Turning the gamble into a business choice requires knowledge of all aspects of the project, including risks.

- The "can do" culture of many organizations unintentionally discourages some people from speaking up about possible project pitfalls.

- If you learn a few generic remedies to risks that commonly threaten schedule, scope, and resources, you can prevent many common problems.

READY, FIRE… AIM!!! UNLESS YOU ARE LAUNCHing guided missiles, this is no way to begin an important undertaking. Yet some organizations are so eager to take the shot, they fail to locate the target—they fail to plan. Surprisingly, the most neglected area of planning is risk management.

It's surprising because projects are essentially gambles. An organization wagers X amount of resources to achieve Y result by Z date. When an organization's decision to pursue a project is informed by an understanding of the required investment, the projected benefit, *and the possible risks,* the decision reflects a business choice. When the decision is made without regard to risk, it is a shot in the dark.

Risk Management Glossary

Risks are possible things that could happen during your project, potential events (things that might occur) whose negative effects would adversely impact project success.

Risk Management is a systematic process for risk identification, risk analysis, and risk response planning.

Risk Identification is a process for building a list of project risks.

Risk Analysis is the process of exploring risks on the list, determining and documenting their relative importance.

Risk Response Planning is the development and documentation of actions or reactions proposed to deal with risks.

Effective organizations recognize that bad stuff may happen during a project. Risk management is about anticipating what might happen, examining and prioritizing those possible bad events, and figuring out what to do about them. That sounds simple enough, and in fact it can be pretty straightforward. Be warned though. Cultural barriers can make risk management difficult. Many organizations focus on projected benefits while downplaying project risks and forget a crucial reality: _Any_ project can fail.

Any Project Can Fail

Imagine you are asked to coordinate an office construction project for your company. Armed with blueprints that clearly define the scope of your project, you enter a carefully negotiated contract with a reputable builder, which specifies the cost and schedule targets for the project. You're done, right?

Wrong. Before you finalize your moving plans, spike the ball in the end zone, and do your victory dance, remember that the project is not successfully completed yet. Labor problems, material delays, environmental lawsuits, zoning law changes, human errors, and weather could conceivably conspire to delay construction, increase costs, or bury your project altogether. Your contract may specify costs and dates, but that doesn't guarantee that your office will be ready when specified, that the costs will not change, or that the building constructed will exactly match your specifications. The contract may give you legal recourse, but it doesn't assure you the project will happen as defined. If the potential for disruption is not considered, it will be difficult to make informed decisions about insurance, contingencies, how much you are willing to invest in the project, and when you should plan on being out of your current offices.

Organizations that refuse to acknowledge the possibility that a project may fail deny themselves informed decision-making at the project's outset, and they may miss chances to mitigate risks that might lead to trouble or even failure. Why would an organization resist acknowledging this fact of life?

Purposes of Risk Management

Anticipate and identify areas of project risk

Minimize the impact of identified risks

Reduce the likelihood of identified risks

Monitor risk areas for early detection

Ensure that the sponsor is aware of identified risks and willing to proceed with the project

If the purpose of the activity is clearly presented, it is difficult for rational people to argue that these are not desirable effects.

Misguided Optimism of a "Can Do" Culture

Many organizations launch projects with the unreasonable assumption that they _cannot_ fail to achieve the project's goals. Even when projects are well defined in terms of schedule, scope, and resource goals, it is often not apparent to the projects' sponsors that there are threats and barriers to achieving these goals. Project sponsors, managers, and team members often do not acknowledge risks or the possibility of failure because of organizational blind spots. These blind spots emerge from a prevalent and well-intentioned "can do" culture, which encourages optimism and hard work and discourages (or dismisses) naysayers and negativity.

Unfortunately, it is difficult for many people to talk or think about possible risks to success without feeling that they are being negative. As a consequence, acknowledging risk and potential for failure becomes a blind spot in many organizations. Because the organization is unable to see potential problems, there is frequently little or no interest in risk management. The irony is that discussing risk can inoculate a project against some risk effects.

