

Project Portfolio Management

A Practical Guide to
Selecting Projects,
Managing Portfolios, and
Maximizing Benefits

Harvey A. Levine

Foreword by Max Wideman

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Foreword

With all that has been written on and about project management over the past decade, you might be forgiven for thinking that surely there cannot be anything new to say. Indeed, some eminent practitioners have even stated categorically that little has advanced in these ten years. But in the past five, the management of projects has risen to a new prominence. Projects are seen as critical to success in all three sectors: public, private, and nonprofit.

The impact of projects on contemporary society is immense, but the evident wastage through improper selection of projects or their improper formulation (or both) is equally immense. Collectively this represents a serious diminution of our collective capital assets and consequent drag on our economy. To deal with this challenge, there *is* something new, though it is still evolving. The solution is to be found in project portfolio management (PPM), and it is not just a trendy label or fad.

Some may view PPM as just another technique of project management, but it is not that. PPM is literally above and beyond project management because it spans all the way from the vision of those in the executive suite, through project management, to the realization of benefits to the enterprise and its successful competitive positioning. Key to this new project portfolio life span is selection of the right projects in the first place.

It should come as no surprise that Harvey Levine, author of several books and literally hundreds of articles on almost every aspect of project management, has thrown himself into the fray on this one. As Harvey explains in the Introduction, “The emergence of PPM as a recognized set of practices may be considered the biggest leap in project management technology since the development of PERT and CPM in the late 1950s.”

Harvey is no slouch. He does not go along with new trends and fads—those that are short on substance and practical use, but no doubt designed to enhance a consultant’s repertoire. Rather, Harvey has spent the past five years studying this topic, gaining insight from knowledgeable people, and finding out what companies actually do. He has surveyed the best of the best and collected their knowledge and wisdom. This book is the result of that effort.

Books on this subject, certainly ones that provide profound, up-to-date, and practical information, are rare, making this one an essential addition to the list.

Perhaps the first thing to understand is why all the fuss. It is interesting to follow the genesis of project management itself. Although not recognized as such, project management was clearly practiced in the great building endeavors of the ancient world. In the twentieth century, it emerged as a management discipline in its own right, essentially from the traditional heartlands of construction and engineering, where it has a well-established process and track record. But the sizes of such projects are such that they generally tend to be not only truly unique but also relatively unconnected.

With the advent of business automation through the use of information systems, computer technology, and software development, all that has changed. In recent years, there has been a tremendous upsurge in project-based work. This is typically associated with new challenges and opportunities brought about by other technological developments, shifting boundaries of knowledge, dynamic market conditions, environmental regulations, and changes in organizational thinking and strategic directions. The challenges that these bring have been compounded by the drive toward shorter

product life cycles, customer involvement, and increased scope and complexity of interorganizational relationships.

Today organizations have embraced project management, in principle at least, as the way to address these challenges. So all these areas have entered the project management domain; indeed they have swamped it. Consequently, it is not unusual for companies to be faced with hundreds of projects annually and even more to choose from. It can be shown mathematically that supposing you have, say, fifteen projects from which you have to choose some, but not all, then you have around thirty thousand choices.¹ Obviously the optimum selection within the constraints of the enterprise's resources is a serious challenge. This book explains how to tackle this problem and what information you need to do so.

The second thing to recognize is that we are dealing here with a different group of people who don't speak the same language. They even have a different mind-set compared to project management types. These are the people who run the enterprise within which projects take place, and they are the ones responsible for keeping the organization afloat. That is, Harvey is addressing business executives such as chief executive officers, chief operating officers, chief financial officers, chief information officers, senior functional managers, or even strategic planners. Certainly, to them, "on time" and "within budget" is important, but their real interest lies in the answer to the question, "What benefits will this project bring to the organization, when, and how risky is it?"

The important point here is that the answers to these questions are typically beyond the purview of the average project manager. Certainly, timely delivery of the right product at the right level of quality is essential, but the correct deployment of that resulting product is what will determine whether the project is really successful. So Harvey introduces readers to a new idea, the project portfolio life span (PPLS). This is the feature that makes the whole thing make sense. PPLS links project benefits back to the original selection decision and provides the basis for continuous organizational learning.

The third lesson to be gained from this book is that it makes a cogent case for consistency in project management methodology, without which it is not possible to collect the requisite project selection decision-making data. It makes an even stronger case for establishing a central project or program office to facilitate the collection and transfer of those data and provide unification of project direction, priority assignment of limited resources, and so on. Such an office must also facilitate the transfer of requisite information back to the various project managers so that they have the information available for making rational corporate-beneficial decisions rather than just project-beneficial decisions.

