

PMBOK 4th Edition KA & PG

KA	Process Name	Inputs	Tools and Techniques	Outputs
Integration Management	Develop Project Charter [INIT]	Project Statement of Work	Experts Judgement	Project Charter
		Business Case		
		Contracts		
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Develop Project Management Plan [PLAN]	Project Charter	Experts Judgement	Project Management Plan
		Outputs From Planning Processes		
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Direct and Manage Project Execution [EXEC]	Project Management Plan	Experts Judgement	Deliverables Work Performance Information
		Approved Change Requests	Project Management Information System	
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Monitor and Control Project Work [M&C]	Project Management Plan	Experts Judgement	Change Requests Project Management Plan Updates Project Document Updates
		Performance Reports		
		Enterprise Environmental Factors		
		Organizational Process Assets		
Perform Integrated Change Control [M&C]	Project Management Plan	Experts Judgement	Change Requests Status Updates Project Management Plan Updates Project Document Updates	
	Work Performance Information	Change Control Meetings		
	Change Requests			
	Enterprise Environmental Factors			
	Organizational Process Assets			
Close Project or Phase [CLOSING]	Project Management Plan	Experts Judgement	Final Product, Service, or Result Transition Organizational Process Assets Updates	
	Accepted Deliverables			
	Organizational Process Assets			
Scope Management	Collect Requirements [PLAN]	Project Charter	Interviews	Requirements Documentation
		Stakeholder Register	Focus Groups	Requirements Management Plan
			Facilitated Workshops	Requirements Traceability Matrix
			Group Creativity Techniques	
			Group Decision Making Techniques	
			Questionnaires and Surveys	
			Observations	
			Prototypes	
	Define Scope [PLAN]	Project Charter	Experts Judgement	Project Scope Statement
		Requirements Documentation	Product Analysis	Project Document Updates
		Organizational Process Assets	Alternatives Identification	
			Facilitated Workshops	
Create WBS [PLAN]	Project Scope Statement	Decomposition	WBS	
	Requirements Documentation		WBS Dictionary	
	Organizational Process Assets		Scope Baseline	
			Project Document Updates	
Verify Scope [M & C]	Project Management Plan	Inspection	Accepted Deliverables	
	Requirements Documentation		Change Requests	
	Requirements Traceability Matrix		Project Document Updates	
	Validated Deliverables			
Control Scope [M & C]	Project Management Plan	Variance Analysis	Work Performance Measurements	
	Work Performance Information		Organizational Process Assets Updates	
	Requirements Documentation		Change Request	
	Requirements Traceability Matrix		Project Management Plan Updates	
	Organizational Process Assets		Project Document Updates	

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KA	Process Name	Inputs	Tools and Techniques	Outputs
Time Management	Define Activities [PLAN]	Scope Baseline	Decomposition	Activity List
		Enterprise Environmental Factors	Rolling Wave Planning	Activity Attributes
		Organizational Process Assets	Templates	Milestone List
			Experts Judgement	
	Sequence Activities [PLAN]	Activity List	Precedence Diagramming Method(PDM)	Project Schedule Network Diagrams
		Activity Attributes	Dependency Determination	Project Document Updates
		Milestone List	Applying Leads And Lags	
		Project Scope Statement	Schedule Network Templates	
		Organizational Process Assets		
	Estimate Activity Resources [PLAN]	Activity List	Experts Judgement	Activity Resource Requirements
		Activity Attributes	Alternatives Estimating Data	Resource Breakdown Structure
		Resource Calendars	Published Estimating Data	Project Document Updates
		Enterprise Environmental Factors	Bottom-up Estimating	
		Organizational Process Assets	Project Management Software	
	Estimate Activity Durations [PLAN]	Activity List	Experts Judgement	Activity Duration Estimates
		Activity Attributes	Analogous Estimating	Project Document Updates
		Activity Resource Requirements	Parametric Estimating	
		Resource Calendars	Three-point estimates	
		Project Scope Statement	Reserve Analysis	
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Develop Schedule [PLAN]	Activity List	Schedule Network Analysis	Project Schedule
		Activity Attributes	Critical Path Method	Schedule Baseline
		Project Schedule Network Diagrams	Critical Chain Method	Schedule Data
		Activity Resource Requirements	Resource Leveling	Project Document Updates
		Resource Calendars	What-if Scenario Analysis	
		Activity Duration Estimates	Applying Leads And Lags	
		Project Scope Statement	Schedule Compression	
Enterprise Environmental Factors		Scheduling Tool		
Organizational Process Assets				
Control Schedule [M&C]	Project Management Plan	Performance Reviews	Work Performance Measurements	
	Project Schedule	Variance Analysis	Organizational Process Assets Updates	
	Work Performance Information	Project Management Software		
	Organizational Process Assets	Resource Leveling		
		What-if Scenario Analysis		
		Adjusting Leads And Lags		
		Schedule Compression		
	Scheduling Tool			
Cost Management	Estimate Costs [PLAN]	Scope Baseline	Experts Judgement	Activity Cost Estimates
		Project Schedule	Analogous Estimating	Basis of Estimates
		Human Resource Plan	Parametric Estimating	Project Document Updates
		Risk Register	Bottom-up Estimating	
		Enterprise Environmental Factors	Three-point estimates	
		Organizational Process Assets	Reserve Analysis	
			Cost of Quality	
			Project Management Estimating Software	
			Vendor Bid Analysis	
	Determine Budget [PLAN]	Activity Cost Estimates	Cost Aggregation	Cost Performance Baseline
		Basis of Estimates	Reserve Analysis	Project Funding Requirements
		Scope Baseline	Experts Judgement	Project Document Updates
		Project Schedule	Historical Relationships	
		Resource Calendars	Funding Limit Reconciliation	
Contracts				
Control Costs [M&C]	Project Management Plan	Earned Value Management	Work Performance Measurements	
	Project Funding Requirements	Forecasting	Budget Forecasts	
	Work Performance Information	To-complete Performance Index (TCPI)	Organizational Process Assets Updates	
	Organizational Process Assets	Performance Reviews	Change Requests	
		Variance Analysis	Project Management Plan Updates	
		Project Management Software	Project Document Updates	