When I was in paratrooper school, the instructors focused primarily on things that could go wrong during a parachute jump. They communicated expected risks: trees, power lines, rivers, parachute failure, etc. And they drilled us in appropriate responses to these risks _while we were still on the ground._ Since we had drilled for it, we were better prepared to react if something did go wrong while we were falling from the sky. Waiting for your parachute to fail before considering an effective response is a fatal approach to parachuting. Waiting for your project to fail before considering an effective response is a fatal approach to project management. Yet while it's easy to see the importance of risk planning before you jump out of an airplane, many organizations stubbornly ignore the possibility that a project might not go as imagined.

Organizational taboos against failure ("Failure is NOT an option!") can present an even bigger barrier. In organizations with a taboo against failure, communicating information that may even _intimate_ the possibility of failure is consciously or unconsciously discouraged—and ultimately unsafe. This leaves the project team unprepared for risks and

also creates an environment in which problems are not communicated when they *do* begin to surface, but instead are ignored. Delayed communication about problems decreases the likelihood they can be dealt with effectively before they seriously damage the project.

If you suspect blind spots or taboos in your organization, you will need to introduce risk management gently and on a small scale. Focus on the importance of risk management activities, armed with the unwavering awareness that risk happens.

Start at the Beginning

While risk management is integral to other project management processes, some preliminary progress must be made on project definition and planning to provide input to risk analysis. As a precursor to your risk management efforts, you'll need to do some homework. Obtain the essential foundation documents for your project. If they don't exist or are inadequate, the risks are fundamental (see Table 1).

With these documents in hand, how-

DOCUMENT	RISK IF DOCUMENT ABSENT/INADEQUATE
A sponsor-approved *charter* or some other definition document that outlines your project's ■ Schedule ■ Scope ■ Resource Goals (the budget and schedule targets, NOT the estimates)	We don't have an agreed-upon definition of what is desired, when it is desired, or our budget to achieve the desired result.
A preliminary project plan document that clearly describes ■ Work Steps—the project tasks ■ Dependencies—the sequence of those tasks ■ Schedule—when the tasks are expected to occur and how long they will take ■ Budget—the estimated resource requirements	We don't have credible plans that suggest the project is doable within the allocated schedule with the resources available to us.
A documented list of assumptions about the project. Assumptions are declarative statements, which are placeholders for truths that are not yet known. For example: "We assume that it will be sunny on the day of the picnic."	We have not documented our assumptions. Some of them are probably inconsistent and wrong. We won't know until they bite us.
A list of the core team who will be working on the project and are qualified to do the work.	We aren't sure we have the staff required to plan and execute this project.

Table 1: Foundation documents are as important to your project as blueprints are to building a house.