As Harvey says in Chapter 1.1, “What is so obviously needed is a basis for addressing project selection issues, deciding on project termination, facilitating reallocation of resources, changing of priorities, and evaluation of alternatives. And, without this capability, there is no project portfolio management.” Furthermore, he says, “Periodically, we need to review [each] project to test assumptions, update givens, and monitor progress. We need to periodically examine alternatives and consider remodeling the portfolio.” And he continues in Chapter 2.4, “The core mistake is to think that PPM is fundamentally the management of multiple projects. This definitely is not so. PPM is the management of the project portfolio so as to maximize the contribution of projects to the overall welfare and success of the enterprise.”

Finally, as Harvey writes in his Foreword to my most recent book: “The recognition and structuring of PPM during the last five years or so has raised the value of projects and project management to a new level. We are now in a position to bridge the gap between the projects and the operations sides of our business. PPM enables us to not only do projects right, but to select and do the right projects in the first place.”

Throughout this book, Harvey tackles the many problems associated with PPM, such as ranking value and benefits, the size of the portfolio pipeline, the impact of uncertainty on projects and portfolios, the benefit-risk relationship, and how to implement PPM.

He has divided the book into two major parts, the first containing the results of his own findings and the second with chapters contributed by major players in the field. A significant portion of the book is devoted to a practical look at precise details for effective PPM implementation.

The whole is a valuable and instructive read and should be on the bookshelf of every executive and senior manager involved in or contemplating the elusive but finer art of project portfolio management.

Vancouver, B.C., Canada
May 2005

Max Wideman

Max Wideman is a Project Management Institute Fellow and past PMI chair. Among his publications are *A Management Framework for Project, Program and Portfolio Integration* (2004) and *Cost Control of Capital Projects and the Project Cost Management System Requirements* (2nd edition, 1995).

Acknowledgments

With forty-three years of intensive involvement in project management (PM), it's only natural that I would build a large network of colleagues who have also been significant contributors to the PM state-of-the-art. What has been a major joy is the sharing among us. We post our research and discussions on open Web sites. We meet, in person or electronically, to discuss, argue, challenge, and test our theories. We gladly share our findings and experiences. With mutual respect, we express our dedication to this exponentially growing field through our publications.

I have had the honor several times to provide a guest chapter to publications by my colleagues. Now it's payback time. In Part Two of this book, about two dozen leaders in the field of project portfolio management (PPM) have contributed their knowledge, experience, and expertise by providing valuable content. Some of them are long-time friends. Others are recent additions to the network. Still others are new associates—those whom I contacted after reading impressive and valuable articles that they authored. Some are polished writers. Others had to be mentored to get past some writer's block or style issues.

What is common to all of them is that they have, through their earlier work and through their writings for this book, left a legacy for the growing PPM community. Without their thoughtful contributions, we would not have published this book. I am deeply indebted

to them for their support and for helping to make this book a valuable resource for the PPM community. A big thank-you to K. C. Yelin, Ray Trotta, Christopher Gardner, Jim Devlin, Mike Gruia, Cliff Cohen, Randy Englund, Matt Light, David Hurwitz, Bob Cooper, Larry Leach, Rebecca Seibert, Don Kingsberry, Rich Dougherty, Vanessa McMillan, Bob Graham, Dennis Cohen, James Schlick, Andrew Longman, Gil Matleff, Jim Pennypacker, and Patrick Sepate for their contributions.

When I first proposed this book, Jossey-Bass, the publisher, was looking for some validation that there would be buyers for it. This is becoming a very competitive market. My first reaction was to invite a few PM software vendors to participate as sponsors. The response was immediate and overwhelming. I thank Expert Choice, Sciforma, Dekker, Welcom, and PlanView for their support. These valued PM software developers have made many contributions to the practice of PM and PPM. Some of them have also provided material for the book, and all will help get the book out to the readers. I also thank them for their faith in my ability to produce a valuable reference book. It is most gratifying.

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A very special thank-you to R. Max Wideman for contributing the Foreword for this book. Max has been a leader in the project management community and has served as president and chair of the Project Management Institute and is a PMI Fellow. For several decades, we have shared a passion for project management and for the development of standards and a body of knowledge. His recently published *A Management Framework for Project, Program and Portfolio Integration* is his latest gift to this body of knowledge. I value his career-long dedication and his friendship. Max also provided significant and valuable comments and advice that helped to make this a better book.

