COMPARISON OF
PMBOK® GUIDE (third edition)
to the
PMBOK® GUIDE 2000

For those who have studied the PMBOK® Guide 2000 or have used it extensively for training, you have probably found inconsistencies, vague wording, tools and techniques that were used as inputs, and other elements that just didn't seem to make sense within the textual context. PMBOK® Guide *Third Edition* (*Third Edition)* is an attempt to take your recommendations and create a better standard for those who practice project management.

The following pages document the many changes, chapter by chapter. Not all changes are specifically detailed, rather those that are significant are compared or contrasted to PMBOK® Guide 2000.

Cheetah Learning hopes this document helps you to quickly gain an insight into the major differences between the PMBOK® Guide 2000 and the PMBOK® Guide *Third Edition.* We also hope that for those wishing to take the PMP® exam, that it helps you decide on when the time is right for you. The exam is not supposed to be updated until about September 2005 at which time the exam will be based on the PMBOK® Guide *Third Edition*.

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NOTE:

All information concerning the inputs, tools & techniques, and outputs is referenced to the specific version of the PMBOK® Guide as noted above the listings for each process relative to the chapters being compared.

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Chapter 1

→ INTRODUCTION

Chapter 1, the introduction to the *Third Edition,* has one additional section and some section names have been changed as seen below.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Purpose of the PMBOK® Guide	Purpose of This Guide
What Is a Project?	What Is a Project?
What Is Project Management?	What Is Project Management?
The PMBOK® Guide Structure	Relationship to Other Management Disciplines
Areas of Expertise	Related Endeavors
Project Management Context	

The purpose of the PMBOK® Guide has been modified from the "…Body of Knowledge that is generally accepted" (PMBOK® Guide 2000, pg. 3) to the "…Body of Knowledge that is generally recognized as good practice" (PMBOK® Guide Third Edition, pg. 3.) The *Third Edition* better defines the difference between projects which are unique and operational work that is repetitive.

The information presented in the section *What Is Project Management?* in the PMBOK® Guide 2000 is covered in two sections by the *Third Edition: What is Project Management?* and *The PMBOK® Guide Structure*. The section, *Related Endeavors* is now called *Areas of Expertise*.

In the newest section, *Project Management Context*, the *Third Edition* makes some mention of the differences between projects and operations; programs and program management; and portfolios and portfolio management. It also touches on PMO which can mean project management office, program management office, project office or program office. In depth discussion of the above is not included and those wishing more information will have to search out books about each topic.

Chapter 2

➡PROJECT LIFE CYCLE AND ORGANIZATION

In the *Third Edition* Chapter 2 has been renamed *Project Life Cycle and Organization* instead of *The Project Management Context*. The number of sections has been reduced to three from five as seen below.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
The Project Life Cycle	Project Phases and the Project Life Cycle
Project Stakeholders	Project Stakeholders
Organizational Influences	Organizational Influences
	Key General Management Skills
	Social-Economic-Environmental Influences

Chapter 2 begins with a discussion of the characteristics of a project life cycle and moves into a discussion of project phases. When comparing the titles of section one, one might think that the project phases have been dropped from this section in the *Third Edition* when in fact, they are detailed but in a different order. The section titled *Key General Management Skills* has been totally dropped from the *Third Edition* as has the section labeled *Social-Economic-Environmental Influences*.

Chapter 3

➡PROJECT MANAGEMENT PROCESSES FOR A PROEJCT

Chapter 3 has been renamed from *Project Management Processes* to *Project Management Processes for a Project* and one section has been dropped.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Project Management Processes	Project Processes
Project Management Process Groups	Process Groups
Process Interactions	Process Interactions
Project Management Process Mapping	Customizing Process Interactions
	Mapping of Project Management Processes

Chapter 3 reviews all the inputs and outputs for the 44 processes in relation to the process group each belongs to. The process groups remain the same; however controlling has been renamed monitoring and controlling. In the *Third Edition* you will no longer find core processes and facilitating processes. Equal consideration is given to all processes with the realization that the project manager and team have to tailor their project plan to the project they are working on and must decide which processes are relevant to a particular project. The following page shows the 44 individual processes mapped to their corresponding process group.

Before the Knowledge Areas are compared, there are a few changes that are worth mentioning because they are relevant to almost every Knowledge Area. One of the greatest changes in the *Third Edition* is a flow chart at the beginning of each Knowledge Area diagramming the specific Knowledge Area and showing the basic interactions between the Knowledge Area in discussion and other processes. The legend on how to read these flowcharts is described in the PMBOK® Guide *Third Edition* beginning on page 73. These flow charts will take some study to understand and not all interactions are shown.

Many of the updates to the PMBOK® Guide *Third Edition* focus on clarifying terminology and consistent use of that terminology throughout the text. For example, an effort was made to describe processes in a verb-object format such as *Develop Project Charter* and *Create WBS.* These two examples are new processes in the *Third Edition.* However, not all processes were renamed as PMI felt that renaming all processes at the same time would lead to confusion and

would be too big a change. It is expected that sometime in the future, other editions of the PMBOK® Guide will have all the processes renamed in a verb-object format.

Interestingly, historical information, a predominant input during planning, and lessons learned, a predominant output from most control processes, are no longer called out as separate inputs and outputs. Instead they considered part of a new input: organizational process assets. This input can be found in most planning processes and is an output as well. Organizational process assets are information a company or organization may have on hand, such as a quality policy, a hiring policy and an overtime policy, when implementing projects.

Enterprise environmental factors, another new input found in most planning processes, are the factors such as culture, infrastructure, resources and socio-economic conditions that must be taken into account when developing a project plan.

Supporting detail, constraints and assumptions are no longer inputs but are taken into consideration as you develop the various plans that make up the project management plan. Page 75 in the PMBOK® Guide *Third Edition* lists the various plans that make up the project management plan.

Corrective action is an output from many of the controlling processes. In the *Third Edition,* the words 'approved' and 'implemented' will be seen before the words corrective action, defect repair and preventive action. The adjectives show that the change control system was implemented to 'approve' the actions and then the actions were 'implemented' during project execution.

At various times in the PMBOK® Guide 2000, inputs and outputs contained phrases such as 'other process outputs' and 'inputs to other processes.' The *Third Edition* has done away with those board inputs and outputs providing specific inputs and outputs. You will also find that no tool & technique is ever an input or output, unlike the confusion found in the PMBOK® Guide 2000.

Chapter 4

➡️INTEGRATION

Project Integration has always been of some concern as practitioners have argued about its placement at the beginning of the PMBOK® Guide before one has a chance to understand the related processes. In the *Third Edition* you will still find Integration at the front of the PMBOK® Guide however, the Knowledge Area has been expanded from three processes to seven processes as shown below. The seven processes span the life of the project giving a sense that this Knowledge Area is focused on integrating all aspects of the project work.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Develop Project Charter	Project Plan Development
Develop Preliminary Project Scope Statement	Project Plan Execution
Develop Project Management Plan	Integrated Change Control
Direct and Manage Project Execution	
Monitor and Control Project Work	
Integrated Change Control	
Close Project	

Develop Project Charter Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Contract – if needed	N/A
	Project statement of work	
	Enterprise environmental factors	
	Organizational process assets	
Tools & Techniques	Project selection methods	
	Project management methodology	
	PMIS	
	Expert judgment	
Outputs	Project Charter	

The Project Charter, once an output from Initiation in the Scope process, is now a process itself. Inputs to developing the project charter include a contract if necessary and a statement of work. Two other inputs, enterprise environmental factors and organizational process assets, have esoteric names that simply refer to the strategic goals of the company and to any company procedures or guidelines respectively. The project charter still is the formal authorization for beginning a project and handing the authority to the designated project manager.