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Quality Management	Plan Quality [PLAN]	Scope Baseline	Cost-benefit Analysis	Quality Management Plan
		Stakeholder Register	Cost of Quality	Quality Metrics
		Cost Performance Baseline	Control Charts	Quality Checklists
		Schedule Baseline	Benchmarking	Process Improvement Plan
		Risk Register	Design of Experiments	Project Document Updates
		Enterprise Environmental Factors	Statistical Sampling	
		Organizational Process Assets	Flowcharting	
			Proprietary Quality Management Methodologies	
		Additional Quality Planning Tools		
	Perform Quality Assurance [EXEC]	Project Management Plan	Plan Quality and Perform Quality Control Tools and Techniques	Organizational Process Assets Updates
		Quality Metrics	Quality Audits	Change Requests
		Work Performance Information	Process Analysis	Project Management Plan Updates
		Quality Control Measurements		Project Document Updates
	Perform Quality Control [M&C]	Project Management Plan	Cause and Effect Diagrams	Quality Control Measurements
		Quality Metrics	Control Charts	Validated Changes
		Quality Checklist	Flowcharting	Validated Deliverables
		Work Performance Measurements	Histogram	Organizational Process Assets Updates
		Approved Change Requests	Pareto Chart	Change Requests
Deliverables		Run Chart	Project Management Plan Updates	
Organizational Process Assets		Scatter Diagram	Project Document Updates	
		Statistical Sampling		
	Inspection			
	Approved Change Requests Review			
Human Resource	Develop Human Resource Plan [PLAN]	Activity Resource Requirements	Organization Charts and Position Descriptions	Human Resource Plan
		Enterprise Environmental Factors	Networking	
		Organizational Process Assets	Organizational Theory	
	Acquire Project Team [EXEC]	Project Management Plan	Pre-assignment	Project Staff Assignments
		Enterprise Environmental Factors	Negotiation	Resource Calendars
		Organizational Process Assets	Acquisition	Project Management Plan Updates
		Virtual Teams		
	Develop Project Team [EXEC]	Project Staff Assignments	Interpersonal Skills	Team Performance Assessments
		Project Management Plan	Training	Enterprise Environmental Factors Updates
		Resource Calendars	Team-Building Activities	
			Ground Rules	
			Co-Location	
		Recognition and Rewards		
	Manage Project Team [EXEC]	Project Staff Assignments	Observation and Conversation	Enterprise Environmental Factors Updates
		Project Management Plan	Project Performance Appraisals	Organizational Process Assets Updates
		Team Performance Assessments	Conflict Management	Change Request
		Performance Reports	Issue Log	Project Management Plan Updates
		Organizational Process Assets	Interpersonal Skills	
Communication Management	Identify Stakeholders [INIT]	Project Charter	Stakeholder Analysis	Stakeholder Register
		Procurement Documents	Experts Judgement	Stakeholder Management Strategy
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Plan Communications [PLAN]	Stakeholder Register	Communication Requirements Analysis	Communications Management Plan
		Stakeholder Management Strategy	Communication Technology	Project Document Updates
		Enterprise Environmental Factors	Communication Models	
		Organizational Process Assets	Communication Methods	
	Distribute Information [EXEC]	Project Management Plan	Communication Methods	Organizational Process Assets Updates
		Performance Reports	Information Distribution Tools	
		Organizational Process Assets		
	Manage Stakeholder Expectations [EXEC]	Stakeholder Register	Communication Methods	Organizational Process Assets Updates
		Stakeholder Management Strategy	Interpersonal Skills	Change Request
		Project Management Plan	Management Skills	Project Management Plan Updates
		Issue Log		Project Document Updates
		Change Log		
		Organizational Process Assets		
	Report Performance [M&C]	Project Management Plan	Variance Analysis	Performance Reports
Work Performance Information		Forecasting Methods	Organizational Process Assets Updates	
Work Performance Measurements		Communication Methods	Change Requests	
Budget Forecasts		Reporting Systems		
Organizational Process Assets				

