Project Portfolio Management and Managing Multiple Projects: Two Sides of the Same Coin?

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Introduction

In today's competitive business environment, managers and companies find themselves facing competition for scarce resources, narrowing windows of opportunity, and constantly changing demands of internal and external customers. In addition, projects are continually being added, changed, and removed in response to business activity and changing market conditions. As a result, the backlog of "needed" projects requires resources that exceed management's ability to provide, almost mandating that project priorities be constantly scrutinized and changed. The growing rate of diverse and unpredictable changes in technology and environment, the demand to reduce lead time and time to market, the increasingly demanding market and the rise in international competition, require consistent and effective project and product management.

This paper focuses on what seems to be one of the main causes of failure: the need to management multiple project interdependencies assuring their mutual compatibility at the portfolio level. Every different project portfolio selection, therefore, could—and generally does—change either the risk or relevance of each project. This situation is exacerbated when the projects selected have no clear relation or link to the corporate strategy.

Currently there exists a general philosophy that all projects under way make up the project portfolio. Unfortunately, a group of independent projects does not make up a portfolio—it is simply a group of projects, consuming time and resources. Hopefully, these projects have been selected with long-range strategy in mind. Projects generally are not independent. If a logical person would not purchase a mutual fund or a group of stocks without first assessing his or her long-term financial goals, why do companies approve and fund any project that is proposed without first evaluating it and its contribution to and alignment with the corporation's strategic goals and objectives? Often is it due to management's inability to clearly define the company's strategic vision, goals and objectives or their willingness to succumb to pressure from the political astute and organizationally savvy managers.

Exhibit 1 summarizes, at a high level, the major differences between Project Portfolio Management and Multiple Project Management.

Assessing Priorities and Allocating Resources

During the past several years, much has been written on the subject of resource allocation for projects, often under the title of project portfolio management. These writings have focused primarily on methods for the short-term resource allocation. Generally models emphasized day-to-day planning, giving

Exhibit 1. High-Level Comparison of Project Portfolio Management and Multiple Project Management

	Portfolio Management	**Multiple Project Management**
Purpose	Project Selection and Prioritization	Resource Allocation
Focus	Strategic	Tactical
Planning Emphasis	Long & Medium-Term (annual/quarterly)	Short-Term (day-to-day)
Responsibility	Executive/Senior Management	Project/Resource Managers

priority to projects based on their perceived level of urgency, with urgency being determined by the level of risk, complexity, or relative strength of the project sponsor. Therefore, what frequently happens is that projects, though strategically relevant, but low risk, are viewed less urgent and given a lower priority in the overall project portfolio than projects with the same or less strategic relevance, but higher risk.

There is a tendency to assign all projects in the corporate portfolio a Number One Priority. In spite of this widely recognized criticality, a clear and formal project selection and prioritization policy is too often lacking; selected projects are all considered as high priority projects. As a result, there is no clear guidance as to which project(s) has the greater urgency and the more critical need for resources, effectively placing all projects in an equally competitive position for limited resources. So regardless of the strategic value of certain projects, the will of management is not exercised as to which is more important in the timing of delivery to customers, internal and external. In such a situation, precedence in the access to critical resources is established by individual functional managers. This is done on the basis of the degree of pressure perceived and thus from a viewpoint that is, to say the least, partial. Strong political and psychological pressures are among the causes of this costly situation: it might not be pleasant nor politically advisable to tell people they are working on a low priority project.

Projects must be prioritized based on their relative importance and contribution to the overall strategy. Each project should be prioritized relative to other projects being evaluated as well as those currently under way. In addition, as the business and technical environment changes, the priority of one or more projects may change also.

Unfortunately, most managers, and especially project managers, are not in the position to control or change project priorities. Thus, project managers, along with the resource managers, must continually ask themselves several critical questions:

(1) Are resources assigned to the highest priority projects?

(2) Are project resources being fully utilized?

(3) Are projects being completed on time, within budget, and to the required quality standard?

The focus on resources is because rarely does the project manager have the luxury to add additional resources for an extended period of time to complete the current "critical or high priority" project.

The multiple project environment requires that an efficient, dynamic, process for determining how to allocate resources to and set a realistic delivery schedule for new projects, especially when being added to an existing set of on-going projects.

The growth rate of multiple, parallel projects in need of program management is phenomenal, between 20% and 30% a year" according to Hugh Ryan, director of the large, complex systems practice at Anderson Consulting. The imperative is forcing organizations to rethink how they implement IT projects from the ground up. The first priority, says PG&E's CIO John Keast, is a holistic view of common business goals. "If you focus on the big picture first, then you'll have people who can deal with the cross-project situations that inevitably come up," says, Keast. "Too often in the past, they were inwardly facing and lost sight of the whole" (Wilder, Caldwell, & Garvey).

