

PMBOK® Guide, Third Edition – Is more really better?

A Review by R. Max Wideman – Part 3

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In Part 1 of this review we took a general look at the Institute's latest *A Guide to the Project Management Body of Knowledge, Third Edition*, highlighting the good points but also drawing attention to some serious **Missed opportunities**. In Part 2 of our review we looked at Sections I and II of the Guide in more detail, examining both **What we liked** and the **Downside**. In this Part 3 we take a similar look at Section III, The Project Management Knowledge Areas, the largest section of the Guide.

Section III – The Project Management Knowledge Areas

What we liked

In Chapter 4, subsection 4.5, we were pleased to see a somewhat greater focus on managing the work of actually creating the product of the project¹ than was the case in the previous Guide.

Chapter 5, Project Scope Management, makes a sincere attempt to elaborate the distinction between "project scope" and "product scope", but subsequent text appears to confuse the two. So, as we mentioned under *Missed opportunities* and explain in the *Downside* below, it doesn't quite make the grade.

We think that the elaboration of the work breakdown technique, subsection 5.3,² will be more valuable than the earlier Guide's description. Chapter 6, Project Time Management, the second longest in the Guide, is a solid chapter, as in general are Chapter 7, Project Cost Management; Chapter 9, Project Human Resource Management; Chapter 10, Project Communications Management; and Chapter 11, Project Risk Management. These are, after all, well-traveled topics but each chapter has been enhanced by the addition of explanations and examples.

Chapter 12 starts out with a good explanation of the special nature of Project Procurement Management, the importance of rigor in dealing with legal documents and how that affects associated project activities.³ We particularly liked the observation ". . . most of the discussion in this chapter is equally applicable to non-contractual formal agreements entered into with other units of the project team's organizations."⁴ Indeed, many of the principles should be extended to the commitments of the project team members to the project and the project team as a whole to the project's sponsor!

We certainly liked the way each chapter is thoroughly supported by corresponding definitions in the Glossary. We had to refer to it many times to clarify our understanding of the new and changed labels introduced, as well as some of the new terms introduced such as "Influencer"⁵ and "Organizational Process Assets".⁶

Downside

Section III commences with an introduction to Process Flow Diagrams that now appear early in each knowledge area chapter. No doubt business and systems analysts will be comfortable with this form of presentation but that is not necessarily true for the rest of the project management community, especially

when some of the logic or content appears to be open to question. For example, shouldn't the Cost Estimating process shown in the Planning Process Group flow diagram⁷ follow Activity Resource Estimating rather than directly from the Create WBS? The end result of the Planning Process Group appears to be Schedule Development, yet this appears as an input to Cost Budgeting,⁸ Quantitative Risk Analysis (as Schedule Management Plan),⁹ and Plan Purchase and Acquisitions (as Develop Project Management Plan).¹⁰ And shouldn't the output from the Project Scope Management Process Flow Diagram¹¹ be the formulation of the project's product?

We think there is considerable opportunity for clarification and simplification. As an immediate example, "Enterprise Environmental Factors" only needs to be shown as an input to "Develop Project Charter 4.1"¹² and can be removed from all other process flow diagrams since Integration Management applies to all subsequent processes. In Chapter 11, Qualitative and Quantitative Risk Analysis could be combined because, from a process point of view, both are part of project risk analysis. Duplication and overlap could be removed or simplified by cross reference such as the illustrations that appear under the Planning Process Group in Chapter 3¹³ that appear again in the Knowledge Area chapters. Undertaking a review of the Guide from this perspective could possibly reduce its complexity and size by as much as 25 %.

Project Integration Management, Chapter 4, now constitutes seven processes in this group rather than the previous three, as listed below.¹⁴ The three processes in the 2000 version are shown starred.¹⁵

1. Develop Project Charter
2. Develop Preliminary Project Scope Statement
3. Develop Project Management Plan*
4. Direct and Manage Project Execution*
5. Monitor and Control Project Work
6. Integrated Change Control*
7. Close Project

This new lineup really only makes sense in the context of a single-phase project, once more pointing to the failure to recognize the over-arching importance of the project life span as we discussed under *Missed Opportunities* in Part 1 of our review. The confusing similarity with the labels of the five project management process groups, as we discussed under *Section II – The Standard for Project Management of a Project* in Part 2 of our review, must also not be overlooked.