Develop Preliminary Project Scope Statement Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Project charter	N/A
	Project statement of work	
	Enterprise environmental factors	
	Organizational process assets	
Tools & Techniques	Project management methodology	
	PMIS	
	Expert judgment	
Outputs	Preliminary project scope statement	

In the PMBOK® Guide 2000, the Scope Planning process created a scope statement as an output. The *Third Edition* conveys the fact that a scope statement, in its early stages, is a preliminary scope statement. In doing so, a new process was born: Develop Preliminary Scope Statement with the realization one needs some preliminary information about the project and that the scope statement would be updated as planning progresses.

The preliminary scope statement identifies such items as the rough budget, the preliminary project requirements, constraints and assumptions, early identified risks, acceptance criteria, etc. as provided by the sponsor or the group initiating the project.

Develop Project Management Plan Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Preliminary project scope statement	Other planning outputs
	Project management processes	Historical information
	Enterprise environmental factors	Organizational policies
	Organizational process assets	Constraints and assumptions
Tools & Techniques	Project management methodology	Project planning methodology
	Expert judgment	Stakeholder skills and knowledge
	PMIS (which now includes configuration management and the change control system as subsets)	PMIS
		Earned value management
Outputs	Project management plan	Project plan
		Supporting detail

The next process in Integration, Develop Project Management Plan is similar to the process called Project Plan Development in PMBOK® Guide 2000. Note the name change to reflect the verb-noun convention. The inputs seem quite different as seen above but remember that the inputs of organizational process assets and enterprise environmental factors encompass organizational policies and historical information.

The tools & techniques for Develop Project Management Plan are also changed. There are only three tools & techniques: project management methodology, project management information system (PMIS) and expert judgment. However, configuration management, previously a tool & technique of Integrated Change Control, has been renamed configuration management system and is a subset of the PMIS. The change control system is also a subset of the PMIS, being removed from the Integrated Change Control process.

PMI has updated the text to reflect that the PMIS is now an automated system assuming the wide spread usage of computer software in developing and controlling the project.

You'll notice that throughout PMBOK® Guide *Third Edition*, there are not any references to historical information which was a predominant input to most planning processes. Historical information is now included in the input called organizational process assets.

Direct and Manage Project Execution Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project management plan	Project plan
	Approved corrective actions	Supporting detail
	Approved preventive actions	Organizational policies
	Approved change requests	Preventive action
	Approved defect repair	Corrective action
	Validated defect repair	
	Administrative closure procedure	
Tools & Techniques	Project management methodology	General management skills
	PMIS	Product skills and knowledge
		Work authorization system
		Status review meetings
		PMIS
		Organizational policies
Outputs	Deliverables	Work results
	Requested changes	Change requests
	Implemented change requests	
	Implemented corrective actions	
	Implemented preventive actions	

	Implemented defect repair	
	Work performance information	

The fourth process in Integration is Direct and Manage Project Execution, previously called Project Plan Execution. Again a name change to reflect the verb-noun convention. In PMBOK® Guide 2000, preventive and corrective actions were inputs. This has been expanded to include the following clarification of 'approved' corrective actions, 'approved' preventive actions, 'approved' change requests, and 'approved' defect repair. Administrative closure procedure has been changed to an input from being a process and ensures that part of executing the project is properly closing it, administratively. Tools & techniques have been cut to two: project management methodology and PMIS. The methodology provides the tools needed to execute the plan.

Outputs for the Direct and Management Project Execution process reiterate that the 'approved' changes have been implemented. The outputs have the word 'implemented' before them now. The other outputs are deliverables and work performance information.

Monitor and Control Project Work Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project management plan	N/A
	Work performance information	
	Rejected change requests	
Tools & Techniques	Project management methodology	
	Earned value technique	
	Expert judgment	
	PMIS	
Outputs	Recommended corrective action	
	Recommended preventive action	
	Recommended defect repair	
	Forecasts	
	Requested changes	

Monitor and Control Project Work is the fifth process in Integration. This is a new process that focuses on using earned value analysis techniques to monitor project progress. Out of this process come the 'recommended' corrective actions, preventive actions, change requests and defect repair. These in turn become some of the inputs for the sixth process in Integration, Integrated Change Control.

Integrated Change Control Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project management plan	Project plan
	Work performance information	Performance reports
	Requested changes	Change requests
	Recommended preventive actions	
	Recommended corrective actions	
	Recommended defect repair	
	Deliverables	
Tools & Techniques	Project management methodology	Change control system
	Expert judgment	Configuration management
	PMIS	Performance measurement
		Additional planning
		PMIS
Outputs	Approved corrective action	Project plan updates
	Approved preventive action	Corrective action
	Approved defect repair	Lessons learned
	Approved change requests	
	Project management plan updates	
	Project scope statement updates	
	Validated defect repair	
	Deliverables	

Integrated Change Control is now centered on reviewing the 'recommended' actions or the outputs of Monitoring and Controlling the Project Execution, and approving or rejecting those actions. Project plan and scope statement updates are outputs due to the fact that requested changes may mean updates to either or both of those documents.

As stated earlier, the change control system and configuration management have both been moved to become a subset of the PMIS tool.

Close Project Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project management plan	N/A
	Contract documentation	
	Enterprise environmental factors	
	Organizational process assets	
	Work performance information	
	Deliverables	
Tools & Techniques	Project management methodology	
	PMIS	

	Expert judgment	
Outputs	Administrative closure procedure	
	Contract closure procedure	
	Final product, service or result	
	Organization process asset updates	

The last process in Integration is Close Project. All project information such as the project plan, contracts, deliverables and work performance are inputs. The outputs include closing the whole project administratively, making sure all contracts are closed properly, formal acceptance and hand over of the product, service or result of the project, and updating any organizational policies or procedures as needed.

Chapter 5

➡️ Scope

The Scope Knowledge Area continues to have five processes associated with it. However, Initiation has been moved to Integration and Create WBS has been created as a new process.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Scope Planning	Initiation
Scope Definition	Scope Planning
Create WBS	Scope Definition
Scope Verification	Scope Verification
Scope Control	Scope Control

In the introductory material from each PMBOK® Guide there are definitions of each of the processes. Below is a table showing the differences.

Process	PMBOK® Guide *Third Edition* (p 103)	PMBOK® Guide 2000 (p 51)
Scope Planning	"Creating a project scope management plan that documents how the project scope will be defined, verified, controlled, and how the work breakdown structure (WBS) will be created and defined"	"Developing a written scope statement as the basis for future project decisions"
Scope Definition	"Developing a detailed project scope statement as the basis for future project decisions"	"Subdividing the major project deliverables into smaller, more manageable components"
Create WBS	"Subdividing the major project deliverables into smaller, more manageable components"	N/A
Scope Verification	"Formalizing acceptance of the completed project deliverables"	"Formalizing acceptance of the project scope"
Scope Control	"Controlling changes to the project scope"	"Controlling changes to the project scope"

As you can see, Create WBS has taken on the function previously completed by the process of scope definition. Scope definition has taken on the function previously completed by the process of scope planning. Scope verification is

formalizing the acceptance of *project deliverables* instead of the *project scope* which is how most of us thought of scope verification anyway – you verify the work against the scope statement and requirements.

