Using Risk Management on Projects

The widespread occurrence of risk in life, business, and projects has encouraged proactive attempts to manage risk and its effects. History as far back as Noah’s Ark, the pyramids of Egypt, and the Herodian Temple shows evidence of planning techniques that include contingency for unforeseen events. Modern concepts of probability arose in the 17th century from pioneering work by Pascal and his contemporaries, leading to an improved understanding of the nature of risk and a more structured approach to its management.

Without covering the historical application of risk management in detail here, clearly those responsible for major projects have always recognized the potentially disruptive influence of uncertainty, and they have sought to minimize its effect on achievement of project objectives.

Recently, risk management has become an accepted part of project management, included as one of the key knowledge areas in the various bodies of project management knowledge and as one of the expected competencies of project management practitioners. Unfortunately, embedding risk management within project management leads some to consider it as “just another project management technique,” with the implication that its use is optional, and appropriate only for large, complex, or innovative projects. Others view risk management as the latest transient management fad. These attitudes often result in risk management being applied without full commitment or attention, and are at least partly responsible for the failure of risk management to deliver the promised benefits.

To be fully effective, risk management must be closely integrated into the overall project management process. It must not be seen as optional, or applied sporadically only on particular projects. Risk management must be *built in, not bolted on* if it is to assist organizations in achieving their objectives.

Built-in risk management has two key characteristics:

• First, project management decisions are made with an understanding of the risks involved. This understanding includes the full range of project management activities, such as scope definition, pricing/budgeting, value management, scheduling, resourcing, cost estimating, quality management, change control, and post-project review. These must take full account of the risks affecting the project, giving the project a risk-based plan with the best likelihood of being met.

• Secondly, the risk management process must be integrated with other project management processes. Not only must these processes use risk data, but there should also be a seamless interface across process boundaries. This has implications for the project toolset and infrastructure, as well as for project procedures.

Benefits of Effective Risk Management

Risk management implemented holistically, as a fully integral part of the project management process, should deliver benefits. Empirical research by Terry Cooke-Davies, gathering project performance data from benchmarking networks of major organizations across a variety of industries, shows that risk management is the single most influential factor in project success. Where risk management is well implemented, more projects meet their objectives (using a composite performance measure for schedule and cost, projects in organizations reporting “fully adequate” risk management completed on average at 95 percent of plan). Where risk management is poor, projects fail more often (projects where risk management was rated “not at all adequate” averaged 170 percent of plan). These conclusions are based on detailed examination of characteristics describing risk management approach and deployment. Figure 1-2 presents typical data (in this case for documenting organizational risk management responsibilities in the project). Unfortunately, despite indications that risk management is very influential in project success, the same research found that risk management is the lowest scoring of all project management techniques in terms of effective deployment and use, suggesting that although many organizations recognize that risk management matters, they are not implementing it effectively. As a result, projects still fail, businesses still struggle, too many foreseeable downside threat-risks turn into real issues or problems, and too many achievable upside opportunity-risks are missed. There is clearly nothing wrong with risk management in principle. The concepts are clear, the process is well defined, proven techniques exist, tools are widely available to support the process, and there are many training courses to develop risk management knowledge and skills.

So where is the problem? If it is not in the theory of risk management, it must be in the practice. Despite the huge promise held out by risk management to increase the likelihood of project and business success by allowing uncertainty and its effects to be managed proactively, the reality is different.

The problem is not a lack of understanding the “why, what, who, or when” of risk management.

Lack of effectiveness comes most often from not knowing “how to.” Project managers and their teams face a bewildering array of risk management standards, procedures, techniques, tools, books, training courses—all claiming to make risk management work—which raises the questions: How to do it? Which method to follow? Which techniques to use? Which supporting tools?

The main aim of this book is to offer clear guidance on “how to” do risk management in practice. The next chapter discusses common barriers to risk management effectiveness and introduces a number of Critical Success Factors to overcome these barriers. This leads into Chapter 3, which outlines Active Threat and Opportunity Management (ATOM)—a generic risk management methodology, applicable to any type of project of any size in any industry.

Implementation of ATOM for the typical project is described in Part II, where each step in the risk process is presented with sufficient detail to make implementation as easy as possible without oversimplifying. Techniques are explained step by step, with underlying theory where appropriate and relevant, and useful templates are contained in two appendices. Of course not all projects are typical, so ATOM is scalable to fit both the simple and the more complex project. Part III of this book explains how to tailor the generic risk process to both small and large projects to ensure that the process meets the specific risk challenge, as well as discussing how ATOM for projects interfaces with the wider program context.

Undoubtedly risk management has much to offer to both businesses and projects. People following the approach in this book will discover how to capture those promises for themselves, their projects, and their business.