Chapter 4, Project Integration Management, starts out with a number of sections that appear to overlap with those in Section II, Chapter 3. It would have been better to have both these chapters in Section II, and perhaps even consolidated, to provide a comprehensive view of managing a project. This might have avoided the impression that these are somehow separate activities, and proofing of the two together might have eliminated some of the anomalies that follow.

In Part 1 of this review (under *Downside*) we observed that the 2000 version made the tacit assumption that each output is generated by only one process resulting from only one set of inputs. Further, with but one exception, each output that is not an end item is an input to a succeeding process. In other words, the whole represented substantial systems logic. This is not the case with the 2004 version where outputs reappear as outputs from other processes with different inputs. Indeed, outputs from succeeding processes also appear as inputs to preceding processes. Here are some examples.

- "Quality Baseline" is an output from "Quality Planning"¹⁶ and "Quality baseline (Updates)" is an output from "Performance Quality Control".¹⁷ That's fine but they have a different set of inputs,

so the "updating" will be necessary almost immediately.

- "Activity Attributes (Updates)" are outputs from "Activity Sequencing" (i.e. logic)¹⁸; "Activity Resource Estimating" (i.e. resourcing)¹⁹; "Activity Duration Estimating" (i.e. time allocation); and "Schedule Development" (i.e. all of the above)²⁰. Is the business of Project Time Management really that complicated? Should a project really be managed like that?
- "Contract" is shown as an input to "Cost Budgeting"²¹ but "Cost Budgeting" belongs to the "Planning Process Group", while "Select Sellers"²² belongs to the "Executing Process Group". Hence, this is an improbable, if not impossible, connection. Should we really be developing budgets from "what products, services, or results [that have already] been purchased"?²³
- "Administrative Closure Procedure" is an input to "Direct and Manage Project Execution"²⁴ but it is an output of "Close Project".²⁵ This suggests that we are not going to know how to manage the project until after we've closed it.
- "Rejected Change Requests" is an input to "Monitor and Control Project Work"²⁶ but it is an output of the subsequent process "Integrated Change Control".²⁷ This is clearly shown in the same chapter's Project Integration Management Processes Flow Diagram²⁸ and this time there are no feedback arrows to suggest otherwise.

In Chapter 5, the biggest problem continues to be with articulating an effective understanding of Project Scope Management. To start with the Guide provides three distinct entities as follows:

- "Scope" (on its own) is defined as "The sum of the products, services, and results to be provided as a project. See also project scope and product scope."²⁹
- "Project Scope" is defined as "The work that must be performed to deliver a product, service, or result with the specified features and functions."³⁰
- "Product Scope" is defined as "The features and functions that characterize a product, service or result."³¹

To recap, "scope" (on its own) is the deliverable. "Product scope" is the "features and functions" of the deliverable, and "project scope" is the work that must be done to create the deliverable. These are three separate and valuable concepts. But then there are further definitions:

- "Statement of Work (SOW)" is defined as "A narrative description of products, services, or results to be supplied"³² i.e. the deliverable.
- "Work" is defined as "Sustained physical or mental effort, exertion, or exercise of skill to overcome obstacles and achieve an objective."
- "Deliverable" is defined as "Any unique and verifiable product, result, or capability to perform a service that must be produced to complete a process, phase, or project."³³
- "Product scope description" is defined as "The documented narrative description of the product scope."³⁴
- "Project scope statement" on the other hand "describes, in detail, the project's deliverables *and* the work required to create those deliverables."³⁵

Not necessarily the fault of the Guide, but as a standard, Statement of Work (SOW) appears to be a misnomer since "work" is part of the project scope, i.e. "the work", rather than "scope" as in "products, services, and results". In any case, and at least in some industries, "SOW stand for "*scope* of work" rather than "*statement* of work" even though it too is misused. "Product scope description" is evidently a description of the "features and functions" of the deliverable. A legitimate question in all this is: Can the description of the product or service be separated from a description of its functionality and from the work attributable to either one, and does it matter? In our view it can, and it does.

This becomes self-evident when we see that subsection 5.4, "Scope Verification" is characterized as "formalizing acceptance of the completed project *deliverables*", while subsection 5.5 "Scope Control" is characterized as "controlling changes to the project scope", i.e. the *work*.³⁶ The project manager's dilemma is further compounded by the fact that a change to the "scope" and/or "product scope" and/or "project scope", all as defined above, are all handled by the Guide's Integrated Change Control, a "process performed from project inception through completion."³⁷ However, changes to the work may be necessary to correct variances-from-plan in the progress of the project, which is the responsibility of the project's management. Changes in the "scope" and/or "product scope", on the other hand, are most likely the subject of a change requiring formal approval under the authority of the project's sponsor, with concomitant changes to schedule and budget.

