Microsoft

BEST PRACTICES

AGILE PORTFOLIO MANAGEMENT

Jochen Krebs

Praise for *Agile Project Management*

This book is the missing link for large enterprises seeking to apply an agile approach to portfolio management.

—Mike Cohn, Author of Agile Estimating and Planning

Jochen Krebs has written a book that demystifies what happens in large organizations where various interdependencies can mystify and confuse teams making the journey to agile methods. It belongs on the bookshelves of forward-thinking executives and project managers at all levels.

—Peter Rivera, SVP, Executive Creative and Program Director, AOL Programming

This book addresses a sorely neglected area in the overall discussion of Agile methods. The solutions to many of the issues organizations face when adopting Agile methods like Scrum and XP lie in effective portfolio management, and Jochen has done well to bring this topic to the fore.

—Sanjiv Augustine, President Lithespeed, Author of Agile Project Management, Co-Founder of Agile Project Leadership Network

This is an absolute must read. Jochen simplifies a very complex concept and delivers a book that is easily read and provides a very pragmatic approach to Agile Portfolio Management.

—Robert Eagan, Director of Global Project Management Methodology for a major New York Financial Organization

Jochen Krebs' new book, Agile Portfolio Management, breaks new ground in the Agile canon by providing specific techniques for organizing work in Agile organizations at the program and portfolio level. As larger IT organizations adopt Agile broadly, many find that their legacy project selection, budgeting, and portfolio management processes are impediments to realizing the full competitive benefits their Agile development organizations can support. Joe's book will provide

Chapter 4

Foundation

To promote agility in the enterprise and apply agile principles throughout its projects, you'll need to recognize the organizational structure that's in place. Even though every organization has perhaps a slightly different spin in terms of hierarchies and structures, it usually fits into one of the three categories: functional, projectized, or matrix. I'll describe how these structures work with agile development. Furthermore, I'll define projects, programs, portfolios, and their relationship within the rest of the organization and its project management office.

Facts

Before we take a deep dive into agile portfolio management, let's get a statistical feel for the size of the information technology (IT) portfolio management market in general.

Gartner, the world's leading information technology research and advisory company, reported in 2007 that the revenue for portfolio management software products increased over 7 percent, reaching nearly $7.2 billion in total software sales by 2006. The forecasts for the upcoming years include a two-digit percentage increase, which means that yearly portfolio management revenue will break the $1 billion mark by 2009.

Why is there such a big demand for portfolio management tools? Research shows that 40 percent of the IT investments in the US fail to deliver the intended results. Considering that more than $2.3 trillion is invested in IT projects in the U.S. every year, it is understandable that executives try to keep an eye on their IT projects. This transparency enables them to make a true and fair assessment of a project and its progress.

Gartner suggests that 40 percent of all IT organizations rely on manually harvested project metrics, which *"...is labor intensive and error-prone."* Portfolio management software products create a platform for exchanging deliverables and look like a quick fix for the problem of manually creating project metrics. The products, however, embrace the existing process and often deal with maintenance projects inside the portfolio rather than with innovative new projects. According to the META Group (an information technology market assessment firm that was acquired by Gartner in 2005), a staggering 84 percent of all organizations do not create business cases for their projects at all, or they do it just for a few key projects. Additionally, 89 percent of all organizations have no metrics in place and have literally no clear view into their projects. When you consider all the unused potential of project resources (human and financial) combined with the lack of business value, it is not surprising that chief information officers (CIOs) have the shortest tenure among all executives.

Running parallel to these trends in portfolio management are the eye-opening trends and developments within the agile community. For example, attendance at the annual agile conference rose from 675 in 2005 to 1100 in 2006 to a sold-out event with 1600 attendees in 2007. Although agile development typically grows from the bottom up in organizations, project managers, business analysts, and executive managers are now getting more and more involved, and they have very good reasons to do so.

VersionOne, for example, conducted the second "State of Agile" survey in 2007, which suggested that 90 percent of agile adopters realize increased productivity. Furthermore, 83 percent of adopters materialized at least 10 percent acceleration in time-to-market delivery and 66 percent decreased their costs by at least 10 percent. With all the focus on increasing the pace of delivery and reducing costs, you might think that the quality might be lacking. The opposite is actually the case: 85 percent of the same agile adopters indicate that their defects were reduced.

When asked what their motivations were for adopting agile processes, many of those responding indicated that the root cause was the need to improve portfolio management. Twelve percent wanted to increase project visibility, 24 percent were interested in accelerating time-to-market delivery, and 30 percent had the goal of better coping with changing business priorities.

Agile development claims only a very small fraction of the overall worldwide IT budget, but that number is steadily increasing. Based on the facts outlined in the *State of Agile* survey, this trend is likely to continue. Agile projects have proven that they return the amount invested in them and consistently live up to their promise. So what are the obstacles that prevent agile from flourishing in organizations? Thirty-six percent of those participating in the survey responded that there was a general resistance to change, 24 percent blame lack of management support, and another 25 percent blame their current existing organizational boundaries.