Why Don’t We Do It?

Most people would agree that risk management should be useful. If this is true, why is it not more widely used? Some of the more frequently cited reasons or excuses are listed in Figure 2-2 and described in the following paragraphs.

The risk process takes time and money

Risk management is not a passive activity, and there is a cost associated with executing the upfront risk process—the cost of *assessing risk.* Risk management requires involvement of the project sponsor, project manager, members of the project team, and other stakeholders over and above what some would consider their normal level of commitment to the project. This causes a double problem: finding time for the risk process in an already overloaded working environment is difficult; and even when time is found, the risk process costs money, as effort is spent in risk workshops and review meetings.

Risk responses cost money

A central purpose of the risk process is to identify risks and determine appropriate responses, which inevitably results in the need to do new and unplanned things. This introduces a second type of cost to the risk process: the cost of *addressing risk.* Risk responses are in reality new project activities that were not originally considered necessary. Because risk responses were not included in the original project scope, they add to the resource requirement and budget. As a result, risk management adds to the project workload while at the same time increasing the required budget.

Risk management doesn’t work for us

Although risk management is not difficult, many people have unfortunately experienced it being applied ineffectively, leading them to believe that risk management doesn’t work. This situation often arises when risk management is performed without proper commitment, perhaps by organizations merely complying with a regulatory, contractual, or procedural requirement.

Risk management is just scaremongering

Until recently, risk management was commonly concerned only with threats. As a result the risk process focused only on the bad things that might occur, examining every possible cause of failure, and listing every potential problem. This can demotivate and create a sense of doom for the project team, which believes that the project cannot succeed given the number of identified negative risks. This can also affect senior management, project sponsors, and customers, who might believe that the project team is merely scaremongering, raising potential problems that might never happen, possibly trying to engender sympathy, or maybe even paving the way for project failure.

Managing issues is more fun and rewarding

Some believe that dealing with issues, problems, or even crises is more interesting and rewarding. Individuals might gain considerable satisfaction from solving a problem, especially if it’s a big one, even if it could have been prevented by proactive risk management. In addition, many organizations reward those macho project managers who successfully resolve a major crisis and then deliver their project in line with its objectives. By contrast, the project manager who has avoided all problems by effectively applying risk management is often ignored, with the implication that “it must have been an easy project because nothing went wrong.”

It’s too late to carry out risk management

Some projects simply involve implementing predefined solutions in which all key objectives (time, cost, and quality) are pre-agreed and unchangeable. Where this is true, the project manager might see little point in taking time to identify risks that require additional work and more money to manage, when neither more resources nor more budget will be made available because the objectives are fixed and agreed upon in advance. The risk process might even reveal that achieving the agreed-upon project objectives is impossible—an “unacceptable” conclusion. Although many would say that part of the purpose of risk management is to expose unachievable objectives, in reality this could put the project manager in a difficult position and could result in statements like, “Don’t give me problems, just give me solutions,” or “Stop complaining, just do it.”

I’m too busy dealing with issues

When projects are badly planned in the first place, issues and problems will quickly arise that can dominate the project’s day-to-day management. In these situations, project managers easily become consumed with the “now” problems and find it difficult, if not impossible, to worry about potential future events, even though identifying and proactively managing them would clearly be beneficial to the project. Frequently the result is that risk management never even gets started.

It’s just common sense

Everyone looks both ways when they cross the road, don’t they? Nobody would ever consider climbing a mountain without ropes, would they? The majority of people should surely carry out risk management on a day-to-day basis; it’s just common sense. If this is true, then we should expect that risk management will be applied intuitively to all projects, and that project managers will always do it without needing a formal or structured risk process.

We can’t prove that risk management works

Some risks that are identified never materialize, and as a result some people think that considering things that might not happen is just a waste of time. In addition, it is difficult to prove that risk management is working on a project because there is never an identical project that can be run without risk management as a control. And where the risk process only addresses threats, successful risk management means nothing happens! Since it is impossible to prove a negative, the absence of unusual problems cannot be firmly linked with the use of risk management— the project team might just have been lucky that no problems occurred.

Turning Negatives into Positives

Each of the excuses described above represents a potential barrier to implementing effective risk management. Where project stakeholders hold these views, it is important to address their concerns, correct their misperceptions, and allay their fears so that they can engage with the risk process and make it work. The following paragraphs outline possible approaches to deal with each point (summarized in Figure 2-2).

The risk process takes time and money

Implementing risk management does take time and does cost money. However, when applied properly, risk management actually saves time, saves money, and produces outputs of the required quality. The argument is similar to that supporting the use of quality procedures in project management, where proactive attention to potential problems ensures the best possible results by reducing wasted effort and materials caused by rework or solving problems.