Scope Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Product description
	Organizational process assets	Project charter
	Project charter	Constraints
	Preliminary project scope statement	Assumptions
	Project management plan	
Tools & Techniques	Expert judgment	Product analysis
	Templates, forms, standards	Benefit/cost analysis
		Alternatives identification
		Expert judgment
Outputs	Project scope management plan	Scope statement
		Supporting detail
		Scope management plan

Scope Planning has a new definition in the chapter introduction although in both PMBOK® Guides the scope management plan was an output of this process. The scope management plan now defines how the WBS will be created and defined, as well as how the project scope will be defined, verified and controlled. In the PMBOK® Guide 2000, Scope Planning was focused on the elaboration of the project work and a scope statement was one of the outputs along with the scope management plan.

Scope Definition Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	Scope statement
	Project charter	Constraints and assumptions
	Preliminary scope statement	Other planning outputs
	Project scope management plan	Historical information
	Approved change requests	
Tools & Techniques	Product analysis	WBS templates
	Alternatives identification	Decomposition
	Expert judgment	
	Stakeholder analysis	
Outputs	Project scope statement	WBS
	Requested changes	Scope statement updates
	Project scope management plan updates	

Scope Definition is developing or elaborating the preliminary project scope statement but, remember a preliminary project scope statement was created during the Integration process of the Develop Preliminary Project Scope Statement. Therefore, this preliminary scope statement is now an input to Scope Definition and Scope Definition elaborates on this document. The output from Scope Definition is a project scope statement having the word 'preliminary' dropped.

You'll notice that many of the inputs, tools & techniques from the PMBOK® Guide 2000 process of Scope Planning are now the inputs and tools & techniques of this process. That's because the Scope Definition Process in the *Third Edition* is not focused on the WBS any longer but rather on elaborating the scope statement.

Create WBS Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	N/A
	Project scope statement	
	Project scope management plan	
	Approved change requests	
Tools & Techniques	WBS templates	
	Decomposition	
Outputs	Project scope statement updates	
	WBS	
	WBS dictionary	
	Scope baseline	
	Project scope management plan updates	
	Requested changes	

The process Create WBS is a welcome addition. The WBS has always been perceived as one of the cornerstones of a successful project but in the PMBOK® Guide 2000 its importance was glossed over. It now is the proud owner of its own process. Decomposition of a WBS is expanded upon for three pages. The work package is defined as the lowest level of the WBS where cost and schedule estimates can be produced reliably. WBS components are products, services or results, not actions.

The outputs for Create WBS are: Updates to the project scope statement and project plan, the WBS itself, a WBS dictionary, a scope baseline, and requested changes. The WBS dictionary, scope baseline and requested changes are new outputs. The scope baseline consists of the detailed project scope statement, the WBS and WBS dictionary. It is likely that once you start decomposing the WBS,

you are more than likely to request changes to the scope statement which was completed earlier.

Scope Verification Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project scope statement	Work results
	WBS dictionary	Product documentation
	Project scope management plan	WBS
	Deliverables	Scope statement
		Project plan
Tools & Techniques	Inspection	Inspection
Outputs	Accepted deliverables	Formal acceptance
	Requested changes	
	Recommended corrective actions	

The fourth process in Scope, Scope Verification, is similar in both PMBOK® Guides. Some minor differences are that work results as inputs are called deliverables; the WBS dictionary is an input instead of the WBS because the dictionary has more information about the requirements for a component of the WBS; formal acceptance is not an output of scope verification but accepting deliverables, change requests and recommended corrective actions are. This is in line with the new definition of Scope Verification: "Formalizing acceptance of the completed project deliverables" (p 103) where individual deliverables are accepted.

Scope Control Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	WBS	WBS
	WBS dictionary	Performance reports
	Performance reports	Change requests
	Approved change requests	Scope management plan
	Project scope management plan	
	Project scope statement	
	Work performance information	
Tools & Techniques	Change control system	Scope change control
	Variance analysis	Performance measurement
	Replanning	Additional planning
	Configuration management system	
Outputs	Project scope statement updates	Scope changes
	WBS updates	Corrective action
	WBS dictionary updates	Lessons learned

	Scope baseline updates	Adjusted baseline
	Requested changes	
	Recommended corrective action	
	Organizational process asset updates	
	Project management plan updates	

The final process in Scope is Scope Control, renamed from Scope Change Control. The inputs, while different, still reflect the WBS and scope information. However, the changes in tools & techniques are worth mentioning. The change control system is documented in the scope management plan and explains how the project scope and the product scope can be changed. Variance analysis refers to measuring the variation of different aspects of the project and is a much better name for a tool than performance measurements which always seemed to be confused with performance reports. Additional planning has been named replanning. And finally, the configuration management system assures that changes are relevant to the project before letting them flow through the Integrated Change Control process.

The outputs from Scope Control are as expected although a bit different from the earlier version: Scope baseline, project plan and organizational process asset updates; requested changes; and recommended corrective action.

Note the new nomenclature of wording: 'requested' changes and 'recommended' corrective actions. This is very important as it identifies that 'requests' and 'recommendations' are outputs and not a call to action. Those requests and recommendations, if accepted, are inputs and executed during the project execution process.

⇒TIME

The Time Knowledge Area has one more process in it than before: Activity Resource Estimating which used to be covered in the Cost Knowledge Area and called Resource Planning. This is the more appropriate place for resource estimating as the activities that are required to complete the work are being reviewed for scheduling purposes. The activities not only entail the work that needs to be completed but scheduling is dependent upon the availability of the person doing the work as well as his or her skill level.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Activity Definition	Activity Definition
Activity Sequencing	Activity Sequencing
Activity Resource Estimating	
Activity Duration Estimating	Activity Duration Estimating
Schedule Development	Schedule Development
Schedule Control	Schedule Control

Activity Definition Process

		PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs		Enterprise environmental factors	WBS
		Organizational process assets	Scope statement
		Project scope statement	Historical information
		WBS	Constraints
		WBS dictionary	Assumptions
		Project management plan	Expert judgment
Tools & Techniques		Decomposition	Decomposition
		Templates	Templates
		Rolling wave planning	
		Expert judgment	
		Planning component	
Outputs		Activity list	Activity list
		Activity attributes	Supporting detail
		Milestone list	WBS updates
		Requested changes	

In the process Activity Definition, there are several concepts that are expanded upon. One is 'rolling wave planning' used as a technique. We previously saw this in PMBOK® Guide 2000 in chapter 3 and defined as the '…progressive detailing of the project plan…' However, in its new context it means that the work for tomorrow or the near future (or as the *Third Edition* states – within one or two

reporting periods) is planned in detail and the work farther out is planned with less detail. The definition of the 'rolling wave' has moved from the project plan level to the WBS level which of course is still part of the project plan.