There is a trend in the IT industry to accommodate two key needs demonstrated by the statistics introduced in this section. An increasing agile workforce will make these needs even more relevant.

First, agile project teams need a simple and effective mechanism for exchanging project information with their stakeholders. In addition, the agile project team needs to be prepared to realize a vision that might not be captured in a business case. Second, executive management needs to see into the operations and steer projects so that they provide their expected value. The ability of executive management to lead instead of manage a project, combined with the benefits of agile development practices, will increase productivity, quality, morale, time-to-market delivery, and the ability to react to change.

The link and collaboration between the business and the agile development teams is described as *agile portfolio management*.

Organization

Every organization has a structure and culture. Each organizational culture is unique and is a combination of all individuals' skills, practices, and social behavior. The culture comes in so many variations and flavors that it needs to be assessed on a case-by-case basis. How to assess corporate culture is not a topic covered in this book. Although organizational structures are also very diverse, they can usually be generalized as belonging to one of three distinct types: functional, projectized, or matrix. A blend of these models is also possible and is referred to as a *composite*. It is important to understand the structure of an organization, particularly how it affects the interaction and collaboration between departments and individuals, before we lay out an agile portfolio management strategy.

Functional Organization

In a functional organization, departments are organized in silos. Figure 4-1 illustrates how an organization is divided into silos of functionality—for example, having human resources (HR), accounting, marketing, and IT all report to the CEO. The larger the organization, the greater the chances are that you'll find subhierarchies with specialized functionality inside the silos. The managers of the subhierarchies report upward in the chain, with the information eventually being reported to the CEO.

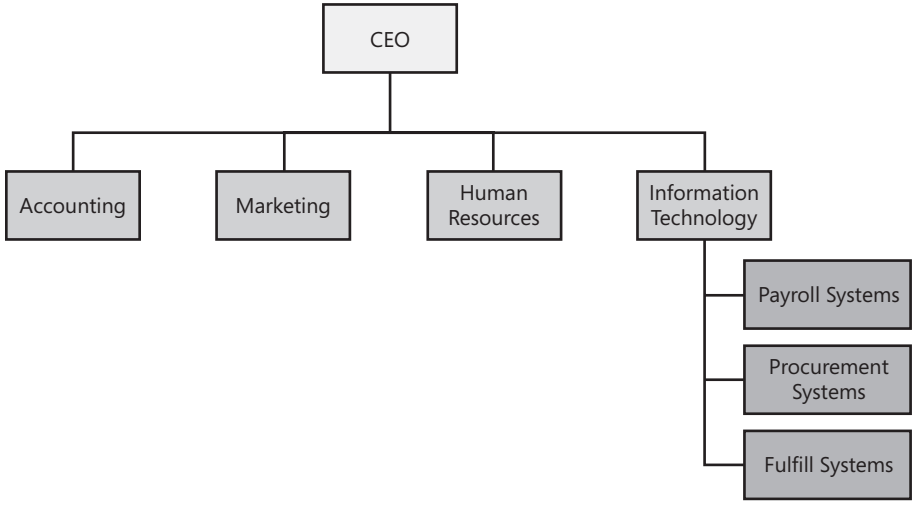

FIGURE 4-1 Functional organization

Two advantages found in a functional organization are the simplicity of communication and the presence of a project sponsor who has a vested interest in every endeavor of the project. Aside from the advantages of clear communication channels and a dedicated sponsor, the functional organization provides little of value for agile portfolio management because of its

command-and-control environment. For example, the functional structure has the following negative affects on agile portfolio management:

- Functional structures restrict the ability of team members to cross organizational boundaries, making it difficult for them to collaborate on requirements and an overall project strategy.
- The project team has little authority compared with their managers, who are in charge of the line of business (also known as line managers) as well as career development.
- Line managers become project managers, making the project manager role overloaded with political considerations.
- Communication goes through one channel—that is, up and down the chain of command through the line manager.
- There is little room for creativity because of the lengthy bureaucratic approval process.
- There is a greater degree of subjectivity when corporate strategies are defined.

Functional organizations find it very challenging to adopt agile portfolio management as well as agile software development. The longer the structure has been in place, the harder it is to change the behavior of the employees from the top down. Because of organizational policies and the lack of exposure people have to other people and processes outside their own silo, implementing a bottom-up approach is also significantly more challenging than in other structures. Existing procedures and policies result in bottom-up changes being rare. This structure is ideal for companies that manufacture consumer products. These repetitive production cycles are less dependent on innovation or creativity.