Especially where work is being done under contract, these are two very different processes. In our view, this chapter of the Guide requires more work. Definitions are required that clearly separate the conceptual goals and objectives of the project, justified in the project's original Project Business Case approved for initiation; the names of the deliverables, stated in the Project Charter; the features and functions of each of those deliverables, as described in the Product Scope Statement; and the work required to create all of that, as described in the Project Scope of Work for execution.

Chapter 8 deals with Project Quality Management. In Part 1, under *Missed Opportunities*, we criticized the sequence in which the knowledge area chapters are presented. The saddest part is that "Quality Management" appears like an orphan after chapters 5, 6, and 7 covering the subjects of scope, time and cost respectively. As we observed in Part 1, "quality" ultimately transcends all else, whether in terms of performance, productivity, or final product. Who will remember that last year's project was late and over budget? That's all lost in last year's financial statements. It is the quality of the product that endures throughout the product's life.

No, the proper place for the subject of quality is immediately after scope. Why? Because in the logical sequence of the four "core" knowledge areas, i.e. scope, quality, time and cost:

- You cannot reliably estimate the "cost" of a project until you know the pace of (i.e. "time") for its production.
- You cannot reliably estimate the durations of the work activities until you know the "quality" grade to be produced by those activities, i.e. how much effort will be required, and
- You cannot discuss those quality grades until you know the "scope" i.e. the deliverables that you are going to produce in the first place.

Hence, the logical planning evolutionary sequence of first "scope", then "quality", then "time" and finally "cost".

This positioning would not only emphasize the importance of quality in the management of a project but that it, like the other three, requires a baseline of reference against which it can be managed. That baseline is the quality "grade" so briefly mentioned in Chapter 8³⁸, and not mentioned anywhere else in the Guide except the Glossary.³⁹ How can you *Perform Quality Assurance*⁴⁰ unless you know the quality grade requirements that you are trying to meet, i.e. conform to?

Few people seem to have latched onto this fundamental concept for project quality management. The text and diagrams in Chapter 8 might have been simplified had this been recognized. Incidentally, neither "conformance to requirements", nor "fitness for use"⁴¹ nor "Quality Baseline"⁴² is defined in the Glossary.

Chapter 12, Project Procurement Management, necessarily deals with a subject that occupies a whole area of the legal profession and upon which a mountain of literature is to be found. Moreover, common practices that form a part of the law vary from jurisdiction to jurisdiction and from one area of project application to another. So it is not easy to reduce the subject to a few pages. Still, we do think some basics could be made clearer.

Unlike the Guide 2000 that expressly stated that the subject "is discussed from the perspective of the buyer in the buyer-seller relationship",⁴³ this Guide 2004 states:

"This chapter presents two perspectives of procurement. The organization can be either the buyer or seller of the product, service or results under contract."⁴⁴

In fact the seller's perspective receives only limited mention and is not called out separately.

Areas that could be improved include:

- "Contract" is an output from "Select Sellers"⁴⁵ but the process of award of contract is a significant one that receives little attention.
- The discussion of "Contract Types"⁴⁶ could be improved. For example: "Cost-reimbursable contracts" and "Time and Material contracts" are often deemed to be synonymous and do not warrant separate paragraphs.
- On the other hand, the type of contract to be deployed depends on:
 - The nature of the product or service to be bought (from off-the-shelf to fully-built);
 - How much you know about what you are buying (from vague outline to fully specified);
 - The manner of specifying what you want (i.e. functional, performance, detailed design, or example as a model);
 - From whom you are buying (e.g. from a Request for Proposal to a professional consultant, to a tender call through a bid depository for site specific services); and
 - The appropriate and corresponding form of payment (from time-and-materials to fixed-price)

These areas are either not distinguished in the text or are overlooked altogether.

We don't think it appropriate for changes to a contract to be processed through the Integrated Change Control process.⁴⁷ A change to a contract is a specific and separate legal process that gets only a brief mention "Under Contract Administration".⁴⁸ The suggested list of "Evaluation Criteria"⁴⁹ is mainly suited to evaluating responses to Requests for Proposals and is not appropriate for construction-type contracts.

