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Flexible Project Management: Enabling a Flexible Team
Part II of four in a series of articles on flexible project management

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Broadening Agile

A gile software development—and agile project management—is a popular topic among project managers today, as it allows them to deal with the inevitable changes that occur in the middle of a project.   But how do agile techniques apply to non-software projects?   This is the second article in a series that explores that question.

Agile techniques are ideally suited to software development projects. But if your project is in another domain, agile is likely to be frustrating, because agile software techniques exploit characteristics, such as object technologies, that are unique to the software medium. Agile software techniques do not translate directly to other domains. Instead, people who lead non-software projects must understand how agile creates the flexibility to accommodate mid-project change, and then build a new system employing these principles.

In the first article in this series, "Agile Isn't Just for Software", we started building this new system.   We described the importance of iteration—rather than a strictly sequential process—for maintaining flexibility in a turbulent environment, and we provided many opportunities for incorporating iteration into your project.

This second article addresses another essential facet of project flexibility: the people factors. Two future articles will look at how to create a flexible project environment and toolbox.
- "Creating a Flexible Environment" – how to decide when the benefits of flexibility are worth its additional cost, and how decision-making affects flexibility
- "Building a Flexibility Toolbox" – how project managers can flexibly plan projects and manage risks

People are Number One

You have heard before that people are the most important factor in a project, but this is so essential that we would like to provide some compelling evidence for the criticality of people. The figure below draws upon data compiled by Barry Boehm for computing the

multiplier on project effort for developing a piece of software. For example, the variation in effort can range from 1 to 33 person-months depending on the people assigned to the project, but only from 1 to 10 person-months for variations in factors related to the product being developed, for instance, its complexity, the reliability level required, and the rigidity of the product's requirements.
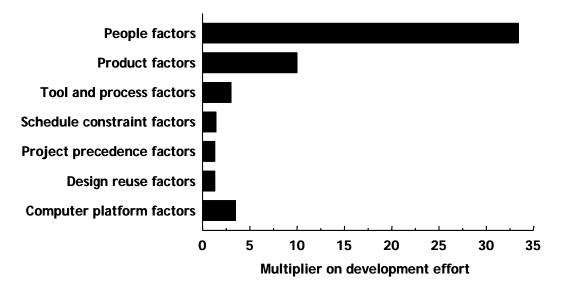

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To improve flexibility through this human element, concentrate on two items:

1. Use people who are experienced and comfortable with a turbulent environment.
2. Improve and speed up communication within the team.

People who are comfortable with change are not flustered when one change piles upon another. Because events change so quickly on a project exposed to turbulence, your communication channels must be up to handling the heavier communication burden or the project will bog down with misinformation.

If you are an experienced project manager, you probably already know how to achieve these two objectives, so below we provide some additional techniques that you may not have considered yet.

The Right People

Some people are comfortable walking on unstable ground and some aren't, which is partly due to personal style. Some thrive under the excitement of constant change while others are uncomfortable with it, seeking the refuge of a plan and structure. Clearly, those who need stability in order to proceed will be ill suited to a changing environment and this should be recognized upfront by both them and the project manager.

However, there is an experience factor involved, too. Alistair Cockburn, a leader in the agile software world, has identified three categories, which he calls "mastery levels":

- **Level 1: Following.** These people are able to and are comfortable with following a single specified method. They do not have the confidence or inclination to vary from this method or to choose between methods.

- **Level 2: Detaching.** They have seen the approach of Level 1 fail enough times to know that it is not always the best way to go. Thus, they are capable of pulling away to some degree and considering multiple specified methods, but they still need a framework to follow.

- **Level 3: Fluent.** These folks have been around enough changing environments that they are able and willing to improvise and adjust to building what is needed without reference to a provided structure. In fact, they may become bored and do poorly if required to follow a specified plan.