Another concept is something called a 'planning component,' a tool, which can be broken into either a 'control account' or a 'planning package.' First, let's define what a planning component is. If the team does not have enough information to decompose the WBS to the level necessary for adequate development of the work package deliverables, the WBS will not be complete. The incomplete branch of the WBS is left hanging at the level to which it was decomposed. However, the team can still plan the schedule based upon this level. It is not as accurate but can be used for *planning* purposes; therefore it is called a planning component.

The 'control account' planning component is where management has placed a control point. When the project comes to this point, the work is defined, executed and (remember, the WBS has not been decomposed to the work package level) documented as it is done. In fact, the work package is being created at the same time as the work is being done.

The 'planning package' planning component has more information than where a 'control account' has been placed but not as much as a work package. The 'planning package' component contains known work but does not have a schedule of detailed activities.

A new output of Activity Definition is activity attributes. Activity attributes are all the information which is known about the activity and includes but is not limited to: dependencies, schedule, personnel assigned, constraints and assumptions, descriptions, assigned codes or numerical references, etc. The attributes identify necessary information so that schedules may be reliably developed.

Activity Sequencing Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Project scope statement	Activity list
	Activity list	Product description
	Activity attributes	Mandatory dependencies
	Milestone list	Discretionary dependencies
	Approved change requests	External dependencies
		Milestones
Tools & Techniques	Precedence diagramming method	Precedence diagramming method
	Arrow diagramming method	Arrow diagramming method
	Schedule network templates	Conditional diagramming method
	Dependency determination	Network templates
	Applying leads and lags	
Outputs	Project schedule network diagrams	Project network diagrams
	Activity list updates	Activity updates

Activity attribute updates	
Requested changes	

In the next process, Activity Sequencing, the inputs, while named differently, input the same information in both PMBOK® Guides. The tools & techniques of precedence diagramming method and arrow diagramming method remain the same. The conditional diagramming methods describing GERT and other methods allowing looping and conditional branching has been completely dropped from the *Third Edition.* The tool, network templates, has been renamed 'schedule network templates' to indicate more precisely that the network diagram is the development of a schedule.

The three dependencies: mandatory, discretionary and external that used to be inputs to Activity Sequencing, are now listed as separate types of dependencies under the technique called 'dependency determination.' The last technique employed by Activity Sequencing is 'applying leads and lags.' Leads and lags were previously inputs to the schedule development process.

Project network diagrams, an output from Activity Sequencing, has been renamed, project schedule network diagram. The reference to PERT has been dropped and a new output, requested changes, has been added.

Activity Resource Estimating Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000 (Resource Planning from Cost)*
Inputs	Enterprise environmental factors	WBS
	Organizational process assets	Historical information
	Activity list	Scope statement
	Activity attributes	Resource pool description
	Resource availability	Organizational policies
	Project management plan	Activity duration estimates
Tools & Techniques	Expert judgment	Expert judgment
	Alternatives analysis	Alternatives identification
	Published estimating data	Project management software
	Project management software	
	Bottom-up estimating	
Outputs	Activity resource requirements	Resource requirements
	Activity attributes updates	
	Resource breakdown structure	
	Resource calendar updates	
	Requested changes	

Activity Resource Estimating, moved from the Cost chapter, is basically the same. The input called resource pool description is now called resource availability but the text remains basically the same. The tool previously called alternatives identification is now called alternative analysis. Estimating publications, an input to Cost Estimating has been moved to this process.

Outputs from Activity Resource Estimating are: activity resource requirements, activity attribute updates, resource breakdown structure (RBS), resource calendar updates and requested changes.

Activity Duration Estimating Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Activity lists
	Organizational process assets	Constraints
	Activity list	Assumptions
	Activity attributes	Resource requirements
	Project scope statement	Historical information
	Activity resource requirements	Identified risks
	Resource calendar	
	Project management plan (risk register and activity cost estimates)	
Tools & Techniques	Expert judgment	Expert judgment
	Analogous estimating	Analogous estimating
	Parametric estimating	Quantitatively based durations
	Three-point estimates	Reserve time
	Reserve analysis	
Outputs	Activity duration estimates	Activity duration estimates
	Activity attributes updates	Basis of estimates
		Activity list updates

Activity Duration Estimating has only minor changes. Inputs, while named a little differently, are about the same. The tools & techniques include a tool called 'Three-point Estimates' and is what you might first think of as PERT. The PERT formula is not in the text but the text states '…duration estimate can be constructed by using an average of the three estimated durations.' The formula would then look like $(M+O+P)/3$ instead of the better known PERT calculation of $(O+4M+P)/6$.

A resource calendar has been added as an input and parametric estimating has been added as a tool. Also, Reserve Time has been renamed reserve analysis.

Schedule Development Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Organizational process assets	Project network diagrams
	Activity list	Activity duration estimates
	Project scope statement	Resource requirements
	Activity attributes	Resource pool descriptions
	Project schedule network diagrams	Calendars
	Activity duration requirements	Constraints and assumptions
	Activity resource requirements	Leads and lags
	Resource calendars	Risk management plan
	Project management plan (risk register)	Activity attributes
Tools & Techniques	Schedule network analysis	Mathematical analysis
	Critical path method	Duration compression
	Schedule compression	Simulation
	What-if scenario analysis	Resource leveling heuristics
	Resource leveling	Project management software
	Critical chain method	Coding structure
	Project management software	
	Applying calendars	
	Adjusting leads and lags	
	Schedule model	
Outputs	Project schedule	Project schedule
	Schedule model data	Supporting detail
	Schedule baseline	Schedule management plan
	Resource requirements updates	Resource requirement updates
	Activity attributes updates	
	Project calendar updates	
	Requested changes	
	Project management plan updates – schedule management plan updates	

In Schedule Development, the next process in the Time Knowledge Area, the information throughout the chapter has been modified a bit, but not necessarily enough to expand upon a great deal. Duration compression has been renamed schedule compression. Simulation as a tool was dropped and what-if scenario analysis replaced it. Coding structures were dropped as tools and critical chain method was added. Adjusting leads and lags was added as a technique and a schedule model tool was added.

Schedule Development outputs are about the same with the project schedule being the main output along with the schedule baseline. You'll note that there is not a process that has the schedule management plan as an output. Accordingly, PMBOK® Guide *Third Edition* indicates that during the Develop Project Management Plan process, one should develop a schedule management plan and all other process management plans.

Schedule Control Process		
	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Schedule management plan	Project schedule
	Schedule baseline	Performance reports
	Performance reports	Change requests
	Approved change requests	Schedule management plan
Tools & Techniques	Progress reporting	Additional planning
	Schedule change control system	Schedule change control system
	Performance measurement	Performance measurement
	Project management software	Project management software
	Variance analysis	Variance analysis
	Schedule comparison bar charts	
Outputs	Schedule model data updates	Schedule updates
	Schedule baseline updates	Corrective action
	Performance measurements	Lessons learned
	Requested changes	
	Recommended corrective actions	
	Organizational process asset updates	
	Activity list updates	
	Activity attributes updates	
	Project management plan updates	

The last process, Schedule Control has more nomenclature updates than anything of substance. Anyone who reads through this portion of the chapter will find it very familiar. There are more outputs now: nine as compared to three. Interestingly, performance measurements, a tool in PMBOK® Guide 2000, is now an output in the *Third Edition* and is the reporting of the SV and SPI. The tool is now called 'performance measurement' (notice the final 's' is dropped) and is the act of finding the SV and SPI for the project schedule.

