

## **Project Management at the Edge – by Jim Highsmith**

Today, the IT project manager must withstand the din of noise from every business and technology magazine blaring out that e-business, e-commerce, and the Internet are causing massive change in the business world. Project managers are called upon to deliver results, while battling this turmoil and uncertainty. But even while many organizations acknowledge the massive change wrought by Internet technology, they exhibit considerable inertia when it comes to adapting project management practices to accommodate this extreme, high-change, high-speed world.

It's not that traditional project management practices of task monitoring, extensive measurements, repeatable processes, and the like are wrong, but that they are insufficient in extreme environments. Businesses are poised at the edge of history, poised on the cusp of a new era, and the projects that really matter today are distinctly different than those of yesterday—and project managers are key to the transition. Yesterday project managers wrestled with *complicated* projects, today they struggle with *complex* projects, those characterized by high change, high speed, and uncertainty. In the past, certain industries—from computers to biotechnology—have gone through periods of turbulence. In his best-selling book *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, Clayton Christensen points out how traditional management approaches fail in turbulent times. Christensen's studies focus on a single industry. Today, nearly every industry is mutating concurrently—heaping change on top of change. How do project managers survive when projects change as rapidly as a sand dune in a desert sandstorm?

### **The Speculate-Collaborate-Learn Life Cycle**

Peter Senge (*The Fifth Discipline: The Art & Practice of the Learning Organization*) describes how organizational learning depends on understanding the fatal flaw in our mental models, our assumptions about how things work. The “art” part involves when and how we each come to the realization that long-held, ingrained beliefs and practices need revision. Traditional project management approaches are built on the assumption that the desired results of the project are relatively predictable—that things will change, but not significantly—and therefore plans can actually be achieved. Change is tolerated, barely, and controlled. However, in rapidly changing environments, plans are often outdated within weeks. The typical project management cycle of Plan-Deliver-Review, based on an assumption of a relatively stable business environment, becomes overwhelmed by high change.

I offer project managers a somewhat different life cycle, one more geared to accepting continuous change as the norm—Speculate-Collaborate-Learn. The word “plan,” when used in most organizations, indicates a reasonably high degree of certainty about the desired result. If project managers don't achieve “planned” schedule, scope, and cost targets, they are labeled poor performers. The implicit and explicit goal of “making plan” restricts the project manager's ability to steer the results in creative directions. Operating in this mode produces the results you planned for, however, they may not be the results you now need.

“Speculate” (granted my banking clients have a hard time with this one!) gives us more room to explore, to make explicit the realization that we are unsure, to allow us to deviate from plans without fear. It doesn't mean that planning is obsolete, just that planning is acknowledgeably more tenuous than it was in the past. It means we have to keep delivery cycles short and encourage iteration. It means we may need to redefine the meaning of success.

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Speculating admits that we don't know everything. Once we admit to ourselves that we are fallible (note that this is impossible in some organizations), then learning practices become vital for success—the “Learn” part of the life cycle. We have to test our knowledge constantly—using practices like project retrospectives and customer focus groups. Furthermore they should be done after each iterative cycle rather than waiting until the end of the project. The quality of learning derived from practices like project retrospectives provides a key indicator about the true commitment to learning in an organization, and, therefore, a key to its adaptability.

My specialty area is software development. While there is always room for improvement, most developers in ISV and IT organizations are reasonably proficient in analysis, programming, testing, and similar skills. A significant problem, however, is that turbulent environments are in part defined by high rates of information flow and diverse knowledge requirements. Building an e-commerce site requires greater diversity of both technology and business skills and knowledge than the typical IT project of 5-10 years ago. In this high-information flow environment, where a person or a small group can't possibly “know it all”, collaboration skills—working jointly to produce results or make decisions—are paramount. “Collaborate” then becomes the third key to building a more adaptable project management life cycle. Teams must collaborate on technical problems and business requirements. Teams need to improve their joint decision-making ability and more decisions must be delegated to the team level, because rapid change (and tight schedules) precludes traditional Command-Control style decision making.

### **Project Management Skills for the Future**

Extreme projects always balance at the edge of chaos—the idea of being in “control” must be abandoned. If a project manager senses that his or her project environment is relatively stable, then a Plan-Deliver-Review life cycle with its emphasis on efficiency is appropriate. However, if his or her sense is that the environment is unstable and turbulent, then a Speculate-Collaborate-Learn life cycle may be more useful. To implement this approach, project managers will need to hone additional skills—collaboration, improvisation, decision making under uncertainty, experiential judgement, influencing, and innovative problem solving. The era of generating task lists, dutifully checking off their completion, and measuring project success in traditional ways is rapidly passing us by.

### **Bio.**

Jim Highsmith is a Senior Consultant for the Cutter Consortium, Editor of *e-Business Application Delivery*, and author of the recently published *Adaptive Software Development: A Collaborative Approach to Managing Complex Systems* (©2000, Dorset House Publishing). Jim can be reached at [jimh@adaptivesd.com](mailto:jimh@adaptivesd.com).