Level 3 people are a scarce resource and should be seeded carefully in a project that is likely to face change. Place them in parts of the project in which you expect or need change in order to achieve your business goals, and use them to bring Level 1 and Level 2 people up through the ranks.

Adequate Authority

Countless decisions must be made in a project, and each of these requires a certain amount of authority to make such a decision. Several examples are authority to modify the capital budget, authority to authorize travel, and authority to select your team's location. If you brainstorm with your team, you should be able to compile a list of, say, 50 types of such authority that someone in the company must have in order to complete your project.

Clearly, the team needs a certain amount of authority to make decisions, or progress will be slow as it obtains management approval for each decision. This is especially critical in a shifting, foggy environment, in which decisions arise frequently, need resolution quickly, and require information that the team is more aware of than is management.

Once you have your own list of authorities needed in your organization, there are two ways to use it. One use stems from the observation that often a decision is delayed because the organization is unsure about who should make it. Management assumes the team will handle it, and the team is waiting for management to make the decision and give the permission to proceed. To avoid such situations, look at your list and decide in advance with management whether the team or upper management has the authority to make each decision type.

The second application is for the team to consider each item on the list and pick out a few areas where it does not believe it now has authority for certain decisions but could proceed much more effectively if it did have such authority. Then discuss these areas with management in hopes of enlarging the team's authority in a few critical areas. An important factor to remember here is that not only can the team make faster decisions if they are made internally, but they will be better decisions because only the team has the freshest information in a turbulent environment. Also, team members will be more highly motivated to make a decision work if it is their decision rather than management's.

In the Same Space

Several factors are leading contemporary project teams to become more geographically dispersed:

- Corporate operations and markets are becoming more global.
- Companies acquire new units in new regions.
- The competitive environment pushes companies to obtain the best talent from wherever it is located in the world.
- Similarly, economics suggests acquiring talent from wherever you can obtain it most economically.
- Communication technologies now allow better communication at a distance.

Much has been written about modern "virtual" teams, some of it emphasizing the opportunities for dispersion that technology is opening for us and some more realistically addressing the difficulties encountered in this new mode of operation.

We work with project teams facing dynamic environments and repeatedly encounter the weakened and delayed communication that occurs as teams operate at a distance. This is a difficult issue, because there is some very good evidence for the value of co-locating teams (see Smith, pp 141–146), but in contemporary project teams it is increasingly difficult to do. Because distance fragments communications, co-location is perhaps the most fertile area in which you, the project manager, can improve your team's performance. Let's cover some of these opportunities.

First, if your team is divided between metropolitan areas, co-locate members in the same metropolitan area, which means that all cross-functional (engineering, marketing, manufacturing, supply chain, and other) functions on the team are within conversational distance (30 feet or 10 meters). Because project decisions usually involve input or concurrence from various functions, having them all in one place speeds up and improves decisions greatly. If you are not able to do this for the entire project, try to do it for the critical initial phases of the project or for subsets of your team.

Analyze the communication patterns of your team by using directed graphs to understand where the heaviest communication links are, or should be, and then take the steps to ensure that these communication partners are co-located.

Finally, if you are working on a product development project, arrange your product's architecture to match your geographical dispersion so that the heaviest communication occurs within product modules being developed by a co-located team, and the interfaces between these modules simplify communication between teams at a distance. (For more information on employing product architecture, see Smith, chapter 3.)

Endpoint

Here are the essential points to remember:

- Cultivate people fluent in your project process, who can improvise and adjust it as necessary when the environment or project shifts.
- Strive for committed ("skin in the game") and dedicated (full time on your project) team members, who will be able to keep up with changes much better.
- Arrange for as much co-location as possible to cope with the heavy communication burden that accompanies constant changes in plans.

In the next article in this series, we will show you how to set up a project environment conducive to changing plans.
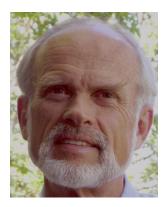
Further Information

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