Even though there are more outputs, most of them are updates to very logical results of controlling the schedule and are not unexpected.

Chapter 7

COST

The Cost Knowledge Area has one less process than before. Resource Planning was moved to the Time Knowledge Area. As with the other planning processes, during the Develop Project Management Plan process, a cost management plan is developed to identify how the project cost planning, budgeting, estimating and control will happen. The *Third Edition* provides examples of how the management plan can be used to defined which units of measure will be used for resources (for example will you use man hours as opposed to work days?), define control thresholds that identify when stakeholders must be apprised of variations beyond what is acceptable, define earned value rules that might define when earned value calculations will be completed and how percent complete will be calculated, and define report formats and timing.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Cost Estimating	Resource Planning
Cost Budgeting	Cost Estimating
Cost Control	Cost Budgeting
	Cost Control

Cost Estimating Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Resource requirements
	Organizational process assets	Resource rates
	Project scope statement	Activity duration estimates
	WBS	WBS
	WBS dictionary	Estimating publications
	Project management plan – Schedule management plan, Staffing management plan, Risk register	Historical information
		Chart of accounts
		Risks
Tools & Techniques	Analogous estimating	Analogous estimating
	Determining resource cost rates	Parametric estimating
	Bottom-up estimating	Bottom-up estimating
	Parametric estimating	Computerized tools
	Project management software	Other cost estimating methods
	Vendor bid analysis	

	Reserve analysis	
	Cost of quality	
Outputs	Activity cost estimates	Cost estimates
	Activity cost estimate supporting detail	Supporting detail
	Requested changes	Cost management plan
	Cost management plan updates	

In Cost Estimating, the WBS is an input but in PMBOK® Guide 2000, other inputs included resource rates, activity duration estimates and estimating publications. The estimating publications were moved to be a tool in the Activity Resource Estimating process of the Time Knowledge Area.

Resource rates became another tool called 'determining resource cost rates.' You may ask why activity duration estimates, an output from Activity Duration Estimating, are not inputs to Cost Estimating Process. The *Third Edition* defines the cost for schedule activities to include "…labor, materials, equipment, services and facilities, as well as special categories such as an inflation allowance or a contingency cost." Reading further on, one finds that the schedule management plan will have the results from Activity Duration Estimating. The schedule management plan is an input so it is implied that the activity duration estimates will be reviewed as inputs.

Three new inputs are vendor bid analysis, used in competitive circumstances; reserve analysis or contingency allowances; and the cost of quality which is further clarified in the Quality Knowledge Area.

Cost Budgeting Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Project scope statement	Cost estimates
	WBS	WBS
	WBS dictionary	Project schedule
	Activity cost estimates	Risk management plan
	Activity cost estimate supporting detail	
	Project schedule	
	Resource calendars	
	Contract	
	Cost management plan	
Tools & Techniques	Cost aggregation	Cost budgeting tools and techniques
	Reserve analysis	
	Parametric estimating	

	Funding limit reconciliation	
Outputs	Cost baseline	Cost baseline
	Project funding requirements	
	Cost management updates	
	Requested changes	

There are many more inputs to Cost Budgeting but in reality they are just delineated a bit more. Resource calendars and contracts may be necessary depending upon the project. It is assumed that risks are managed and identified in the cost management plan. The WBS dictionary identifies more specific information about work packages so is critical as input to the budgeting process.

The new tools & techniques for Cost Budgeting are much better than the old 'cost budgeting tools and techniques' found in PMBOK® Guide 2000. Costs are now aggregated from all the work packages, reserves are set aside and limits are set for the project. The one output, cost baseline, sets the project budget.

Cost Control Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Cost baseline	Cost baseline
	Project funding requirements	Performance reports
	Performance reports	Change requests
	Work performance information	Cost management plan
	Approved change requests	
	Project management plan	
Tools & Techniques	Cost change control system	Cost change control system
	Performance measurement analysis	Performance measurement
	Forecasting	Earned value management
	Project performance reviews	Additional planning
	Project management software	Computerized tools
	Variance management	
Outputs	Cost estimate updates	Revised cost estimates
	Cost baseline updates	Budget updates
	Performance measurements	Corrective action
	Forecasted completion	Estimates at completion
	Requested changes	Project closeout
	Recommended corrective action	Lessons learned
	Organizational process asset updates	
	Project management plan updates	

Inputs to Cost Control remain relatively the same in nature.

Under the tools & techniques can be found the technique performance measurement analysis. This is all the earned value analysis tools previously described in PMBOK® Guide 2000 (EV, PV, AC, CPI, ETC, etc.) The acronyms of BCWS, BCWP and ACWP are not in the *Third Edition* but, for example, planned value (PV) is defined as "…the budgeted cost for the work scheduled…" Whether one has to know the acronyms to pass the PMP exam is still to be determined. The act of performing the measurements is called performance measurement analysis and when they are documented and reported, it is called performance measurements.

Under the tool called forecasting, there is a discussion of how ETC and EAC are used in various scenarios (on new estimates as opposed to exceptions.) These are expanded upon from the previous PMBOK® Guide and easier to read and understand.

Variance management as a technique deals with how the project team will respond to variances during performance measurement analysis.

Project closeout has been dropped as an output from Cost Control as cost must be controlled throughout the whole project.

QUALITY

The Quality Knowledge Area had two name changes in the process. This is in line with the *Third Edition's* naming conventions using verb-noun combinations. The name changes can be seen below. The majority of the Quality Knowledge Area remains unchanged.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Quality planning	Quality planning
Perform quality assurance	Quality assurance
Perform quality control	Quality control

Quality Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Quality policy
	Organizational process assets	Scope statement
	Project scope statement	Product description
	Project management plan	Standards and regulations
		Other process outputs
Tools & Techniques	Cost-benefit analysis	Benefit/cost analysis
	Benchmarking	Benchmarking
	Design of experiments (COQ)	Flowcharting
	Cost of quality	Design of experiments
	Additional quality planning tools	Cost of quality
Outputs	Quality management plan	Quality management plan
	Quality metrics	Operational definitions
	Quality checklists	Checklists
	Process improvement plan	Inputs to other processes
	Quality baseline	
	Project management plan updates	

The inputs to Quality Planning remain basically the same considering that the quality policy and the standards and regulations would be embedded in the organizational process assets and enterprise environmental factors. The product description could be embedded in the scope statement and/or the project management plan.

The tool, cost-benefit analysis, has been rearranged probably to indicate the formula for cost/benefit relationships.

In the PMBOK® Guide 2000 flowcharting included Ishikawa diagrams and system flow charts. Flowcharting has been removed from Quality Planning in the *Third Edition* but is included in the newest tool called 'additional quality planning tools.'

The quality management plan defines how the project team will implement the company's quality policy. While the new output in Quality Planning, the process improvement plan, identifies how the team will create and implement processes to improve quality.

Perform Quality Assurance Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Quality management plan	Quality management plan
	Quality metrics	Results of quality control measurements
	Process improvement plan	Operational definitions
	Work performance information	
	Approved change requests	
	Quality control measures	
	Implemented change requests	
	Implemented corrective actions	
	Implemented defect repair	
	Implemented preventive actions	
Tools & Techniques	Quality planning tools and techniques	Quality planning tools and techniques
	Quality audits	Quality audits
	Process analysis	
	Quality control tools and techniques	
Outputs	Requested changes	Quality improvement
	Recommended corrective actions	
	Organizational process asset updates	
	Project management plan updates	

In the PMBOK® Guide 2000, operational definitions were also called metrics. PMBOK® Guide *Third Edition* uses the term 'quality metrics' in the place of 'operational definitions.' The extension of the number of inputs is understood in light of the fact that one must look at all implemented change requests, defect repairs and corrective action to assure that the quality of the project is as expected.

