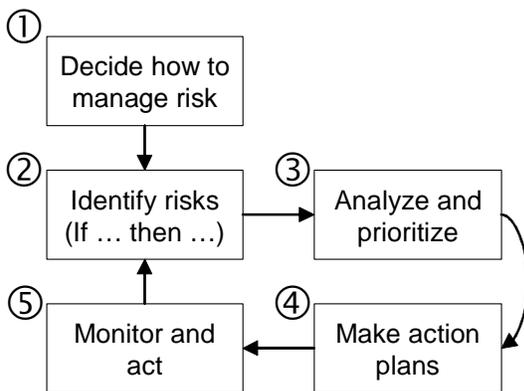


Mastering Projects Series  
**Advanced Risk Management**

**Traditional Risk Management Is Not Enough**

Project managers have honed risk management techniques for decades. These tried and true approaches save many projects from disaster, but are increasingly challenged by the turbulence and rapid rate of change surrounding modern projects. In a previous article, I described tips for applying the five steps of traditional risk management (figure 1). In this article, I look at eight advanced risk management approaches that you can use in these



**Figure 1: Traditional Risk Management Process** challenging new environments.

**Advanced Risk Management Techniques for Your Toolbox**

**1 Change your mindset.** For turbulent projects, risk management is job #1, not just one more project management process among many. Continuous risk management is the philosophy that drives everything else. Preston Smith

calls this “intrinsic risk management” – the project team weaves it into everything they do. Here’s an example of this philosophy: the first item on the agenda of *every* project team meeting is a review of risks.

In traditional risk management, the project team does risk identification and action planning once in the

All project management is risk management.  
*Eric Verzuh*

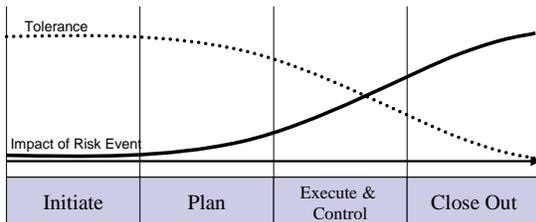
planning phase, perhaps with several updates after that. With intrinsic risk management, they look at risks every day! Using a risk list becomes as ingrained as writing a personal daily to-do list.

**2 Make projects short.** Research shows clearly that long projects have a disproportionately high failure rate. To reduce risk, break big projects into smaller, shorter projects. This may seem obvious, but it is extremely effective at reducing risk. One CIO I know refuses to approve any project that is forecast to take longer than 3 months. Longer projects must be broken into a series of smaller projects, each standing alone and delivering real value to the customer.

**3 Use rolling wave planning to stay agile.** Some projects can’t be broken into smaller, independent projects. However, making upfront detailed plans that cover the *entire* project may be inefficient and give a false sense of security. In turbulent environments, the future beyond a short horizon is just too fuzzy to plan with

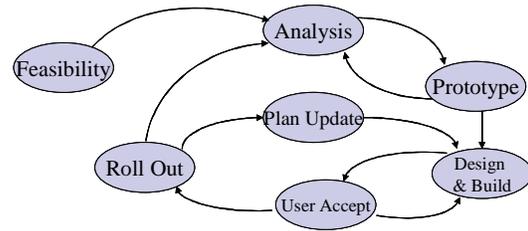
great accuracy. The rolling wave approach recognizes that giving up planning entirely would lead to disaster, but the level of planning detail should correspond to the amount of certainty about each phase of the project. To use rolling waves, start by creating a plan that covers the entire project, but add a crucial twist: make near term plans very detailed, but plan for the later portions of the project at a higher level. As the project moves forward, move the detailed planning window forward, too. Rolling wave is one of the earliest agile planning approaches, described by F.L. Harrison in 1981.

**4 Front load risk.** The cost of risk varies throughout the project. Usually risk tolerance is highest early in the project because you have less invested and more “runway” to make corrections. Take advantage of this by doing the riskiest, most investigational tasks early in the project.



**5 Go in circles with iterative project management.** Change is inevitable, and can even be a competitive advantage for those organizations that react quickly to it. Iterative frameworks keep projects flexible by breaking them into many loops of short planning and execution iterations. Unlike waterfall lifecycles, projects that use an iterative approach can change direction quickly. They also get the added advantage of frequent customer feedback on whether the

project’s direction is correct. Many software development teams use iterative frameworks such as RUP, Scrum, XP, and Evo with great results.



**6 Get honest with prototyping.** Paper designs that haven’t yet been “reduced to practice” harbor many nasty surprises. Reduce this risk by turning paper designs into real prototypes as quickly as possible. Software developers call this “the honesty of working software.” Prototyping is most obvious for projects that are creating a physical deliverable, such as a new machine, but you don’t get off the hook if you’re creating something non-physical. Use tools such as simulations or user interface mockups. Almost anything can be prototyped physically or virtually – get creative!

Prototyping reduces risk in two ways.

1. Prototypes give customers something to “touch and see” early in the project. Customers often don’t really know what they want until they see something. Prototypes elicit their real requirements early, reducing late changes to requirements.
2. Prototypes force project teams to grapple early with the bothersome realities of actually making ideas work. This is always harder than it seems, so prototyping front-loads a major source of risk.

**7 Defer decisions.** At first, this seems to run counter to front-loading risks. Indeed, waiting too long to make important decisions can stall projects and throw them into confusion. However, making decisions too early in a rapidly changing environment has an insidious consequence. You may paint yourself unnecessarily into a corner when things change. Paradoxically, you must make some decisions as early as possible to give the project stable anchor points, but defer others until the last possible moment to retain maximum flexibility in changing conditions. This can be difficult for technical professionals and project managers, who are usually trained to converge on solutions by methodically and rapidly eliminating options.

**8 Change the architecture.** The previous seven tips focused on the project management process itself. However, risks may lurk in the very design of what the project is creating. For example, the design you select for your IT applications may make future changes very difficult and costly. Your architecture is *inflexible*. An inflexible architecture in a rapidly changing world means that you will incur dangerous delays and costs whenever requirements, needs, or technologies inevitably change. Therefore, reduce project risk by creating an architecture that has built in flexibility. These design approaches are known as modular or platform design techniques. They

concentrate on modularity, interchangeability, and robust interfaces. They are powerful ways to reduce risk and can also improve inventory management, reduce product costs, and increase maintainability.

## Conclusion

The traditional risk management process in figure 1 is still a valuable tool. Supplement it by adding these eight advanced techniques to your toolbox so you will be prepared when turbulence and change overwhelm the traditional risk management process.

## References and Reading

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