

## Components of a Project Portfolio Management Process: *Part One – Selecting Projects for the Pipeline*

*We started our coverage of Project Portfolio Management with two papers: Project Portfolio Management is not just Enterprise Project Management, and Project Portfolio Management: The Right Stuff. We continue this series with the first of a three-part discussion of the contents of a Project Portfolio Management process.*

Discussion of a project portfolio management process must consider four major areas. These are:

- ❑ Selecting Projects for the Pipeline (What goes in the pipeline)
- ❑ Managing the Pipeline (What stays in the pipeline)
- ❑ Executing PPM (Who does it)
- ❑ Tools for Data Gathering and Analysis

### Where do we start?

Getting started in implementing a project portfolio management process is a bit like the chicken and egg question. Do we first attack the existing portfolio and then implement an improved project selection process? Or do we accept the current portfolio and go right after the selection of new projects? There is no prescribed order. However, reports from the field indicate that many firms have first reviewed their current portfolio, eliminating a significant portion of their project load, and making room to add more valuable projects. As we cannot address all of these parts in a single paper, we will look at the new project selection phase first.

### Sources of Projects

When we talk about “projects” in a portfolio, what do we mean by projects? The flavor of a project portfolio management process will depend somewhat on the kinds of projects involved. While most firms are now heavily involved in projects, the purpose and types of projects vary. For instance:

- ❑ The project is for the benefit of an external client. The primary benefit to the project producer is income (profit). Secondary benefits may include (1) making use of surplus resources, (2) building a reputation in a new area, and (3) creating re-usable technology/knowledge.
  - Examples of these are: Architectural, Engineering & Construction projects, Consulting, Temporary Labor sources, Professional Services Organizations.
- ❑ The project is for the benefit of the performing company – to create new products and services that will be sold (at a profit).
  - Examples of these are: manufacturing and process companies, software developers, and pharmaceutical firms.
- ❑ The project is for the benefit of the performing company – to improve or maintain capabilities required to effectively operate the business.

- These would include internal IT projects, manufacturing processes, facilities improvements or expansions.
- The project is for the benefit of the performing company – to improve a competitive position.
  - Includes any of the above.

We can see that a project portfolio management process for a Bechtel or a Halliburton, involved is A/E/C work would have a different focus than the internal IT department at Citicorp.

We can also see that the funnel of proposed projects could be filled from many sources. Project requests may come in via the firm's Opportunity Management program, from product managers or other internal requests, or from senior management (to support strategic initiatives). How do we filter the project requests so that those projects that pass through the funnel into the pipeline best serve the long-term interests of the firm?

## Selecting Projects for the Pipeline (What goes in the pipeline)

There are thousands of true stories that illustrate what is wrong with how most organizations determine what projects they will work on. It is obvious that the pointy-haired guy (Dilbert's boss) has gotten around. Here's one of the many situations that I have experienced.

The company was a major manufacturer of paper goods. As part of my engagement, we were looking at how they add a project to the pipeline and prepare the project charter. When I asked them to explain the process for approving a new project, they told me the following:

The process begins when a client of the paper company calls his sales rep and asks if the company can provide a product to a new specification. The sales rep calls the product-line manager, who, in turn, calls the development engineer responsible for that technology. The engineer (I was told) decides whether he would like to work on creating a version of the product to the new specification. He has the option (solely on his own) to accept or decline the product-line manager's request. If he decides to work on the project, he has the right to impact upon several of the firm's resources.

What is wrong with this picture?

- The engineer has no idea how this modified product fits into the firm's strategies.
- He has no data on marketability or profitability.
- He has no process for performing a value/benefits evaluation.
- He probably hasn't considered the capability to support the revised specification or other risk parameters.
- He is committing other resources, which may be needed for higher priority projects.
- Furthermore, there really isn't a practice for determining project priorities.
- What about the customer? Is he really serious about the revised product? Will he buy it at a price that is not yet determined? Will he take his business elsewhere if the current supplier does not deliver a new version? Can he get a product to the new spec from someone else? A development engineer would be unlikely to ask these questions or to

have the answers. Yet this information is essential in making the project decision and should be an integral part of the project selection process.

So now you get the idea. The project pipeline for this firm was a disaster. Resources got shifted from project to project, many of which should never have been in the pipeline in the first place. Resources were diverted from high-value, low-risk, strategically aligned projects to someone's pipedream. Many of these projects never reached completion. Meanwhile, opportunities were lost and money was wasted.