It is curious that under tools & techniques for Quality Assurance, one would find 'quality planning/control tools and techniques.' I was once told by a teacher to not use the word to define the word. I believe that is what has happened in this instance. The control tools & techniques are further defined under Quality Control

and consist of cause and effect diagrams; control charts; flowcharts; histograms; Pareto charts, run charts, scatter diagrams, statistical sampling; inspection and defect repair reviews.

The output, quality improvement, has been expanded to four outputs as seen in the table above.

Perform Quality Control Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Quality management plan	Quality management plan
	Quality metrics	Operational definitions
	Quality checklists	Checklists
	Organizational process assets	Work results
	Work performance information	
	Approved change requests	
	Deliverables	
Tools & Techniques	Cause and effect diagrams	
	Control charts	Control charts
	Flowcharting	Flowcharting
	Histograms	
	Pareto chart	Pareto diagrams
	Run chart	Trend analysis
	Scatter diagram	
	Statistical sampling	Statistical sampling
	Inspection	Inspection
	Defect repair review	
Outputs	Quality control measurements	Quality improvements
	Validated defect repair	Rework
	Quality baseline updates	Completed checklists
	Recommended corrective actions	Process adjustments
	Recommended preventive actions	Acceptance decisions
	Requested changes	
	Recommended defect repair	
	Organizational process asset updates	
	Validated deliverables	
	Project management plan updates	

The inputs to Perform Quality Control remain relatively the same except for some additions of a few inputs keeping in line with new nomenclature. The same is true for the tools & techniques. The biggest change can be seen on the outputs. All of the PMBOK® Guide 2000 outputs have been retired and ten outputs take their place, all self-explanatory.

Chapter 9

➡️ HUMAN RESOURCES

The Human Resource Knowledge Area has added one process – Manage Project Team. The other three processes have been renamed but still retain the same functions.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Human Resource Planning	Organizational Planning
Acquire Project Team	Staff Acquisition
Develop Project Team	Team Development
Manage Project Team	

Human Resource Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Project interfaces
	Organizational process assets	Staffing requirements
	Project management plan – activity resource requirements	Constraints
Tools & Techniques	Organization charts and position descriptions	Templates
	Networking	Human resource practices
	Organizational theory	Organizational theory
		Stakeholder analysis
Outputs	Roles and responsibilities	Role and responsibility assignments
	Project organization charts	Staffing management plan
	Staffing management plan	Organization chart
		Supporting detail

In PMBOK® Guide 2000 Human Resource Planning was called Organizational Planning. The goal is to create a project team based on the information that you have at hand. The staffing management plan will be updated as the project is executed due to the fact that team members may be added, replaced or a members' job may change.

The input, project interfaces, has been replaced with enterprise environmental factors and speaks to the organizational and structural aspects of where and how the project is carried out. In the PMBOK® Guide 2000 organizational interfaces talked about the complexity of a project and how reporting relationships might occur across different organizational units, In PMBOK® Guide *Third Edition,* this

topic talks about identifying which departments will be involved with the project and finding out how each department works and how they work with each other. A similar update has been made to what PMBOK® Guide 2000 called technical interfaces and the *Third Edition* calls technical. PMBOK® Guide 2000 talked about the reporting relationships between different technical divisions or disciplines while the *Third Edition* talks about find the right technical specialists to do the job and work on the project. In addition, the *Third Edition* adds logistical and political considerations when developing the project team.

This section is expanded to show various role and responsibility charts and reports, and indicates that the members' role, authority level, responsibility and competency should be considered when developing the responsibility assignment matrix.

Acquire Project Team Process

		PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs		Enterprise environmental factors	Staffing management plan
		Organizational process assets	Staffing pool descriptions
		Roles and responsibilities	Recruitment practices
		Project organization charts	
		Staffing management plan	
Tools & Techniques		Pre-assignment	Negotiations
		Negotiation	Preassignment
		Acquisition	Procurement
		Virtual teams	
Outputs		Project staff assignments	Project staff assigned
		Resource availability	Project team directory
		Staffing management plan updates	

This process remains basically the same except for the inclusion of virtual teams as a technique with an emphasis on the need for greater and clearer communication between virtual team members.

Develop Project Team Process

		PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs		Project staff assignments	Project staff
		Staffing management plan	Project plan
		Resource availability	Staffing management plan
			Performance reports
			External feedback
Tools & Techniques		General management skills	General management skills
		Training	Training

	Team-building activities	Team-building activities
	Ground rules	Collocation
	Co-location	Reward and recognition systems
	Recognition and rewards	
Outputs	Team performance assessment	Performance improvements
		Input to performance appraisals

The inputs and tools & techniques for Develop Project Team remain virtually the same between the two PMBOK® Guides except that the work 'collocation' has been corrected to be spelled 'co-location.'

In the PMBOK® Guide 2000 the output from this process is performance improvements. The *Third Edition* has updated the output to indicate that an assessment must be made to see if there is an improvement of performance rather than assuming there will be.

Manage Project Team Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	N/A
	Project staff assignments	
	Roles and responsibilities	
	Project organization charts	
	Staffing management plan	
	Team performance assessment	
	Work performance information	
	Performance reports	
Tools & Techniques	Observation and conversation	
	Project performance appraisals	
	Conflict management	
	Issue log	
Outputs	Requested changes	
	Recommended corrective actions	
	Recommended preventive actions	
	Organizational process assets updates	
	Project management plan updates	

Manage Project Team process is new in the *Third Edition.* This process deals with managing all aspects of the team and making the team a cohesive whole so that the project can be executed successfully.

COMMUNICATIONS

In the Communications Knowledge Area, Manage Stakeholders process has replaced the Administrative Closure process. Administrative closure is no longer a process but is an input to the Close Project process in Integration.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Communications Planning	Communications Planning
Information Distribution	Information Distribution
Performance Reporting	Performance Reporting
Manage Stakeholders	Administrative Closure

Communications Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Communications requirements
	Organizational process assets	Communications technology
	Project scope statement	Constraints
	Project management plan – constraints and assumptions	Assumptions
Tools & Techniques	Communications requirements analysis	Stakeholder analysis
	Communications technology	
Outputs	Communications management plan	Communications management plan

Communications Planning is defining who needs what, when, where and how. The *Third Edition* has moved the communications requirements and communications technology to be tools & techniques rather than inputs. The main inputs are the project management plan and the scope statement. The communications requirements are basically what PMBOK® Guide 2000 called stakeholder analysis.

Information Distribution Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Communications management plan	Communications management plan
		Work results
		Project plan
Tools & Techniques	Communications skills	Communications skills

	Information gathering and retrieval systems	Information retrieval systems
	Information distribution methods	Information distribution methods
	Lessons learned process	
Outputs	Organizational process asset updates	Project records
	Requested changes	Project reports
		Project presentations

Work results and the project plan are dropped as inputs because the communications management plan will indicate whether or not they are necessary.