Corporations are constantly undertaking multiple projects to add new product lines or to improve and replace existing products/processes. In order to achieve economies of scale and scope, firms may want to leverage their resource investments on new technologies, processes, and products. In addition, because of increasingly intense international competition, the perspective of multiple project management has become a critical issue for competition.

Regardless of the number of projects, whether one or 100, there are several common objectives for all projects:

- Minimum total throughput time (time in shop) or all projects
- Minimum total completion time for all projects
- Minimum total lateness or lateness penalty for all projects (Meredith & Mantel).

To best accomplish these objectives, multiple project environments should be focused on ensuring compatibility among different simultaneous projects with a strategic portfolio approach. Generally speaking, multiple project management is an area where traditional methods and techniques appear to be less adequate. This problem is mainly related to the complexity of inter-project links, both tangible (e.g., financial, technical) and intangible (e.g., client relations, knowledge transfer.)

Each new project, especially new product development projects, often has both technical and organizational linkages or interdependencies with past or currently ongoing projects. The strategic management of these linkages among multiple projects is complicated, but is often a critical issue for a firm's project management performance.

Most multiple project environments involve constant change and managers should recognize that a well-defined project selection and prioritization process can give guidance to project and resource managers for planning and allocating resource assignments. The resource allocation issue is concerned with determining the best tradeoffs between available resources throughout the duration of all projects in the project portfolio and establishing the right priorities. The priorities of the individual projects within the project portfolio relate to urgency of need and there is almost always competition between the projects for resources when one has a higher priority than the others.

Allocating resources, especially human resources, to projects in a multiple project environment is sometimes difficult and often creates problems. Important in this allocation process is the linking of day-to-day planning for each individual project to the long-term business strategy. In addition, allocating the right human resources to a project is vital. The more projects that are involved and the more specific the skills and knowledge required for each project, the more important, but also the more difficult, is the allocation process. Frequent conflicts between projects thus arise; and if not resolved in a systematic perspective, these conflicts could lead to a drastic reduction in project and overall organizational performance.

Long-term resource allocation should be placed in the strategic business and planning process. Generally corporations walk through their resource allocation process. Directly linked to this process is the medium-term resource allocation, which if done at all is generally accomplished quarterly. The day-to-day planning, for effectively managing resources among multiple projects is conducted within project execution and product delivery processes. Coupling day-to-day planning to the strategic business plan this medium-term-resource allocation is absolutely necessary. Also, by linking medium-term resource allocation, and day-to-day resource planning, to long-term resource allocation, the business strategy process, and to strategic goals, all affected stakeholders will have a better understand the overall need for a logical and consistent project selection and prioritization and, in effect, a reliable resource allocation process.

Making all the pieces fit is one of the greatest challenges facing today's business executives, middle managers, and project managers, but it also provides corporations with one of their greatest opportunities. The demand for "big-picture" project management can catalyze—and then cement—the long-needed project selection-business strategy-resource allocation integration on which all progressive and competitive CEOs and Senior Managers insist.

A Multiproject Portfolio Selection and Prioritization process is needed to help make the pieces fit, including a comprehensive evaluation methodology to assess the complex interactions that arise between projects within the strategic portfolio and the ever-changing relevance or risk of the overall portfolio. The overall process should continue until a satisfactory result is achieved, actions for improvement are taken that may act to strengthen the competitive position of the company as a whole, or elements to enhance the success factor of individual projects. It is very conceivable that projects may be reclassified and a new project portfolio structured.

The Multiple Project Challenge

Managing multiple projects is a challenge within many organizations because of current practices that ignore the basics of project priorities, project categories, project standards, and multiple tool applications. Lack of priorities, categories, standards, and uniform tool applications complicates the startup and initiation of projects especially in a multiple project environment.

There is a mistaken belief that project category and project priority are the same. Category relates to the size, dollar value, duration, and overall contribution to the organization's financial health. Priority, on the other hand, is the urgency of need and relates to time of delivery and criticality of delivery date. The two are related, but should always be treated separately.

Categories of projects give an organization the basis for the level of detail required in planning and the selection criteria that can be used on any size of type of project (Ireland).

Periodic reviews of current and potential projects to be placed in the project portfolio, as well as, decisions regarding resource allocation must be conducted. Without quarterly, or at least semi-annual, evaluations, decisions on the make up of the project portfolio are generally made too late and, due to pressure to be "productive," resource allocation decisions are resolved in discussions between project managers and resource managers. Unfortunately, without a good process, resources may be allocated to the wrong projects.

This dilemma is clearly stated by says Kathy Boyd, global services manager with Hewlett-Packard's consulting unit, "Problems are accelerated today because of business time-frame demands, tight budgets and very short project deadlines. Where does any IT project fit in the overall business strategy? That must be known" (Wilder, Caldwell, & Garvey).

