Chapter XII
Enhancing Flexibility in Dispersed Product Development Teams

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ABSTRACT

Highly creative product development teams are exploring the unknown. Initial plans are likely to change as they understand better how the customer will use the product they are developing, as competitive products appear, and as new technologies evolve. Thus, a creative team must remain open to change as its plans shift. If the team is dispersed (virtual), the complications of dealing with changes in plans magnify. This chapter provides tools and approaches for being flexible to such changes as creative teams proceed. These include ways of lowering the cost of change, anticipating change, isolating change, and maintaining options as late as possible. Such tools and approaches will help teams working on highly creative projects to take advantage of their creativity, even when they are dispersed over time and distance.

INTRODUCTION

Dispersed[1] product development teams have become increasingly popular over the past decade, especially with large multinational companies. In many cases, these teams span multiple continents and time zones. In order to maintain control over such a far-flung organization, management generally imposes procedures and plans so that all parts of the team remain focused on a common objective.

While they clearly have their strengths, such procedures and plans can undercut creativity. They encourage heavy upfront planning and reward sticking to plan. In contrast, creativity requires experimenting, trying things out, and adjusting as better solutions appear. In short, dispersed teams are easiest to manage when they can execute their original plans without change, but creativity requires change.

This chapter addresses this paradox by introducing the notion of flexibility in dispersed teams

and by showing how one can enhance the flexibility of a team to deal effectively with change.

Creative product development teams need the flexibility to be able to explore options and make changes, even late in the development cycle. Unfortunately, such flexibility is difficult to achieve, especially for dispersed teams. This chapter will explore flexibility and offer flexibility-enhancing tools aimed at teams spread across various locations.

What Flexibility is and Why it is Important

Flexibility is the ability to make changes relatively late in a project without being too disruptive. The later one can make changes or the less disruptive they are, the more flexible the process is. One usually measures disruption in terms of the money, labor, or time lost in making the change. See Figure 1, in which, after the initial planning period, the restricted flexibility level locks too much down too early, but the completely flexible level leads to chaos at the end of the project. Thus, the rate of convergence must be managed consciously throughout, as shown in the moderately flexible level.

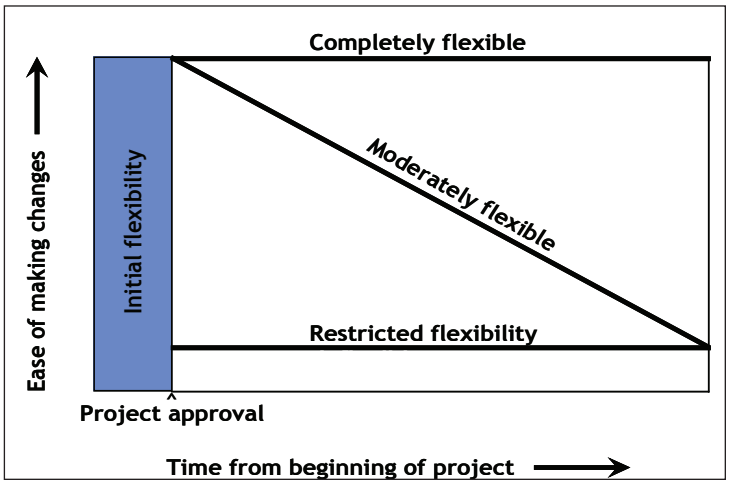
Change can appear in many forms. A common one in product development is a change in product requirements, which may occur because the developers neglected to identify a requirement earlier, because feedback from prototypes or market research has uncovered a new requirement, or because a competitor has just offered new functionality. Technical change is another source, and it can occur when a new technology appears, when the capabilities of a technology expand, or when developers discover weaknesses or limitations in a technology that they are planning to use.

Flexibility is important because the essence of product innovation is change, as discussed below. Productive innovation benefits from change, and inhibiting change stymies innovation.

Flexibility and Creativity

Product development is the creation of something that has not existed before, and as one pursues this creative act, unplanned changes will occur. Creativity involves generating, assessing, and choosing among options. Creative professionals are trained to generate many options without

Figure 1. Three levels of managing flexibility in a development project (Source: 2007 by John Wiley & Sons; used with permission)



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