Risk responses cost money

The cost of implementing new activities in order to manage risks is a fundamental part of applying the risk process. Failing to respond to risks through planned response activities means that risks will go unmanaged, the risk exposure will not change, and the risk management process will not be effective. The cost of risk responses should be seen as an investment in the project’s success—“spending to save.” A similar argument exists for the cost of quality, where rework or fixing noncompliances is recognized as being more expensive than doing the job right the first time. Equally for risk management, addressing a threat proactively usually costs less than it does to resolve a problem when it happens. And addressing an opportunity is clearly more cost-effective than missing a potential benefit.

Risk management doesn’t work for us

Ineffective or badly applied risk management can cause more problems than it solves. Where this is the case, measures must be put in place to make the risk management process more effective, perhaps by training project team members or improving risk processes. Once these changes have been made, then the organization must ensure proper application of the changed ways of working. If the excuse that “risk management doesn’t work” is based on poor practice, the answer is to do it properly and it will work. Sometimes the belief that risk management is not applicable or helpful arises from a view that “our projects are different,” a feeling that risk management might work for others but “it doesn’t work for us.” Here, a pilot project can be particularly useful in demonstrating the benefits of doing it properly on a real project.

Risk management is just scaremongering

Overemphasis on identifying every potential threat to the project can be overcome in two ways. The best solution is to ensure that the risk process also proactively identifies and addresses upside risks (opportunities) that counteract the threats. This also helps the project stakeholders realize that the project is not all “doom and gloom,” and that things might get better as well as worse. The second part of the answer is to ensure that identified threats really do matter. Often many so-called threats may have little or no impact on the project, or might not even be risks at all. And of course where threats are identified that really could affect the project adversely, effective responses must be developed to reduce the risk exposure. The answer to the charge that risk management is merely scaremongering is to ensure that the risk assessment is realistic and presents genuine threats and opportunities together with appropriate responses.

Managing issues is more fun and rewarding

It is undoubtedly stimulating to tackle problems and crises, and it is right for organizations to reward the staff who have the skills to rescue troubled projects. However, the reward scheme should not incentivize macho behavior at the expense of prudent risk management. Organizations should also find ways to reward project managers who successfully manage the risks on their project. This may be through the creation of key performance indicators (KPIs) that measure the effectiveness of the risk process, linked to a risk-based bonus. One KPI related to effective risk management might be the number of issues that arise during the project: the greater the number of issues, the less effectively the risk management process has been applied.

It’s too late to carry out risk management

The reality is it’s never too late, because failing to identify risks doesn’t make them go away; a risk identified is a risk that can be managed. Failing to identify and manage risks means that projects are taking risks blindfolded, leading to a higher number of problems and issues, and more missed opportunities. Even where project objectives are presented as “fixed,” this does not guarantee that they are achievable, and the aim of the risk process is to maximize the chances of achieving objectives.

I’m too busy dealing with issues

This excuse can become a self-fulfilling prophecy. If risk management never starts, then more issues will arise that require immediate attention, reinforcing the problem. This downward spiral must be nipped in the bud. Making risk management mandatory might solve the problem, though there is a danger that imposing a risk process will result in project teams only paying lip service to it. A better strategy is to make a convincing argument that risk management is actually good for the project, and that carrying it out will prevent further issues and make life easier.

It’s just common sense

The problem with common sense is that it’s not very common. Risk management cannot be left to intuition because the stakes are too high. Of course, some people are very good at managing risk intuitively, and these individuals might be able to trust their common sense instead of following a structured approach to risk management. However, most people require some assistance in taking the necessary steps to identify and manage risk effectively. For the majority, having a framework within which to conduct the risk process is both helpful and necessary. A structured approach to risk management helps everyone do what the best practitioners do intuitively.

We can’t prove that risk management works

This excuse might exist where the risk process is focused entirely on threats, since it is difficult to prove unambiguously that an absence of problems resulted from successful risk management.

However, when the risk process also addresses upside risks (opportunities), a successful risk process results in measurable additional benefits, including saved time, reduced cost, and reduced rework. We recommend a broad approach to risk management covering both threats and opportunities; where this is implemented, evidence that risk management works can be gathered. It should also be recognized that risk management delivers a range of “soft” benefits in addition to those that are directly measurable, as reflected in Figure 2-3, which presents “hard” and “soft” benefits of risk management as listed in the *APM PRAM Guide*. Many of these benefits offer demonstrable proof of risk management’s value to an organization and its projects. Finally, evidence can be sought from either within the organization or other similar organizations by reviewing case studies of successful projects where the results are attributed to effective risk management.