Under "Request Seller Response"⁵⁰ the suggestion that "The prospective sellers, normally at no direct cost to the project or buyer, expend most of the actual effort in this process" is an unfortunate one. It suggests that the project gets a free-bee. This is far from true. All of that work, and indeed for the work of lost proposal submissions, has to be paid for somewhere. It becomes part of the price of the product or services and project managers should be made well aware of that commercial fact.

"Records Management System"⁵¹ gets a brief mention when in fact it is a whole process essential to project management as a whole, as well as being a vital part of effective contract administration and control. The paragraph does refer back to "Project Management Information System"⁵² but this brief paragraph does not mention records management per se.

Finally, from Section IV: Appendix A – Third Edition Changes, we learn that:

"The project team proposed a wholesale change to all process names to be verb-object

format in the PMBOK® Guide – third Edition. However, PMI authorized only an incremental change in the PMBOK® Guide – third Edition to include only those approved processes and a small number of other processes for specific reasons explained later in this appendix."⁵³

We think this commercial decision was a pity. At least the labeling at this level would have been consistent and conforming to good Work Breakdown Structure practice.

Summary

This latest Guide is a valiant attempt to improve the previous version. However, it would have been valuable to circulate it as an open Exposure Draft as was done in 1994, and 2000. It is true that members were notified in November 2003 of the availability of an Exposure Draft of this 2004 version but we think that three obstacles have militated against its success.

1. Unlike the Exposure Draft of 2000, it was not made available in hard copy and the proposed changes at the text level were not expressly marked. It is difficult to review a large document on screen and few busy people, those that should be reviewing the document, have the time or inclination to print out such a large document.
2. Nevertheless, it appears that a large number of suggestions were received, perhaps too many to handle in a marked up document. That in it self should have sounded the alarm and a second draft iteration instituted.
3. Those who wished to comment first had to sign PMI's restrictive copyright agreement. We believe that this has probably inhibited a broader and more open exchange of ideas and practical experience for fear of losing ownership of valuable content.

We feel that what is now urgently needed is an amending document that corrects as many deficiencies as possible. This would be a very worthwhile endeavor.

Meantime, I should like to take this opportunity to thank those who have reviewed this analysis and provided most helpful comments.

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¹ *A Guide to the Project Management Body of Knowledge*, Third Edition, Project Management Institute, PA, 2004, pp94-98

² Ibid p112

³ Ibid pp270-271

⁴ Ibid p271

⁵ Ibid p26

⁶ Ibid p40

⁷ Ibid. Figure 3-7, p47

⁸ Ibid Figure 7-2, p160

⁹ Ibid Figure 11-2, p241

¹⁰ Ibid Figure 12-2, p273

¹¹ Ibid. Figure 5-2, p106

¹² Ibid Figure 4-2, p80

¹³ Ibid pp48-65

¹⁴ Ibid pp78-79

¹⁵ Ibid pp303-304

¹⁶ Ibid p187

¹⁷ Ibid p197

¹⁸ Ibid p135

¹⁹ Ibid p138

²⁰ Ibid p151

²¹ Ibid p168

²² Ibid p289

²³ Ibid p168

²⁴ Ibid p93

²⁵ Ibid p101

²⁶ Ibid p95

²⁷ Ibid p99

²⁸ Ibid p80

²⁹ Ibid Glossary p375

³⁰ Ibid Glossary p370

³¹ Ibid Glossary p368

³² Ibid Glossary p376

³³ Ibid Glossary p358

³⁴ Ibid Glossary p368

³⁵ Ibid p110

³⁶ Ibid p103

³⁷ Ibid p96

³⁸ Ibid p180

³⁹ Ibid p362

⁴⁰ Ibid p179

⁴¹ Ibid p181

⁴² Ibid p187

⁴³ *A Guide to the Project Management Body of Knowledge*, 2000 Edition, Project Management Institute, PA, 2000, p147

⁴⁴ *A Guide to the Project Management Body of Knowledge*, Third Edition, Project Management Institute, PA, 2004, p269

⁴⁵ Ibid p289

⁴⁶ Ibid pp277-279

⁴⁷ Ibid p280

⁴⁸ Ibid p292

⁴⁹ Ibid p283

⁵⁰ Ibid p284

⁵¹ Ibid p293

⁵² Ibid p88

⁵³ Ibid p302