Fundamentals of Project Management, 4th Edition
Simple Solutions for Busy People
By Joseph Heagney
(A Book review by R. Max Wideman, FPMI)
The views expressed in this article are strictly those of Max Wideman.
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Introduction

Every now and again it is nice, even comforting, to read a book on the basics or fundamentals of project management. Here is a book that does just that. It is a simple compendium of all the things that every project manager should know — *from the start*. And it is unique in a couple of ways.

Firstly, Joseph Heagney, author of the 4th edition, has updated this latest book from the previous editions that were written by a different and well-known author, James P. Lewis, PhD. That makes the contents well tried in the market place. The second reason it is different is that it devotes fewer that ten pages to the pronouncements found in the Guide to the Project Management Body of Knowledge ("PMBOK") published by the Project Management Institute ("PMI"). Instead, with the realistic pragmatism founded on project leader experiences and responses that have stood the test of time, it presents practical applications intended as a brief overview of the discipline of project management.

For example, Joseph observes in his Preface to the Fourth Edition:
> "Projects are often accomplished by teams, teams are made up of people, and people are driven by . . . Project leaders. Conspicuously absent from the preceding is the term 'manager', as in 'project manager'. If project managers manage projects, what do they do with the people who make up their teams or support networks in the absence of a formal team? Successful project leaders *lead* the people on their teams to consistent goal attainment and enhanced performance."[1]

Unfortunately, our culture being what it is, "Project *Leader*" does not sound nearly as impressive as "Project *Manager*"!

As the back cover tells us: "The fourteen accessible and clearly arranged chapters feature enlightening examples and instructive, challenging exercises, the answers to which combine to form a valuable do's-and-don'ts list applicable to all your current and future project endeavors."[2] Well, at least as the PMBOK guide says: "On most projects most of the time."[3]

Book Structure

This book has a simple and logical structure of fourteen chapters as follows:
Figure List
Preface to the Fourth Edition
Acknowledgments
1. An Overview of Project management
2. The Role of the Project Manager
3. Planning the Project
4. Developing a Mission, Vision, Goals, and Objectives for the Project
5. Creating the Project Risk Plan
6. Using the Work Breakdown Structure to Plan a Project

Chapter 1, the longest, gives a fast overview of the scope of project management. In particular it includes words of wisdom not normally found in textbooks such as:

- "It would be better if the *PMBOK(®Guide* specified that a project manager should **facilitate** planning"[4]
- "The role of the project manager is that of an enabler"[5]
- "Leadership is the art of getting others to want to do something that you believe should be done"[6]
- "[The] reason [why] people don't plan is that they find the activity painful.[7]
- [But] No plan, no control![8]

All the chapters are laced with simple diagrams and callouts that emphasize the contents. Also, every chapter concludes with an associated summary: *Key Points to Remember*, and most close with review questions or an exercise for discussion.

What we liked

Author Joseph Heagney rightly points out that:

> "One of the most common misconceptions about project management is that it is just scheduling. [This] is certainly a major tool used to manage projects, but it is not nearly as important as developing . . . a good work breakdown structure (WBS) to identify all the work to be done. . . . In fact, without practicing good project management, the only thing a detailed schedule will do is allow you to document your failures with great precision!"[9]

> "Scheduling is just one of the tools used to manage jobs and should not be considered the primary one."[10]

He asks rhetorically: "Isn't project management just a variant on general management?" Very good question. Many people outside of project management would like to see it that way so that everyone would fit into well-established slots. In answer to his own question:

> "Yes and no. There are a lot of similarities, but there are enough differences to justify treating project management as a discipline separate from general management. For one thing, projects are more schedule-intensive than most activities that general managers handle. And people in a project team often don't report directly to the project manager, whereas they do report to most general managers."[11]

And then in Chapter 2 he continues:

> "What is Managing? . . . I don't know if it is really possible to convey what managing

actually is. One reason is that project management is a ***performing art***, and it is difficult to convey in words what an actor, athlete, or artist does. However, we can describe the various roles of a project manager, and that is the focus of this chapter. What should be clear is that you cannot very well become something if you cannot describe and define it, so this is a necessary exercise."[12]

Well said! And to this, for the benefit of all those distraught project managers out there, he might have added a reference to ***responsibilities*** and how you should go about demonstrating your ***reliability*** and ***authority***!