A very, very special thank-you to my spouse of forty-seven years, Judy Levine. In addition to the important encouragement and support, Judy also volunteered to read the manuscript before I submitted it to the publisher. As an author in her own right, she made numerous helpful suggestions to improve grammar and readability. As a retired management professional, she read with interest and understanding this treatise on project portfolio management (not her field) and offered perceptive comments for further improvement of the text. If, when you read this book, you can get through the difficult passages with understanding, tip your hat to Judy.

Finally, after a long career in practicing project management and especially in sharing my knowledge and views, this thought comes to mind: to teach is to learn. After doing hundreds of seminars, speeches, and writings, I find that the payoff is what I learn from each of these experiences. So to all of those who have worked with me on this project, thanks for contributing to my knowledge and making me wiser.

The Author

Harvey A. Levine is in his forty-fourth year of service to the project management profession, providing applications, system design, and consulting services in project planning and control, mostly with the General Electric Company. He has served on the board of directors of the Project Management Institute, including as president and chairman of the board, and is a PMI Fellow. Levine has been adjunct professor of project management at Rensselaer Polytechnic Institute and at Boston University. Since 1986, he has provided consulting services in a wide range of project management areas, across all industries and sectors. His book *Practical Project Management: Tips, Tactics, and Tools* (2002) has won wide recognition for its pragmatism and readability. He has also published over two hundred articles and papers.

Introduction

Project portfolio management is a set of business practices that brings the world of projects into tight integration with other business operations. It brings projects into harmony with the strategies, resources, and executive oversight of the enterprise and provides the structure and processes for project portfolio governance.

I have never been one to jump on the bandwagon. Much to the contrary, I tend to resist and question new trends and fads, finding that many of them are only a flash in the pan—short on substance and practical use. However, when it comes to PPM, I eagerly join the stampede. PPM is more than an expanded application of project management. The emergence of PPM as a recognized set of practices may be considered the biggest leap in project management technology since the development of Program Evaluation and Review Technique and Critical Path Method in the late 1950s. However, it is important to recognize that this newer technique goes way beyond the simple expansion of project management practices. PPM revolutionizes the way that we look at projects, the impact that projects have on the health of the business, and even the governance of projects.

Understanding What PPM Is Not

Don't confuse PPM recent popular concepts, such as enterprise project management and professional services automation. These are an expansion of project management, but in a totally different direction. And neither addresses the alignment of projects with strategies or the science of selecting the right projects. Neither of these provides for project portfolio governance.

Another key misconception is to think of PPM as the management of multiple projects. Yes, PPM does address this. But the primary and unique aspect of PPM is what it does to formalize and assist in the selection of projects.

We talk about why we need PPM in Chapter 1.1 and about what PPM is and is not in Chapter 1.2. But here's a brief look.

The What and Why of PPM

PPM is a set of business practices that brings the world of projects into tight integration with other business operations. In the past, the absence of this integration has resulted in a large disconnect between the projects' function and the rest of the operations of the enterprise. Without this essential connectivity, a lot of effort goes into doing projects right—even if they are not the right projects.

We have projects proposed and approved that do not deliver the promised benefits. We have projects that are wrong; they are not in sync with the goals of the enterprise. We have projects that have excessive risk, yet the risk is set aside when the project is considered for approval. We have projects that get approved solely because of the political power of the project sponsor. These projects drain valuable and scarce resources from more beneficial projects.

We have projects that are failing at an early stage. Yet they are continued until total failure is recognized and the team admits that the product cannot be delivered. We have projects that are designed to generate income (or cost savings), but because of various kinds of failures, they become a burden instead. We have projects

that slip so badly in time that they miss the window of opportunity. Yet they are continued when they should be terminated.

So what we have here are two distinct and costly problems:

- Projects that should not have been selected to be in the pipeline
- Projects that remain in the pipeline even after they no longer serve the company's best interests

The result is that many projects are not delivering on their promises or are not supporting the goals of the enterprise.

The Impact of PPM

Fortunately, as widespread and as costly as these problems are, the solution is simple and inexpensive: it requires very little in the way of acquisitions and has very little impact on head count. It does require a few new skills and some small additions to management software. Moving to a PPM culture will require a top-level commitment and a mature and cooperative environment for the project and governance teams.

For this small investment, you can have a significant impact on the way that the organization deals with projects and business initiatives. PPM will push the corporate culture in a new direction—one in which it really wants to go if it could only articulate it.

Success will require the development and implementation of new practices. While the new process flow will be comprehensive, it will actually streamline the selecting and managing of projects. The new processes will be executed primarily with current staffing.

Perhaps the biggest change will be in communication and decision making. And these changes will be for the better.

Do you remember the Six Sigma movement? It propelled us ever closer to zero defects. The PPM process will move us closer to zero failed projects. The objective is to reduce terminated projects to zero. It's hard to argue with the premise that the earlier that you

can weed out a bad project, the better. Best yet is not wasting any time on such a project in the first place.