It is in the Communication Knowledge Area that the lessons learned technique is used. The *Third Edition* suggests that key internal and external stakeholders be part of the lessons learned process. The results and knowledge gleaned from the lessons learned are documented as part of the organizational process assets and become part of the historical database (or project files.) Project records, reports and presentations which are outputs in PMBOK® Guide 2000 are also documented and included in organizational process assets.

Performance Reporting Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Work performance information	Project plan
	Performance measurements	Work results
	Forecasted completion	Other project records
	Quality control measures	
	Project management plan – performance measurement baseline	
	Approved change requests	
	Deliverables	
Tools & Techniques	Information presentation tools	Performance reviews
	Performance information gathering and compilation	Variance analysis
	Status review meetings	Trend analysis
	Time reporting systems	Earned value analysis
	Cost reporting systems	Information distribution tools and techniques
Outputs	Performance reports	Performance reports
	Forecasts	Change requests

	Requested changes	
	Recommended corrective actions	
	Organizational process asset updates	

In the *Third Edition* the inputs have been expanded to specify what the PMBOK® Guide 2000 called 'other project records.' The variance, trend and earned value analyses have been eliminated as tools and replaced with time and cost reporting systems. The variance, trend and earned value analyses are tools used in the Cost, Time and Quality Knowledge Areas. The results of such analyses as well as other performance information are included in the output – performance reports.

Manage Stakeholders Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Communications management plan	N/A
	Organizational process assets	
Tools & Techniques	Communications methods	
	Issue logs	
Outputs	Resolved issues	
	Approved change requests	
	Approved corrective actions	
	Organizational process asset updates	
	Project management plan updates	

Much of the project management literature will espouse that a project manager spends greater than 90% of his or her time communicating to the project team/stakeholders. Accordingly, the *Third Edition* includes a process to manage such communication among stakeholders. Stakeholders are defined as "Persons and organizations such as customers, sponsors, performing organization and the public, that are actively involved in the project, or whose interests may be positively or negatively affected by execution or completion of the project. They may also exert influence over the project and its deliverables." (Glossary page 376)

The other process in Communications deal with planning, gathering and distributing information. The Manage Stakeholders process deals with the act of communicating using the tools & techniques in the process.

Chapter 11

➡RISK

The Risk chapter has not changed a great deal. All the processes remain named the same; however, some name changes have occurred in the inputs, tools & techniques, and outputs.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Risk Management Planning	Risk Management Planning
Risk Identification	Risk Identification
Qualitative Risk Analysis	Qualitative Risk Analysis
Quantitative Risk Analysis	Quantitative Risk Analysis
Risk Response Planning	Risk Response Planning
Risk Monitoring and Control	Risk Monitoring and Control

Risk Management Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Project charter
	Organizational process assets	Organization's risk management policies
	Project scope statement	Defined roles and responsibilities
	Project management plan	Stakeholder risk tolerances
		Template for the organization's risk management plan
		WBS
Tools & Techniques	Planning meetings and analysis	Planning meetings
Outputs	Risk management plan	Risk management plan

The input called enterprise environmental factors, encompass the PMBOK® Guide 2000 inputs of the organization's risk management policies and the stakeholder risk tolerances. Organizational process assets encompass the defined roles and responsibilities and the template for the risk management plan. The project charter has been dropped as an input probably because it is much too broad and replaced with the scope statement and project management plan.

The risk management plan has been updated to include definitions of risk probability and impact, and the probability and impact matrix defining how risks will be prioritized. This is not the same as actually prioritizing the risks which happen through qualitative and quantitative risk analysis.

A risk breakdown structure (RBS) has been introduced in the *Third Edition.* The RBS is a way to systematically decompose risk in enough detail so that risk identification is thoroughly completed.

Risk Identification Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Risk management plan
	Organizational process assets	Project planning outputs
	Project scope statement	Risk categories
	Risk management plan	Historical information
	Project management plan	
Tools & Techniques	Documentation reviews	Documentation reviews
	Information gathering techniques	Information-gathering techniques
	Checklist analysis	Checklists
	Assumptions analysis	Assumptions analysis
	Diagramming techniques	Diagramming techniques
Outputs	Risk register	Risks
		Triggers
		Inputs to other processes

The major change in Risk Identification is the development of a risk register as an output instead of just a list of identified risks. The risk registered contains the identified risks, any responses that came about during the identification process, the root causes of the risks if known, and updating the risk categories if applicable.

Qualitative Risk Analysis Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	Risk management plan
	Project scope statement	Identified risks
	Risk management plan	Project status
	Risk register	Project type
		Data precision
		Scales of probability and impact
		Assumptions
Tools & Techniques	Risk probability and impact assessment	Risk probability and impact
	Probability and impact matrix	Probability/impact risk rating matrix
	Risk data quality assessment	Project assumptions testing
	Risk categorization	Data precision ranking
	Risk urgency assessment	

Outputs	Risk register updates	Overall risk ranking for the project
		List of prioritized risks
		List of risks for additional analysis and management
		Trends in qualitative risk analysis results

Organizational process assets now encompass the inputs of project status and project type. The risk register would encompass the inputs of identified risks and assumptions. The input information, while written differently in the two PMBOK® Guides is still basically the same for this process.

Quantitative Risk Analysis Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	Risk management plan
	Project scope statement	Identified risks
	Risk management plan	List of prioritized risks
	Risk register	List of risks for additional analysis and management
	Project management plan – project schedule management plan, project cost management plan	Historical information
		Expert judgment
		Other planning outputs
Tools & Techniques	Data gathering and representation techniques	Interviewing
	Quantitative risk analysis and modeling techniques	Sensitivity analysis
		Decision tree analysis
		Simulation
Outputs	Risk register updates	Prioritized list of quantified risks
		Probabilistic analysis of the project
		Probability of achieving the cost and time objectives
		Trends in quantitative risk analysis results

The information in the Quantitative Risk Analysis process is labeled differently in the *Third Edition,* but is basically the same. Many of the inputs, tools & techniques, and outputs in the PMBOK® Guide 2000 become sub-bullets in the text of the *Third Edition.*

Risk Response Planning Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Risk management plan	Risk management plan
	Risk register	Risk ranking of the project
		List of prioritized risks
		Prioritized list of quantified risks
		Probabilistic analysis of the project
		Probability of achieving the cost and time objectives
		List of potential responses
		Risk thresholds
		Risk owners
		Common risk causes
		Trends in qualitative and quantitative risk analysis results
Tools & Techniques	Strategies for negative risks or threats	Avoidance
	Strategies for positive risks or opportunities	Transference
	Strategy for both threats and opportunities	Mitigation
	Contingent response strategy	Acceptance
Outputs	Risk register updates	Risk response plan
	Project management plan updates	Residual risks
	Risk-related contractual agreements	Secondary risks
		Contractual agreements
		Contingency reserve amounts needed
		Inputs to other processes
		Inputs to a revised project plan

Even though the number of inputs, tools & techniques and outputs has been reduced in the *Third Edition,* the information from the absorbed inputs, tools & techniques and outputs is still in the text, it's just been compiled and arranged a bit differently. For example avoidance, transference and mitigation can be found under the tool called strategies for negative risks or threats. Acceptance can be found under the tool called strategy for both threats and opportunities.