This situation is obviously complex for a variety of reasons. Typically, the problem is not well defined, the company does not have an orderly way of examining project alternatives, forced alternatives may violate budget, time, resources, and/or specifications on one or more projects, or very simply project alternatives have not been prioritized with respect to the entire project portfolio.

Another reason for having a well-defined approach to project portfolio management is that in using day-to-day planning for this purpose is generally undesirable, but not atypical, regardless of company size, industry or products/services. This kind of planning is appropriate when used by the project manager to shift resources among multiple projects and tasks. Moving limited talent among multiple IT projects has become the modus operandi of the CIA. When one project hits a bump and needs additional resources, all the others are fair game. "First we look to projects near completion, take the senior talent from those, and assign then to the higher-risk or higher-visibility initiatives," says Michael O'Brachta, an information services officer in the CIA. "If the available pool doesn't work, then we go raid existing projects and make hard decisions about pulling resources off to assign them to riskier or more visible projects" (Wilder, Caldwell, & Garvey).

As a method of trying to manage the corporate project portfolio, day-to-day planning often is very unstable and unsuitable. In contrast, the project portfolio must have some degree of consistency and stability. In addition, while planning the portfolio once a year can be effective for looking at competitive organizations in practice, an annual review period is too long because changes in the project portfolio within a year are inevitable. The problem is that many companies do not know how to handle a more frequent portfolio review process.

DeMaio and Corso propose a five-step model that takes a logical approach project selection and prioritization aimed at helping decision-makers in a multiproject environment:

- Individual project evaluation, evaluation, classification, and initial screening
- Multiproject classification and selection
- Actions for improvement and portfolio reclassification
- Priority assignment

• Ongoing control of project portfolio.

It is critical to establish project selection and prioritization guidelines that are consistent with the corporate mission and objectives. "You have to keep a portfolio viewpoint, and project managers have to think beyond the IT part," says United Airlines senior VP and CIO Bruce Parker. Also, United has had to rethink deployment strategies for the most important resource of all: people (Wilder, Caldwell, and Garvey).

When selecting and prioritizing projects, especially when resource allocation in a multiple project management environment is an issue, it is important to consider the following:

• Projects should be similar in size and level of complexity.
• Projects should be relatively of the same duration and require few unique resources.
• Projects should be of similar priorities to permit balancing requirements without completely omitting some projects in resource assignment.
• Projects should be similar disciplines or technologies.

These considerations will allow the decision-maker(s) to logically compare like projects, (i.e., apples to apples.)

All projects, even inter-related projects in a multiple project environment, typically have a unique and complete life cycle with different start and finish times. This usually places individual projects within the project portfolio in different phases for the project manager to plan and execute at the same time. A project manager may experience some difficulty in trying to maintain a balance between the projects because of the different phases of the life cycle being pursued at the same time. This situation is compounded by projects having different priorities. Higher priority projects generally receive first consideration for initial and subsequent resource assignments. This situation is compounded by the impact or influence of adding a new project to taking a project from the project portfolio.

Attempts to manage multiple projects are also complicated by the fact that management attention, available resources, and project control tools must be spread over many projects. These factors exacerbate an already difficult task and reduce the likelihood of project success especially when the project portfolio is comprised of large and small, technical and non-technical, strategic and operational projects, etc.

A multiple project environment does not permit senior management attention to be focused; instead, senior management must delegate authority of the project to lower management levels. Project control resources cannot be concentrated on multiple small projects to the extent they can be dedicated to a single major project, even though project controls are in many ways more important on multiple projects due to overlapping schedule and resource requirements.

Summary

Perhaps the best way to summarize the focus of project portfolio management and what separates it from multiple project management is in the understanding of what Project Portfolio Management really is. This concept is perhaps best explained by David Cleland in *The Strategic Context of Projects.*

"An enterprise that is successful has a 'stream of projects' flowing through it at all times. When that stream of projects dries up, the organization has reached a stable condition in its competitive environment. In the face of the inevitable change facing the organization, the basis for the firms decline in its products, services, and processes is laid—and the firm will hobble on but ultimately face liquidation.

In a healthy firm, a variety of different preliminary ideas are fermenting. As these ideas are evaluated, some will fall by the wayside for many reasons: lack of suitable organizational resources, unacceptable development costs, a position too far behind the competition, lack of strategic fit with the enterprises direction, and so on. There is [and should be] a high mortality rate in these preliminary ideas. Only a small percentage will [and should] survive and will be given additional resources for study and evaluation in later sages of their life cycles.

Senior mangers need to ensure that evaluation techniques are made available and their use known to the people who provide project ideas and opportunities for growth. Senior management must create a balance between providing a cultural ambience in the enterprise that encourages people to bring forth innovative product and process ideas and an environment that ensures that rigorous strategic assessment will be done on the emerging ideas to determine their likely strategic fit in the enterprise's future."

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