## Evaluating Candidate Projects

We'll assume that the objective of our project portfolio management process is to prioritize work that brings the most value to the firm. The definition of "value" will certainly differ in accordance with the firm's focus, strategies and types of projects. Regardless of these differences, a project portfolio management process will have to address the following:

- ❑ A ranking of value and benefits
- ❑ An appraisal of risk (in achieving these benefits)
- ❑ An inventory of resource availability and allocation
- ❑ An idea of an optimum or acceptable size of the project pipeline

The criteria for each of these factors will have to be customized by the firm that is implementing the project portfolio management process. This definition will be driven by the firm's strategic focus. The project portfolio is one of the layers of tactical planning that are executed in support of the strategic plan. So, we must add to the list above:

- ❑ Publication of the Strategic Plan to the project portfolio management governance council.
  - *Note: In defining the project portfolio management process, we assume that the items in this list will involve some type of "governance council". This would be a team of senior people, designated by top management to make decisions about the project portfolio. The roles and organization for PPM will be addressed in a later paper.*
- ❑ Development of Tactical Plans that would involve projects in support of the Strategic Plan
- ❑ Definitions of "value" and "benefits" as they apply to the tactical plans
- ❑ Some boundaries on acceptable risk parameters
- ❑ A long-range projection of resource strategies

## Ranking Value & Benefits

Assuming that the number of potential projects exceeds the number that can be effectively executed in a reasonable time, there must be a means of prioritizing each project. This process must be structured and conducted by a team, in order to eliminate the tendency to select projects by political means, power plays, or emotion.

Conceptually, this ranking process is simple, although the individual parameters will vary according to strategies, resources, profit motive, etc. The process is not unlike that used in

selecting items for an investment portfolio. In fact, this is an investment portfolio. You are investing in projects with the objective of maximizing the return.

So, one of the primary ranking factors will be expected ROI. However, there are qualifiers associated with this process. You can't prioritize projects using ROI alone. You need to also consider:

- ❑ Alignment with strategic and tactical plans
- ❑ Balance between maintenance projects and investment projects
- ❑ Effective use of resources
- ❑ Probability of delivering the project on time, within budget, and with the designed work scope
- ❑ Ancillary benefits (non-financial)

The ranking practice should utilize a balanced scorecard approach, where each of the factors is listed and weighted. Then, as each factor is rated, an aggregate score for each project is obtained. The rating of each factor can be prompted by a series of questions. The answers to the questions should be noted in a narrative format and then converted to a numerical score based on the level of the answer against a guideline.

## Risk

The value/benefits ranking may be offset by a risk ranking. The risk that we are talking about here is the risk that the perceived benefits might not be realized. A million-dollar return with a ten percent chance of happening is probably not as desirable as a quarter of a million dollar return with a ninety percent probability. A new technology with a twenty percent chance of success may not fit with the strategy. A project that is vulnerable to critical delays might be a lower ranked candidate than one that is certain to be delivered in time to produce the expected benefit.

A common practice is to evaluate the value/benefit ranking and the risk ranking on a grid. Preference would be given to projects that appear in the high value/low risk quartile.

## Resources

If we acknowledge that the availability of resources is a constraint on the number of projects in the pipeline, then why can't we just increase resources as we need them? There are a number of obvious answers to this question.

- ❑ Resources cost money. They impact cash flow. In a well-managed organization, the number of resources in the firm is dictated by the firm's revenue. In a growing organization, the number of resources is increased incrementally as the revenues increase, usually by a set proportion. They are not increased just because there are more projects in the pipeline than can be supported by current resources.
- ❑ Effective and efficient use of resources calls for a stable workforce – a group of people who understand how the organization works and communicates, who fit the organization's culture, and can work well as teams on projects. While there are times

when temporary or transient resources can be used to meet specific needs, it is best to avoid this as a standard source of resources. The cost of supervision, coordination, and learning curve issues will often negate the benefits.

- ❑ One of the key objectives of a managed portfolio is balance. This is a well-respected strategy in investment portfolios. It should also be an objective in project portfolios. Resource balancing is one aspect of a balanced project portfolio. This is a bi-directional process. The mix of projects and the mix of resources should be manipulated to best use the firm's resources on work that is well matched to the available skills.

