*Jeff Oltmann on Mastering Projects*
## Ten Tips to Make Change Work for You

### You Can't Avoid Change

Customers change their minds. Competitors zig instead of zagging. Technology advances. Change is constant, and prohibiting it on projects does not work.

In *Flexible Product Development*, Preston Smith asks, "Is a frozen specification simply fiction?" Citing thirteen years of data collection by Donald Reinertsen at Cal Tech, Smith concludes, "It is not that specifications seldom remain constant during development; it is that they never do. The concept of frozen requirements is a complete fiction in the real world." [Smith, p. 13]

You can't prevent changes to your projects, but allowing rampant uncontrolled change dooms projects. Is there solution to this dilemma?

### Make Change Valuable

In *The New Project Management*, J. Davidson Frame points out that change can be valuable. [Frame, p. 48] Companies that react flexibly and quickly can take advantage of market shifts, new technologies, and changing customer desires, giving them an advantage over their slower, less flexible competitors.

To make change valuable, provide two complementary things to your projects:
1. A structure that replaces chaos with explicit decisions about changes
2. Enough flexibility to take advantage of necessary or good changes

In the rest of this article, I share some tips for each of these.

### Just Enough Structure

A minimal change management structure requires three things: a baseline, a simple change control protocol, and excellent stakeholder management skills.

**1** **Baseline**: You must have a clear initial baseline even to begin to manage changes. Without it, you have no basis to detect potential changes, analyze whether the benefit is worth the cost, and negotiate who will pay for what. Document a baseline with clear requirements, specifications, or use cases, as well as a work breakdown structure.

**2** **Change Control Protocol**: This allows you to make well-considered decisions about possible change. It doesn't have to be complicated or burdensome. Figure 1 shows an example protocol that is simple, but sufficient. Don't rubber stamp each change request. Make sure you understand its cost (not necessarily in monetary terms) and its value to the program and business.
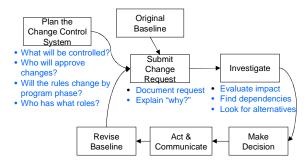


**Figure 1: Change Control Steps**

**3 Great Stakeholder Management Skills**: Most changes have consequences, but stakeholders shy away from the hard tradeoffs that come with managing changes. Manage stakeholder expectations carefully. Use the triple constraint, shown in figure 2, to hold a conversation with your stakeholders about the costs and benefits of proposed changes.

Development Cost
Development Time
Quality
Features

Other Constraints to Consider
• Customer Satisfaction
• Risk

**Figure 2: Triple Constraint**

The tradeoff conversation is often difficult. Pinto and Kharbanda list tradeoff avoidance as one of the twelve biggest ways to make a project fail. They say, "Hard decisions are the perquisite of project management. Uninformed decisions, however, are its bane." [Pinto, p 51] See my earlier column *The Impossible Dream* for more details on having these conversations.

## Sufficient Flexibility

The change management structure discussed above is helpful, but how do you stay flexible?

**4 Roll with the Punches**: The simplest way to increase flexibility is an attitude change. Remember that the plan is not cast in concrete – be prepared to abandon or modify it when changed circumstances dictate.

**5 Divide and Conquer**: Break projects into small chunks, each of which delivers something that demonstrably works. Reassess at the end of each chunk. Is the project still on

the right course? Have critical things changed? What work should be next?

**6 Make Waves**: In turbulent environments, the future beyond a short horizon is just too fuzzy to plan with great accuracy. Use *rolling wave planning* to match the level of planning detail to the amount of certainty about each phase of the program.

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. F.L. Harrison in 1981 first described rolling wave planning in 1981. Since then, it has been incorporated into the iterative and agile approaches that are popular in software projects.

**7 Specify Carefully**: Specify early requirements at a high level, rather than spending energy tying down all of the details. Focus those high-level specifications on desired *results*, rather than on *methods*. For example, HP's original DeskJet printer revolutionized home printing in 1988. The three requirements for it were simply "Laser quality print on plain paper for under $1000," which allowed a breakthrough shift from dot matrix to ink jet technology. A detailed "how-to" spec would have resulted in a mundane product using the same tired old dot-matrix technology.

**8 Anticipate**: Know your customer or user better than they know themselves, so you can anticipate what they need. Smith says, "Seek to anticipate change in the customer environment by finding ways to stay close to your customers and thus

appreciate their trends in using your products." [Smith, p. 55] A variation of this tip is to use early prototypes and mockups to help your customer discover what they really want or need. Anticipation is hard up-front work, but it can pay off in the long term.

**9 Favor Modularity**: Where possible, use a modular product architecture, so you can respond to changes during design rapidly and at low cost, isolating the effects of the changes to one or two modules.

**10 Be Loose and Tight**: According to Melosevic, et al, change management should begin "…as soon as the requirements are developed." [Milosevic, p. 230] However, change management has overhead, both in direct monetary costs and in friction that reduces flexibility and slows projects. Therefore, use "loose" change controls early in the project, when things are changing rapidly. Focus on changes that have the biggest consequences.

As the project progresses, the consequences of ill-advised changes outweigh the additional cost of tighter change control. At this point, tighten up the degree of change control. Tightening may include putting lower level lower details under change control,

and using a formal change control board that involves more people across the organization in the decision process.

## Endpoint

Change is constant and relentless. To succeed, your projects must combine just enough change management structure to prevent chaos, while simultaneously enabling sufficient flexibility to take advantage of valuable changes. Recently one of my students offered this memorable summary: "Semper Gumby – always be flexible, but never break."

## Further Reading

An archive of previous articles is at
http://www.spspro.com//resrouces.htm

[Smith] Preston Smith, *Flexible Product Development*, Jossey-Bass, 2007

[Frame] J. Davidson Frame, *The New Project Management, 2nd ed*, Jossey-Bass, 2002

[Pinto] Jeffrey Pinto and Om Kharbanda*, How to Fail in Project Management (Without Really Trying)*, Business Horizons, July-August 1996

[Milosevic] Milosevic, Martinelli, and Waddell, *Program Management for Improved Business Results*, Wiley, 2007

## About the Author

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