The Components of PPM

The PPM process starts with a rational prioritization and selection procedure. By evaluating a proposed project against a set of selection criteria, bad projects get weeded out (or modified to meet the criteria). If a proposed project can't pass the minimal criteria, there is no need even to rank it for selection. If we don't let the wild horse out of the corral, we don't have to go and chase it back.

PPM is about having the right information so you can make the right decisions to select the right projects. It's about bridging the gap between projects and operations. It's about communicating and connecting the business strategy to the project selection process. It's about making sure that intended opportunities are real opportunities. By evaluating value and benefits, by modifying benefit calculations on the basis of risk, and by forcing such analyses to take place under structured and consistent procedures, we prevent problem projects from sneaking in with real opportunities. (See Chapter 3.2 on project prequalification.)

By evaluating benefits, risks, alignment, and other business and project factors, we can prioritize candidate projects and select the higher-ranking ones to get first crack at the organization's limited economic and human resources. This is the set of practices associated with project prioritization and selection, addressed in Chapter 2.1.

By monitoring performance of active projects against both the project goals and the selection criteria, we can adjust the portfolio to maximize return. This means being willing to restructure, delay, or even terminate projects with performance deficiencies. The ability to monitor such performance exists in all traditional project management systems. All we add in PPM is the routine to do so and the ability to feed these data into the PPM system. This is the set of practices associated with maintaining the project pipeline (Chapter 2.2).

The Voice of the Skeptic

This book does not profess to have all of the answers. Early adopters of PPM, an emerging art and science, are reporting phenomenal results. Nevertheless, as proven in the Hawthorne experiments, almost any kind of change can bring about initial improvements. Do we need more time to be sure that the improvements that have been experienced are directly related to the adoption of PPM practices? I think not. The first decade of PPM development and application has produced numerous stories of enormous success. We present four of these success stories in the case studies in Section Nine.

If there is any doubt about the value of PPM, it is whether PPM is equally effective across all project environments. In Chapter 3.2 on project prequalification, we look at three typical classifications of projects and discuss the applicability of PPM to each of these.

We have no doubt that there is a vastly increased awareness of the forces that help projects to contribute to business success. Through PPM, noticeable improvements in communication and cooperation between the various disciplines of the enterprise are being achieved.

Nevertheless, there are those who believe that some of the processes offer a simple formula for a complex condition. Some of these processes deal with financial valuations of the proposed projects, such as benefits, return on investment, or net present value without directing much effort toward how these values can be determined. Many PPM tools offer extended abilities to display such values without support for creating valid data. Other tools, such as analytic hierarchy process (AHP), are specifically designed to assist in simplifying the prioritization of complex issues and data. AHP is widely recognized and employed as an aid to the decision-making process (see Chapter 4.3). Still, the skeptic in me pauses to ask whether even this admirable technique might focus too much on the details and miss the big picture.

And then there is the other extreme: where supposedly very precise data are displayed with attractive, advanced graphic techniques.

These techniques, such as the increasingly popular bubble chart, are superb vehicles for presenting extensive, multidimensional data in intelligent, usable formats. They are so impressive as to allow us to overlook the possibility that the data displayed may not sit on a solid foundation.

In a recent discussion, a colleague raised this question:

I find my skepticism to be directly proportional to the PPM software hype curve. The root of my skepticism lies in the benefit and benefit-risk side of PPM. I see bubble charts and Web forms as too simple and shallow to support the depth needed to analyze significant undertakings. Significant undertakings require in-depth business plans with market positioning, detailed financial models, trade-off studies, and competitive analysis. This analysis takes place well before any projects are initiated and continues throughout the life cycle. The approval process is interactive and face-to-face with many PowerPoint briefings. Now, one could argue that the PPM discipline embraces all this, but this embracing is more a declaration of hoped-for ownership rather than value-added.

Because PPM software is limited to simple projects, it is relatively well positioned for internal work like information technology projects. I don't think I will ever see the day when Ford executives look at a project portfolio bubble chart to pick which cars to build. I do think that an IT exec could decide on a Web-based expense report over an upgrade to Office 2999 or vice versa using the PPM tools (but maybe not even here).

One message that we can derive from my colleague's declaration is that (as in any other discipline) we need to understand the available processes and tools and be prepared to apply them where practicable—but not blindly. Every data-based process is subject to somebody fouling up the numbers. Diligence and dutiful wariness must be built into the process.

Nothing in the PPM process precludes preparing traditional business plans and analyses. In fact, they are strongly endorsed.