## Size of the Pipeline

How much project work is enough? How much is too much?

If we proceed on the basis that projects generate value and benefits, then doesn't it follow that the more projects that we have in the pipeline, the better off we will be? Ridiculous, you say! Well of course it is. But that doesn't stop many organizations from shooting at everything that moves.

The opportunities (or demand) for projects will usually exceed the capacity to execute them all. I have a folder full of stories where project deliverables were significantly delayed because the pipeline was overloaded. In almost every case, the delays eroded the value and benefits of the venture (as well as alienating the client).

On the other hand, the stories that I am hearing from successful firms tend to show that "doing fewer projects" is actually improving the bottom line. Committed resources are staying on the assigned job, doing the assigned work, in support of established target dates. The income or benefits start earlier and everyone is happier. Furthermore, because the projects are not drawn out, new projects can be added sooner, and just as many projects may eventually find their way into the pipeline – under improved conditions.

The message here is very clear. Limiting the amount of work in the pipeline, so that the projects can be completed as quickly as possible, leads to increased profits or savings, more satisfied clients, and actually leads to executing more projects without increasing resources.

## Adding an Approved Project to the Pipeline

A structured approach toward project initiation is critical to managing a successful portfolio of projects. Here are some critical first steps:

- ❑ **Issue a Project Charter** – Although often omitted from the project process, there should be a formal project authorization practice. This is best instituted by means of a "**Project Charter**" document. The Project Charter should contain much of the early description of project content, objectives and budget. It is both a starting point for the project initiation process and the basis for guidance and measurement during execution. It specifies the project sponsor, the intended benefits and benefactors, and the source of funding. The project charter serves as the spending authorization. Time or expenses should not be charged to a project until such charges are authorized. The authorization document should specify who can charge and to what accounts the charges can go. Spending

authorizations may be granted by phases. The project team should establish *stage gates*, which are used to evaluate project progress before proceeding to the next major phase. We'll talk about these in the next PPM paper.

- ❑ **Establish Critical Parameters** – This includes targets, limits and thresholds. The basis for these parameters is the values that were used to evaluate the project during the selection phase. For instance, what is the target delivery date? What amount of time extension can be tolerated? When do projected delays dictate that continuation of the effort be evaluated? Milestone dates may also be important, and can help to identify out-of-tolerance conditions earlier in the project. Target and limit values should also be established for cost items, technology accomplishments, window-of-opportunity issues, and any area where performance is critical to supporting the criteria associated with the original goals. This is important to stop “wishful thinking” projects from sapping the resources of the firm.
- ❑ **Determine what is to be measured, and by whom** – What gets measured to monitor the targets, limits and thresholds? What is the mechanism for making the measurements? Who makes the measurements, who evaluates them against the measurement parameters, and who reports out-of-tolerance situations?

## Managing the Pipeline (What stays in the pipeline)

In the next segment of this series on PPM, we'll look at how we evaluate project performance and how we determine what projects remain in the pipeline. Topics include:

- ❑ Periodic measurement of status and performance
- ❑ Evaluation of status & performance against critical parameters
- ❑ Reporting of items outside of Targets/Limits/Thresholds
- ❑ Stage Gate and Bounding Box Concepts

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Harvey A. Levine, with 41 years of service to the project management industry, is founder of The Project Knowledge Group, a consulting firm specializing in PM training, PM software selection, evaluation & implementation, and PM using microcomputers. He has implemented or enhanced the project management capabilities of numerous firms, often combined with the selection or implementation of computerized project management tools. For more information on Harvey Levine or the Project Knowledge Group, please visit <http://home.earthlink.net/~halevine/>

Mr. Levine is a leading consultant to the project management software industry and is recognized as the leading expert in tools for project management. He has been Adjunct Professor of Project Management at Rensselaer Polytechnic Institute and Boston University. He has conducted project management public seminars for ASCE, AMA, IBM, and PMI.

Mr. Levine is the author of books, articles, and videos on Project Management. His latest book, "Practical Project Management: Tips, Tactics, and Tools", has recently been published by John Wiley & Sons. Mr. Levine is past president of the Project Management Institute, a recipient of PMI's 1989 Distinguished Contribution to Project Management award, and has been elected a Fellow of PMI.

Mr. Levine has offices in Saratoga Springs, NY and San Diego, CA. His e-mail address is: [halevine@earthlink.net](mailto:halevine@earthlink.net)