

Program Management Complexity

A Competency Model



Ginger Levin, PMP, PgMP
J. LeRoy Ward, PMP, PgMP

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To Morris Levin, for his continuing support and love

Ginger Levin, 2010

To Dick Rutledge and Ben Shaktman, whose advice
forever changed my approach to presentations, leading to
more fun and success than I ever thought possible

J. LeRoy Ward, 2010

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Preface

As two of the first individuals to attain the Project Management Institute's (PMI) Program Management Professional (PgMP®) credential, we recognized in our studying of the PMI Program Management Standard (2006) and other key literature in the field, that little attention had been paid to the topic of complexity in program management. While both the first and second editions of the PMI's *The Standard for Program Management* (PMI, 2006, 2008b) note the importance of managing the projects in a program in a coordinated way to ensure that program benefits are achieved, neither edition addresses the complexity inherent in the interdependencies of such projects. Moreover, the topic of the complexity of programs has not been specifically addressed in the rather meager selection of books and other publications on program management now available in the marketplace. Additionally, there is little, if any, information available today identifying a set of competencies a program manager needs to possess to successfully complete his or her program and deliver the benefits desired by stakeholders. This book fills this void.

We offer a competency model based on more than 70 years of collective experience in the field, as well as drawing from other authoritative sources, that can help existing program managers assess where they can enhance their own skills, while also providing prospective program managers information so they, and others,

can determine if they are ready to assume a program manager position. Finally, our model can be used by corporate and governmental organizations, universities, executives, and human resources professionals to determine program management training needs and other developmental approaches to ensure their staff members can successfully fulfill the role of program manager. After all, programs, with their focus on major and substantive organizational change, are becoming an increasingly more important component in organizations' portfolios. Someone has to "run" them, and that someone must have the requisite skills and competencies to do nothing short of an outstanding job.

We believe complexity is a phenomenon that has plagued and challenged many project and program managers in every industry sector and across all geographies. However, while much research has been devoted to complexity in terms of *project* management, limited research is available on complexity in *program* management notwithstanding the fact that complexity is a recognized characteristic of program management. Perhaps this is because program management remains in its infancy as a profession as compared to project management. But programs are major assets to organizations driving organizational change throughout major business units. If such initiatives are seen mainly as a collection of projects, then resource allocation will be subpar, planning will be episodic, and there will be no one who understands the coherent "whole." As such, the organization stands a greater chance of being unsuccessful, paying more money, and taking more time, than if the projects were managed in a coordinated way.

Additionally, and even when managed in a coordinated way, as the level of complexity increases in a program, the ability of the program manager and his or her team to deliver stated benefits can be, and often is, negatively impacted. Far too often, people do not understand the level of complexity they face until they are "right in the middle of it." Manifestations of negative impact include deteriorating team morale, sponsor and client dissatisfaction, cost and time overruns, and poor requirements management, to name several. Such negative impact has been quantified by many organizations and reveals that hundreds of millions of dollars are being misspent as a result of poor program management practices.

This book, and the development of its accompanying competency model for program managers, was prepared to emphasize the following areas:

- How can a program manager identify the nature and components of complexity in his or her program such that it can be managed successfully and the program will deliver its intended benefits?
- What are the key competencies required of the program manager for success?

In other words, if a program manager can recognize the elements of complexity early on during the defining and initiating stages of a program, can he or she apply certain and specific competencies and management techniques to ensure that such complexity is not a detriment to the program? Moreover, once recognized, what steps can a program manager take to use such complexity to his or her best advantage? And, how can a competency model assist program managers in successful delivery of program benefits and products, services, or results?

The book is organized first with a literature review of program and project management complexity. It then presents an overview of a competency model for program managers, divided into performance competencies and personal competencies. The performance competencies are organized according to the six domains of program management, while the eight personal competencies are based on research plus a limited survey by Program Management Professionals (PgMPs®), who also assisted in its validation.

Following the model are three assessment instruments that include questions to assess one's own competency as a program manager, questions one can use if considering program management as a career, as well as questions an organization can use to determine the knowledge, skills, and competencies of the program managers in the organization to then chart a path for professional growth and continuous improvement. These questions also are contained on the accompanying CD-ROM to this book, which can be found at <https://www.routledge.com/9781439851111>.

Guidance on methods to implement the model for use by individuals who are program managers, are aspiring to be program managers, or by the organization for its program professionals is provided.

Program management is an exciting field but there is a lot at stake: time, money, your organization's reputation, and *your* personal reputation. This work is our attempt to provide some guidance and assistance in helping to ensure that we are all successful with our programs. Let us know what you think.