Risk Monitoring and Control Process

	PMBOK® Guide Third Edition	PMBOK® Guide 2000
Inputs	Risk management plan	Risk management plan
	Risk register	Risk response plan
	Approved change requests	Project communication
	Work performance information	Additional risk identification and analysis
	Performance reports	Scope changes
Tools & Techniques	Risk reassessment	Project risk response audits
	Risk audits	Periodic project risk reviews
	Variance and trend analysis	Earned value analysis
	Technical performance measurement	Technical performance measurement
	Reserve analysis	Additional risk response planning
	Status meetings	
Outputs	Risk register updates	Workaround plans
	Requested changes	Corrective action
	Recommended corrective actions	Project change requests
	Recommended preventive actions	Updates to the risk response plan
	Organizational process asset updates	Risk database
	Project management plan updates	Updates to risk identification checklists

Again, the information contained in this section of risk is worded and arranged a bit differently, but the information remains basically the same. Anyone familiar with PMBOK® Guide 2000 will not have any trouble with the information in the risk chapter.

⟶PROCUREMENT

Five of the six processes in Procurement have been renamed because of the negative connotations of such words as 'procure' and 'solicit.' The introduction to this chapter has been expanded and clarifies that the PMBOK® Guide is written with the point of view that the project team or some member there of is the buyer and that the seller is outside of the organization where the project team is working. It is also assumed that a legal, contractual relationship exists between the buyer and seller.

PMBOK® Guide *Third Edition*	PMBOK® Guide 2000
Plan Purchases and Acquisitions	Procurement Planning
Plan Contracting	Solicitation Planning
Request Seller Responses	Solicitation
Select Sellers	Source Selection
Contract Administration	Contract Administration
Contract Closure	Contract Closeout

Plan Purchases and Acquisitions Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Enterprise environmental factors	Scope statement
	Organizational process assets	Product description
	Project scope statement	Procurement resources
	WBS	Market conditions
	WBS dictionary	Other planning outputs
	Project management plan – risk register, risk-related contractual agreements, resource requirements, project schedule, activity cost estimates, cost baseline	Constraints and assumptions
Tools & Techniques	Make-or-buy analysis	
	Expert judgment	
	Contract selection	
Outputs	Procurement management plan	Procurement management plan
	Contract statement of work	Statement(s) of work
	Make-or-buy decisions	
	Requested changes	

In Plan Purchases and Acquisitions, contract types are more fully identified. Included in the *Third Edition* are the following contract types that were not covered in the PMBOK® Guide 2000: cost-plus-fee, cost-plus-percentage of cost, cost-plus-fixed-fee, cost-plus-incentive-fee. Additional outputs include the make-or-buy decision and requested changes.

Plan Contracting Process

		PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs		Procurement management plan	Procurement management plan
		Contract statement of work	Statement(s) of work
		Make-or-buy decisions	Other planning outputs
		Project management plan – risk register, risk-related contractual agreements, resource requirements, project schedule, activity cost estimates, cost baseline	
Tools & Techniques		Standard forms	Standard forms
		Expert judgment	Expert judgment
Outputs		Procurement documents	Procurement documents
		Evaluation criteria	Evaluation criteria
		Contract statement of work updates	Statement of work updates

In the Plan Contracting process, the make-or-buy decision and various sections of the project management plan are defined inputs more than likely broadening what was meant by 'other planning outputs' in the PMBOK® Guide 2000.

The *Third Edition* expands upon the evaluation criteria adding items to consider such as business size, checking references, and intellectual property rights.

Request Seller Responses Process

		PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs		Procurement management plan	Procurement documents
		Procurement documents	Qualified seller list
		Organizational process assets	
Tools & Techniques		Bidder conferences	Bidder conferences
		Advertising	Advertising
		Develop qualified sellers list	
Outputs		Qualified sellers list	Proposals
		Procurement document package	
		Proposals	

The PMBOK® Guide 2000 input of qualified seller list now becomes a technique called develop qualified sellers list in the *Third Edition* and moving into an output of the qualified seller list. It is now the responsibility of the team to develop the seller list.

In the Plan Contract process, procurement documents are an output and are sent to prospective sellers. In the Request Seller Responses, the seller can send back the procurement document page (specific documents prepared by the buyer that the seller must fill out, or the seller can prepare a proposal. A proposal is prepared by the seller based on information from the procurement documents where the information requested may be of a more technical nature such as the use of cutting edge technology by the seller.

Select Sellers Process		
	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Organizational process assets	Proposals
	Procurement management plan	Evaluation criteria
	Evaluation criteria	Organizational policies
	Proposals	
	Qualified sellers list	
	Project management plan – risk register, risk-related contractual agreements	
Tools & Techniques	Weighting system	Contract negotiation
	Independent estimates	Weighting system
	Screening system	Screening system
	Contract negotiation	Independent estimates
	Seller rating system	
	Expert judgment	
	Proposal evaluation techniques	
Outputs	Selected sellers	Contract
	Contract	
	Contract management plan	
	Resource availability	
	Procurement management plan updates	
	Requested changes	

The inputs to the Select Sellers process have been expanded to include the qualified sellers list and the portions of the project management plan relating to risk and contracts. Additional tools & techniques include evaluation techniques, a seller rating system and expert judgment.

In the PMBOK® Guide 2000 there was not a contract management plan. It is identified as needed in the *Third Edition* if the contract is viewed as significant. For insignificant contracts the team would not have to prepare a contract management plan.

Contract Administration Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Contract	Contract
	Contract management plan	Work results
	Selected sellers	Change requests
	Performance reports	Seller invoices
	Approved change requests	
	Work performance information	
Tools & Techniques	Contract change control system	Contract change control system
	Buyer-conducted performance reviews	Performance reporting
	Inspections and audits	Payment system
	Performance reporting	
	Payment system	
	Claims administration	
	Records management system	
	Information technology	
Outputs	Contract documentation	Correspondence
	Requested changes	Contract changes
	Recommended corrective actions	Payment requests
	Organizational process asset updates	
	Project management plan updates – procurement management plan, contract management plan	

Work performance information includes the seller's invoices as well as information as to whether the seller is meeting the expected quality standards. Payments to the seller are included in the organizational process assets.

The tools & techniques in the Contract Administration process have been expanded to include administering any claims that might come as a result of the contract, management of records and the use of information technology.

Contract Closure Process

	PMBOK® Guide *Third Edition*	PMBOK® Guide *2000*
Inputs	Procurement management plan	Contract documentation
	Contract management plan	
	Contract documentation	
	Contract closure procedure	
Tools & Techniques	Procurement audits	Procurement audits
	Records management system	
Outputs	Closed contracts	Contract file
	Organizational process asset updates	Formal acceptance and closure

In PMBOK® Guide 2000 administrative closure was a process found in the Communication Knowledge Area. The work completed in administrative closure is completed in the Contract Closure process especially when the contract also closes the project. (Remember, administrative closure in the *Third Edition* is an output from the Close Project process in the Integration Knowledge Area.) Contracts specific to a phase of a project will be closed when completed.

GLOSSARY

The glossary has been updated to reflect, in most instances, if a word is an input, a tool, a technique or an output. For example, the word 'estimate' is defined but right after the word is listed and before the definition, one sees [Output/Input] letting the reader know that 'estimate' can be both an input and an output.

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