REMEDIES FOR SCOPE RISKS	REMEDIES FOR SCHEDULE RISKS	REMEDIES FOR RESOURCES RISKS
To make early detection easier, decompose complex tasks into smaller tasks with clearly defined work products and quality gates.	Add contingency time (lags) to the schedule at key points on the critical path to act as a "shock absorber" to dampen normal schedule fluctuations.	Review back-up procedures. Back up software and data regularly and comprehensively. Attempt to restore from back-ups periodically.
Shift tasks that use new tools or techniques to occur earlier in the project. Early experience allows earlier detection of problems and refinement of processes.	Consider duplicate parallel activities for high-risk schedule tasks. For example, transmit a proposal prior to a submission deadline by sending two sets of proposals via two couriers using different routes.	Identify alternative sources. Split large orders between two vendors. If one vendor runs into trouble, the other may still provide half of what you need. It may get you better customer service, too.
Acknowledge the risk of deferring defect detection. Build in tasks for early reviews and testing of key work products.	Break high-risk tasks into smaller pieces that provide early feedback if they are not completed on time.	Assign each team member a "buddy" responsible for fulfilling his or her role in the event of a short-term absence.
Recommend trimming borderline functions *early*. If you can't eliminate or defer a risky component, prototype it as soon as possible to provide early warning of trouble and increased options.	Consider swapping resources so that your most skilled team members work on critical-path tasks. This decreases the potential variability introduced by learning curves or lack of experience.	Establish a budget contingency. If you can, set aside some portion (~10%) of the budget for unanticipated tasks and expenses, rather than fully committing all assigned resources.
If a particular function or feature represents a disproportionate amount of risk, negotiate that component to a subsequent version of the system, or defer implementation of that component (if possible) until other components are successfully completed and integrated.	Review estimates and definitions of critical-path tasks. If one item on the critical path slips, all subsequent items come under pressure. Identifying potential problems early can allow reassignment of resources or reconsideration of approach.	Build/buy spares. If you need one hundred workstations, consider ordering an extra two or three and having them configured at the same time. Hot spares can facilitate adding new staff and recovering quickly from equipment failure.
Set reasonable expectations and plan to meet them. Unrealistic goals are the biggest source of project risk.	Look for external dependencies along the critical path (e.g., computer components to be received). Explore paying to expedite delivery to relieve schedule pressure.	Consider bringing in outside experts to assist with complex tasks and mentor your staff early in the project.

Table 2: Some risks are common to most projects. Here are a few tried-and-true remedies for project risks.

ever, you have the raw materials necessary to begin reviewing your project for likely risks. Next, you will need some support from your organization.

Inform project sponsors and team members about your desire to consciously manage risk:

■ It provides an opportunity to remind sponsors that there are risks.

■ It establishes a necessary foundation for later sponsor discussion of possible responses to risks.

■ It makes a small step toward legitimizing risk management as a standard project practice.

■ It scores you some brownie points for taking the initiative of trying to manage your projects better.

■ It gives your team a chance to adjust to the idea of thinking and openly talking about risk.

In practice, this can be as simple as suggesting to the sponsor and team that you just read a fascinating and provocative article about risk management, and that you would like to try an experiment by investing an afternoon identifying, analyzing, and discussing possible responses to risks. Tell the sponsor that you'll share the outcome with him/her. At this stage don't try to "sell" the idea—in fact you might want to express your own skepticism. You may simply suggest that the concept looked interesting, and you want to try it out to observe the benefits and see what can be learned.

Common Risks and Remedies

Risks come in a variety of flavors and colors. Some may be unique to the technology, team, or customers for your systems, and these will require special consideration. (My upcoming article in the March/April issue of *STQE* will provide more information on identifying and mitigating risk.) Many risks, however, are common and might be encountered in slightly different forms on many projects. When risk events occur, they generally threaten one or more aspects of the "triple constraint" that defines your project: scope, schedule, and resources.

Scope is what you are trying to accomplish. Scope risks include failure to successfully perform a specific task or more pervasive issues of quality, performance, reliability, and compliance with applicable regulation or policy. Tasks whose work product's failure to comply with specifications or whose failure to achieve defined outcomes would substantially harm the project are sources of scope risk.

Schedule is when significant events are desired to occur. Schedule risks tend to be found among tasks on the project's critical path, the tasks with the least amount of "slack" or forgiveness if they start late or exceed their schedule estimates. Review the definitions, estimates, and resource requirements of critical-path tasks to identify potential schedule risks.

Resources are the people, money, and materials needed to complete the project. Tasks that consume hard-to-get or large amounts of resources (people, money, or materials) are sources of resource risks.

That's All…for Now

Now you have some background information on risk management. I have shown you the potential value. I have also shown you why risk management can be challenging to implement in some environments. You may have decided that, despite the difficulties involved, you are ready to begin analyzing the risks for a project, but you don't know how to get started. You're in luck. In the next issue, I will offer another article about risk entitled "Knowing the Odds" that you can use to identify and mitigate specific risks on your project. In it we'll look at a practical process you and your team can use to perform basic risk identification, analysis, and mitigation in a single afternoon. STQE

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