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About the Authors

Dr. Ginger Levin is a senior consultant and educator in project management. Her specialty areas are portfolio management, program management, the Project Management Office, knowledge management, metrics, and maturity assessments. She is certified as a PMP®, PgMP®, and as an *OPM3* Assessor and Consultant. She was the second person in the world to receive the PgMP.

In addition, Dr. Levin is an adjunct professor for the University of Wisconsin-Platteville, where she teaches in its M.S. in Project Management Program and for SKEMA (Esc Lille) University, France, in its project management program at the masters and doctoral level. Also, she is a Visiting Professor for RMIT in Melbourne, Australia.

In consulting, she has served as project manager in numerous efforts for Fortune 500 and public-sector clients, including UPS, Citibank, the U.S. Food and Drug Administration, General Electric, SAP, EADS, John Deere, Schreiber Foods, TRW, the New York City Transit Authority, the U.S. Joint Forces Command, and the U.S. Department of Agriculture.

Prior to her work in consulting, she held positions of increasing responsibility with the U.S. government, including the Federal Aviation Administration, Office of Personnel Management, and the General Accounting Office.

She is the co-author of *Implementing Program Management: Forms and Templates Aligned with the Standard for Program Management*, Second Edition (2008); *Project Portfolio Management: Tools & Techniques; Metrics for Project Management; Achieving Project Management Success Using Virtual Teams; The Advanced Project Management Office: A Comprehensive Look at Function and Implementation; People Skills for Project Managers; Essential People Skills for Project Managers; The Business Development Capability Maturity Model; and ESI's PMP Challenge! PMP Study Guide* and the *PgMP Study Guide* (along with J. LeRoy Ward). Her book entitled *Interpersonal Skills for Portfolio, Program, and Project Managers* also was published in 2010.

Dr. Levin received her doctorate in Information Systems Technology and Public Administration from The George Washington University, and received the Outstanding Dissertation Award for her research on large organizations. She also was inducted into Phi Alpha Alpha, the National Honorary Society for Public Affairs and Administration.

J. LeRoy Ward, Executive Vice President, is responsible for ESI's worldwide product offerings and international partnerships. Complementing a 17-year career with four U.S. federal agencies, Ward has delivered project management programs to clients around the world.

A noted author and speaker, Ward has served on the adjunct faculties of The George Washington University and American University, presenting courses in remote sensing, cartography, computer systems management, and information systems. He has authored numerous articles and publications, including the *Dictionary of Project Management Terms* (3rd ed.); the *PMP® Exam Practice Test and Study Guide*, *PMP® Challenge!*, and the *PgMP® Exam Practice Test and Study Guide* (with Ginger Levin); a set of audio CDs entitled *Conversations on Passing the PMP® Exam* (with Carl Pritchard); and *Project FRAMEWORK, a Project Management Maturity Model* (with multiple authors, including Ginger Levin). His articles have appeared in *PMNetwork*, *Chief Learning Officer*, and *Project Manager Today* (U.K.). A popular and dynamic presenter, he speaks frequently on project management and related topics at professional association meetings and conferences around the world.

Ward holds B.S. and M.S. degrees from Southern Connecticut State University in geography and an MSTM degree, with distinction, in Computer Systems Management from American University, where he was inducted into Phi Alpha Alpha, the National Honorary Society for Public Affairs and Administration. He is an alumnus of the General Services Administration's Trail Boss Program (for major systems acquisitions) and the Federal Executive Institute.

Ward is a member of several technical societies, including the American Geographical Society, the American Society of Training and Development, the International Project Management Association, and the Project Management Institute where he is certified as a Project Management Professional (PMP—Number 431) and a Program Management Professional (PgMP), one of the first to earn the credential.

Overview

Complexity is a phenomenon that has plagued, confounded, and challenged many program managers across all industry sectors and geographies. In short, as the level of complexity increases in a program (defined as a business initiative comprising a group of related projects that are best managed in a coordinated way to achieve stated business benefits), the ability of the program manager and his or her team to deliver stated benefits can be, and often is, negatively impacted. Manifestations of negative impact include deteriorating team morale, sponsor and client dissatisfaction, cost and time overruns, and poor requirements management, to name several. Such negative impact has been quantified, in particular in the information technology industry, by firms and organizations such as Standish (2007). These reports reveal that hundreds of millions of dollars are being misspent as a result of poor program management practices.

Our goal is to help bring these poor practices to an end. Accordingly, this book focuses on answering the following questions:

- How can a program manager identify the nature and components of complexity in his or her program such that it can be managed successfully, and the program will deliver its intended benefits?

- What are the key competencies required of the program manager for success?
- How can a competency model assist program managers, aspiring program managers, and organizations?