Later, Joseph adds:
> "If you consider the major function of managing, it is to ensure that desired organization objectives are met. This is accomplished by exercising control over scarce resources. However, the word control has two connotations, and we must be careful which one we intend.
>
> One meaning of the word is 'power and domination'. In management, this is sometimes called the command-and-control approach, which in its worst form degenerates into the use of fear and intimidation to get things done. . . . The second meaning of control – and the one I advocate for managers – is highlighted in the idea that control is exercised by comparing where you are to where you are supposed to be so that corrective action can be taken when there is a deviation. . . .
>
> In any event, the major point to remember is that you cannot have control unless you have a plan, so planning is not optional."[13]

In our experience, not every project is bounded by scarce resources. The "requirements" for some projects call for the best of the best for everything, as in "world class". These are the projects that really go out of control, and seemingly go on forever!

Some useful ideas

On Work Breakdown Structures

Some people ask: Why bother with a Work Breakdown Structure (WBS)? Joseph Heagney answers that question as follows:
> "A major problem in project planning is determining how long tasks will take and what it will cost to do them. Inaccurate estimates are a leading cause of project failures, and missed cost targets are a common cause of stress and recrimination in project management.
>
> The most useful tool for accomplishing all of these tasks is the WBS. The idea behind the WBS is simple: You can subdivide a complicated task into smaller tasks until you reach a level that cannot be further subdivided. At that point, it is usually easier to estimate how long the small task will take and how much it will cost to perform than it would have been to estimate these factors at higher levels."[14]

Later, Joseph goes on:
> "Generally, we use average times to plan projects. . . . That is the idea, anyway [but] Parkinson's Law discredits this notion, however. Parkinson said that work expands to fill the time allowed. That means that tasks may take longer than the estimated time, but they

almost never take less. One reason is that when people find themselves with some time left, they tend to refine what they have done. Another is that if they turn in work early, they may be expected to do work faster the next time or that they may be given more work to do."[15]

So it is important to recognize these realities when estimating and managing your project. Joseph suggests
"Some guidelines for documenting estimates:

- Show the percent tolerance that is likely to apply.
- Tell how the estimate was made and what assumptions were used.
- Specify any factors that might affect the validity of the estimate (such as whether the estimate will still be valid in six months).

. . .

In fact, it is impossible to make sense of any estimate unless these steps are taken, so they should be standard practice"[16]

On scope changes and multitasking

Joseph Heagney notes that:
"I am often told that scope and priorities change so often in a given organization that it doesn't make sense to spend time finding critical paths [in scheduling]. There are two points worth considering here. One is that if scope is changing often in a project, not enough time is being spent doing upfront definition and planning. Scope changes most often occur because something is forgotten. Better attention to what is being done in the beginning usually reduces scope creep.

Second, if priorities are changing often, management does not have its act together. Generally, the organization is trying to tackle too much work for the number of resources available. . . . One company found, as an example, that when it stopped having people work on multiple projects, employees' productivity doubled! That obviously is highly significant."[17]

On task durations

"A good rule of thumb to follow is that no task should have a duration much greater than four to six weeks. For knowledge work, durations should be in the range of one to three weeks, because knowledge work is harder to track than tangible work."[18]

Applying mathematics

One thing that caught our eye is Joseph's observation: "You Can't Have It All!"[19] and goes on to explain:
"One of the common causes of project failures is that the project sponsor demands the project manager must finish the job by a certain time, within budget, and at a given magnitude or scope, while achieving specific performance levels. In other words, the sponsor dictates all four of the project constraints. This doesn't work."[20]

We agree, even though we are not entirely sure of the meaning of "Performance". It could be the

efficiency of the work performed by the project team, the quality of the work reflected in the product, or the performance of the product in use in successfully producing benefits? Nevertheless, the author expresses the relationship mathematically as follows:

$$C = f(P, T, S)$$

That is to say, "Cost is a function of Performance, Time, and Scope"[21] where function "f" is some factor or other.

Expressing this relationship mathematically is a useful idea. However, the true project management variables are Scope (of the required product), Quality (grade of the required product) as inputs that result in Time (required to do the work) and the consequential Cost (of the whole exercise including materials, equipment and overheads). Or as an equation:

$$SxQ = f(TxC)$$

Where "f" is a factor reflecting the efficiency of the work force, its management and the obstacles (risk events) encountered. But what this equation means is that the author's relationship can be more precisely written as:

$$C = f_2 \frac{(SxQ)}{T}$$

Where C = Total Cost and f_2 is the inverse of f described above.