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Risk Management	Plan Risk Management [PLAN]	Project Scope Statement	Planning Meetings and Analysis	Risk Management Plan
		Cost Management Plan		
		Schedule Management Plan		
		Communication Management Plan		
		Enterprise Environmental Factors		
		Organizational Process Assets		
	Identify Risks [PLAN]	Risk Management Plan	Documentation Reviews	Risk Register
		Activity Cost Estimates	Information Gathering Techniques	
		Activity Duration Estimates	Checklist Analysis	
		Scope Baseline	Assumptions Analysis	
		Stakeholder Register	Diagramming Techniques	
		Cost Management Plan	SWOT Analysis	
		Schedule Management Plan	Expert Judgement	
		Quality Management Plan		
		Project Documents		
		Enterprise Environmental Factors		
	Perform Qualitative Risk Analysis [PLAN]	Risk Register	Risk Probability and Impact Assessment	Risk Register Updates
		Risk Management Plan	Probability and Impact Matrix	
		Project Scope Statement	Risk Data Quality Assessment	
		Organizational Process Assets	Risk Categorization	
			Risk Urgency Assessment Expert Judgement	
Perform Quantitative Risk Analysis [PLAN]	Risk Register	Data Gathering and Representation Techniques	Risk Register Updates	
	Risk Management Plan	Quantitative Risk Analysis and Modeling Techniques		
	Cost Management Plan	Expert Judgement		
	Schedule Management Plan			
	Organizational Process Assets			
Plan Risk Responses [PLAN]	Risk Register	Strategies For Negative Risks or Threats	Risk Register Updates	
	Risk Management Plan	Strategies For Positive Risks Or Opportunities	Risk-related Contract Decisions	
		Contingent Response Strategies	Project Management Plan Updates	
		Expert Judgement	Project Document Updates	
Monitor & Control Risks [M&C]	Risk Register	Risk Reassessment	Risk Register Updates	
	Project Management Plan	Risk Audits	Organizational Process Assets Updates	
	Work Performance Information	Variance and Trend Analysis	Change Requests	
	Performance Reports	Technical Performance Measurement	Project Management Plan Updates	
		Reserve Analysis	Project Document Updates	
		Status Meetings		
Procurement Management	Plan Procurement [PLAN]	Scope Baseline	Make-or-Buy Analysis	Procurement Management Plan
		Requirements Documentation	Expert Judgement	Procurement Statements of Work
		Teaming Agreements	Contract Types	Make-or-Buy Decisions
		Risk Register		Procurement Documents
		Risk-related Contract Decisions		Source Selection Criteria
		Activity Resource Requirements		Change Request
		Project Schedule		
		Activity Cost Estimates		
		Cost Performance Baseline		
		Enterprise Environmental Factors		
	Organizational Process Assets			
	Conduct Procurement [EXEC]	Project Management Plan	Bidder Conferences	Selected Sellers
		Procurement Documents	Proposal Evaluation Techniques	Procurement Contract Award
		Source Selection Criteria	Independent Estimates	Resource Calendars
		Qualified Seller List	Expert Judgement	Change Requests
		Seller Proposals	Advertising	Project Management Plan Updates
		Project Documents	Internet Search	Project Document Updates
		Make-or-Buy Decisions	Procurement Negotiations	
		Teaming Agreements		
	Administer Procurement [M&C]	Procurement Documents	Contract Change Control System	Procurement Documentation
		Project Management Plan	Procurement Performance Reviews	Organizational Process Assets Updates
Contracts		Inspections And Audits	Change Requests	
Performance Reports		Performance Reporting	Project Management Plan Updates	
Approved Change Requests		Payment Systems		
Worked Performance Information		Claims Administration		
Close Procurement [CLOSE]	Project Management Plan	Procurement Audits	Closed Procurement	
	Procurement Documentation	Negotiated Settlements	Organizational Process Assets Updates	
		Record Management System		