Our thesis is simple: If a program manager can recognize the elements of complexity early on during the defining and initiating stages, he or she will be able to apply certain and specific competencies and management techniques to ensure that such complexity is not a detriment to the program. Moreover, once recognized, there are certain steps a program manager can, and should, take to use such complexity to his or her best advantage. And, finally, a competency model can be used as a guide to recruit, train, and develop a program manager such that he or she is successful in delivering stated program benefits, products, services, and results.

COMPLEXITY IN PROGRAM MANAGEMENT

Background

Complexity, as a discrete topic, has been studied and analyzed for years by many writers and thinkers. There are numerous books and articles on the subject, and, broadly speaking, it appears there is beginning to be some degree of consensus as to what complexity is and how it is defined. Moreover, the literature in project management is quite rich with many books, articles, dissertations, refereed papers, and theses being written on all aspects of the discipline, including identifying and managing project complexity.

Project management has emerged in the past ten to 15 years as a legitimate discipline with its own body of knowledge, standards, and methodologies. As we go to press, there are more than 300 colleges and universities around the world offering courses or degrees in the subject. Additionally, according to the Project Management Institute (PMI 2010), the largest association of project managers in the world, to date there are approximately 400,000 people who are certified as a Project Management Professional (PMP®).

The same cannot be said for the field of program management, defined by the PMI (2008d) as “a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related work outside the scope of the discrete projects in the program” (p. 5). To date, there are only about 500 people certified by the PMI (2010) as a Program Management Professional (PgMP®). Very few, if any, universities offer courses in the area, and there are no generally accepted bodies of knowledge or methodologies in the field, save for what a specific corporation or organization might have developed for internal use. The one standard on the subject was published by

the PMI, while the Office of Government Commerce (2007), a part of the U.K. government, has published a “guide” entitled *Managing Successful Programmes*, which has an associated credential entitled the MSP. In short, program management has a long way to go to catch up to its “cousin,” project management. And additional attention is required for the reasons discussed below.

Programs are more varied in nature than projects and can be materially different along many dimensions. For example, it is widely held as conventional fact that a project has a beginning and an end. Yet, many programs have no stated end, let alone an end date.

For example, an annual construction program, such as one in which one of the authors worked on for the U.S. Bureau of Indian Affairs (BIA), will never end so long as the BIA elects to educate Indian children located on the more than 400 reservations in the United States.

A second and material difference is that a program, by definition, can have elements of operational activities associated with it (e.g., maintenance and operations of Indian schools). By definition, a project does not include such activities. Complexity in program management then may arise from the interrelationships and interconnections between and among its constituent projects and non-project work, in addition to the varied sources that have been described in the literature as causing complexity within the individual projects themselves. As well, programs must contend with competition in the marketplace; in technology; in the products, services, and results of the program; and in the performing organization as well as the client organization. These interconnections and interrelationships are explored in this book.

Working with private-sector companies in all industry verticals and geographies, and also with government agencies and nonprofit organizations around the world, we note that there is no commonly held definition of what a program is; accordingly, the definition of program management tends to be “murky” as well. In short, it seems to be unique to whatever organization is practicing the discipline. Additionally, our literature review did not discover any level of

substantive treatment related to the issue of complexity in programs and, as an extension, on how to manage such complexity. There are, however, an increasing number of articles and books that address project complexity, but projects as stand-alone entities.

We have concluded, therefore, that the area of complexity as it relates specifically to programs is in need of further study. Accordingly, this book is intended to add to what little body of knowledge exists and should help program managers identify complexity and ways to deal with it using a competency model as an aid.

Definition of Complexity and Its Key Concepts

It is important to note that even the word “complexity” is difficult to understand. Geraldi (2008) states that “mastering complexity is not a new challenge but an old challenge that is being increasingly recognized and accepted” (p. 4). She points out that while projects and project management are associated with complexity, many have difficulty understanding the concept and, as such, do not look upon a project as a complex system, with very negative consequences. Projects are complex because they represent something unique. And because they are unique, they have an element of uncertainty with regard to their execution that often results in re-work and added time and costs. Often there is insufficient time to make decisions, and it is easy to become involved in the details, losing sight of the overall goals and objectives. This need for timely decision making may lead to mistakes, especially if the goals are not explicit, the team has not worked together before (or is in the forming stage), and there is a large number of stakeholders struggling to comprehend a significant amount of information.

Other key concepts that lead to complexity include politics, new technology, the size of the project, involvement of other organizational units, a large quantity of information sources, a low maturity level in project management, and new processes to consider. The list is long in the project environment, and many of these concepts tend to be overlooked. Partly this is because complexity is not well defined or noted in the field. Cicmil, Cooke-Davies, Crawford, and Richardson (2009) point out this dilemma as they note that “dictionary definitions are not particularly helpful” after stating that discussion of “complex projects is bound to encounter risks inherent in the use of language” (p. 19).