Obviously "f" could be analyzed further but the problem is in determining suitable cost scales for the S, Q, and T variables. Perhaps here is a valuable area for future project management research, especially beneficial for estimating. But simply understanding this relationship is a valuable background to decision-making.

Downside

In the author's view, "Unless you are coordinating the work of other people, you are not practicing true project management."[22] We don't agree. Many projects do undoubtedly involve the work of only one person and necessarily involve the development of a WBS, a schedule, as well as the cost and risk of the exercise. Surely that is project management, even if it is "self-management"? Indeed, one of the big advantages of introducing young people to project management early in their careers, is to give them the opportunity to practice self-serving life skills.

Conversely, many people in the IT domain, especially those using "Agile" practices, measure their progress by tracking the number of outstanding "issues". Since new issues can surface at any time, by this metric just standing still can represent a lot of work! But because they are not tracking time or cost, does this mean that they are not practicing true project management? By the author's standard, we are inclined to think they are not.

Chapter 9 – *Project Control and Evaluation* is a very good chapter. However, we do not feel the same about Chapter 10 – *The Change Control Process*. This chapter is one of the "three notable topics that have been expanded for this [4th] edition."[23] In the first place, in a section titled *Sources of Change* it talks about that wretched obsolete construct *triple constraints triangle*,[24] obsolete because a triangle cannot represent the complete project situation. Second, it is stated that: "Project quality is a constant and should always be considered as a potential source and focus of change control."[25] If "Project quality is a constant", then why would it be subject to "change control"? Thirdly, and on the contrary, the basis of project quality and product quality must both be measured against the quality ***grade*** that is specified in the project's requirements. And ***quality grade*** is a key ***variable*** that must be specified along with the

project's scope at the outset.

Under a section titled: "The Six Steps in the Change Control Process"[26] the first step is describe as: "Step 1: Enter initial change control information into your change control log." We are inclined to disagree. We think a better first step is to ascertain whether what is being asked for is in fact a change, relative to the original baseline documents, or is it just a clarification of those original intentions? Asking this question avoids having the change control log cluttered up with a lot of non-starters that tend to make the final record look bad.

In "Step 2: Determine if the change should be processed" we are told that;
> "By determining if the change should be processed, you take on the role of the project's gatekeeper. All too often, I have seen project managers accept changes simply because they are requested. If the change doesn't make sense – if it doesn't add value or should not proceed for other reasons – push back. Request clarification or justification to help you arrive at a reasonable decision."

In our view, this is patently wrong. The project manager should never be put in the position of "gatekeeper". That is not his or her job. His or her job is to manage the people doing the work of the project according to requirements. Unless the required change is patently obvious and minor, in other words a "no-brainer", the requested change should be referred to a change control board chaired by the project's owner or sponsor. And, moreover, it should be accompanied by corresponding adjustments in the project's time and cost allowances (see *Applying mathematics* earlier). Of course such a "Board" might be just one person – provided they have the authority to spend the client's money!

Summary

According to the author:
> "Whether it's your first project or your one-hundredth, its success depends on your ability to organize, plan, delegate, analyze, and so much more. Now is not the time for complicated theory or advanced concepts. You need the proven, universal underpinnings of real in-the-field project management methodology."[27]

Notwithstanding our observations described under ***Downside***, we quite agree. As we said at the beginning, it is nice to read a book on the real basics of managing a project and this book does provide "Simple Solutions for Busy People".[28]

R. Max Wideman,
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[1] Heagney, Joseph, *Fundamentals of Project Management*, 4th Edition, AMACOM, NY, 2012, p xi
[2] Ibid, back cover
[3] PMBOK® Guide, Fourth Edition, (2008) Chapter 1, p3
[4] Heagney, p5
[5] Ibid.
[6] Ibid, p5 &29, originally taken from *The Pyramid Climbers* by Vance Packard.
[7] Ibid, p33
[8] Ibid, p35
[9] Ibid, p6
[10] Ibid, p81

[11] Ibid, pp1-2
[12] Ibid, p25
[13] Ibid, pp33-35
[14] Ibid, pp68-69
[15] Ibid, p75
[16] Ibid, p77-78
[17] Ibid, pp86-87
[18] Ibid, p89
[19] Ibid, p8
[20] Ibid.
[21] Ibid.
[22] Ibid, p7
[23] Ibid, p xi
[24] Ibid, p126
[25] Ibid, p127
[26] Ibid, p128-130
[27] Ibid, back cover
[28] Ibid, from the title of the book