Projectized Organization

In contrast with the silos in the functional organization, the projectized organization consists exclusively of projects rather than being organized around functionality. Every project has a project manager who is fully authorized for the duration of the project. (See Figure 4-2.)

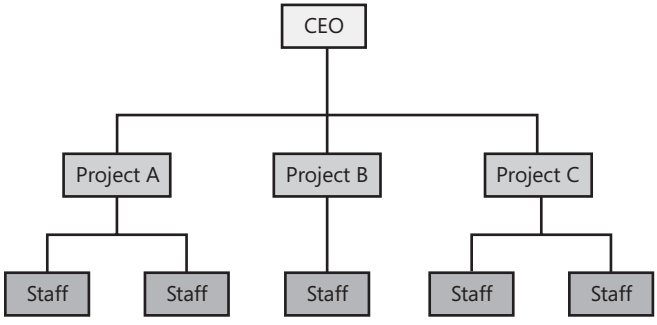

FIGURE 4-2 Projectized organization

The advantage is not only that the project team is in charge of and responsible for its actions but also that the projectized organization changes dynamically with the implementation of each project. Other positive factors that this structure holds for agile portfolio management are as follows:

- It's easy to hire external consultants, even ones who are geographically distributed.
- Teams are empowered and on the radar screen of the organization.
- The organization has a project-oriented culture.
- It's easy to manage resources from an organizational perspective.
- Team members are not distracted by operational work.
- It's easy to assign work to consultants and third parties, including giving them full responsibility for parts of the project.

A side effect of this project-focused structure is that project team members need to have a personal vision and career path that extends beyond each project. This structure is the most modern of the three presented and is a very good candidate for accommodating agile portfolio management.

This organizational model is especially appropriate for companies that constantly schedule numerous projects. Organizations that focus more on operational aspects are, as a general rule, better served with the functional or matrix form.

Matrix Organization

The matrix organization adds a new dimension to the functional organization—in our case, a hierarchy for project management that is parallel to the existing departments (human resources, accounting, or marketing). This organizational form is useful for businesses that need departments for the operational activities to keep the business going but that also need to be able to smoothly instantiate new projects. Figure 4-3 demonstrates that project management becomes divided among project managers who crosscut vertically through the silos of the functional departments.

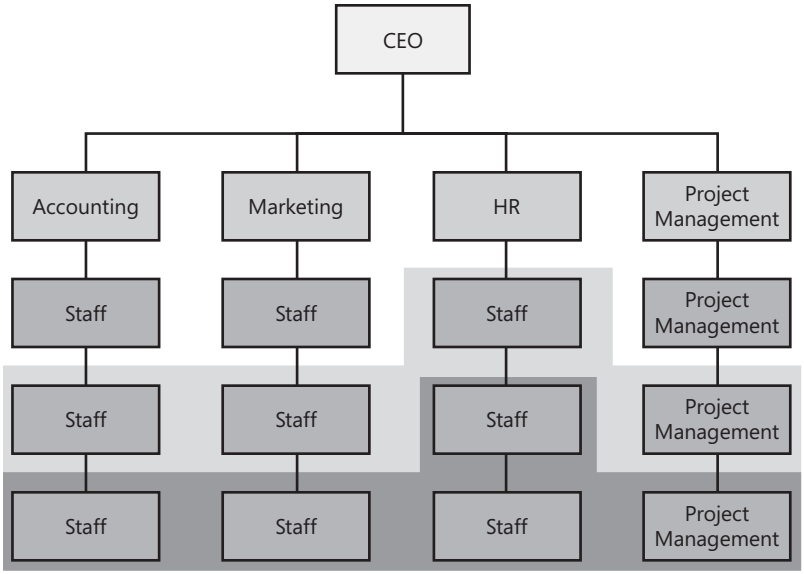

FIGURE 4-3 Matrix organization

For example, suppose a project is needed to develop a new component for the payroll system. A team is assembled from members of the IT organization as well as from human resources. In this type of structure, the supervisory roles and authorities are the same as in the functional silos, but for the duration of the project the project manager is authorized to build a team across the silos. Advantages for agile projects inside the matrix organization are these:

- Team members will always have a home, even after the completion of the project.
- Achieving dedication to projects by sharing best practices of project management is its own branch of the organizational chart.
- It's relatively easy to assemble project teams.
- There is broad stakeholder involvement.

The one big disadvantage of this organization is that competing functional managers have different political agendas. They might not assign resources in the best interest of the organization or project. The individuals on the team are challenged when communicating their accomplishments through the channels. Conflict of interest is created when team members do not know who the target audience is for project reporting (especially the bad news) or how reports might affect career improvement. The reporting structure within the project itself can also create problems. That is the case if a team of junior and senior team members from different departments are mixed to form a project team. It is also not uncommon that the individuals in a matrix organization become confused about their roles, especially for longer projects when team members report to the project manager more frequently than to