

PMP® Process Chart based on PMBOK® 6th Edition

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Process Groups

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Integration	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project World	4.5 Monitor and Control Project work	4.7 Close Project or Phase
integration			4.4 Manage Project Knowledge	4.6 Perform Integrated Change Control	
		5.1 Plan Scope Management		5.5 Validate Scope	
Scope	***************************************	5.2 Collect Requirements		5.6 Control Scope	
Scope		5.3 Define Scope			
		5.4 Create WBS			
		6.1 Plan Schedule Management		6.6 Control Schedule	
	***************************************	6.2 Define Activities			
Schedule		6.3 Sequence Activities			
		6.4 Estimate Activity Durations			
		6.5 Develop Schedule (*Check resource availability	before Publish)		
		7.1 Plan Cost Management		7.4 Control Costs	
Cost		7.2 Estimate Costs			
		7.3 Determine Budget			
Quality		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
		9.1 Plan Resource Management	9.3 Acquire Resources	9.6 Control Resources	
Resource		9.2 Estimate Activity Resources	9.4 Develop Team		
			9.5 Manage Team		
Communication		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
Risk		11.1 Plan Risk Management	11.6 Implement Risk Responses	11.7 Monitor Risks	
		11.2 Identify Risks			
		11.3 Perform Qualitative Risk Analysis			
		11.4 Perform Quantitative Risk Analysis			
		11.5 Plan Risk Responses			
Procurement		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
Stakeholder	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagem	13.4 Monitor Stakeholder Engagement	



Integration

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	ilitegration	Project Management Institute, inc.
INPUTS	TOOLS	OUTPUTS
	Develop Project Charter	
1. Business Documents	1. Expert Judgement	1. Project charter
Business Case	2. Data Gathering	2. Assumption Log
 Benefits management plan 	Brainstorming	
2. Agreements	• Focus Groups	
3. Enterprise environmental factors	• Interviews	
4. Organizational process assets	3. Interpersonal & Team Skills	
	Conflict Management	
	• Facilitation	
	Meeting Management	
	4. Meetings	
	Develop Project Management Pla	n
1. Project Charter	1. Expert Judgement	1. Project management plan
2. Outputs from other processes	2. Data Gathering	
3. Enterprise environmental factors	Brainstorming	
4. Organizational process assets	• Checklists	
	• Focus Groups	
	• Interviews	
	3. Interpersonal & Team Skills	
	Conflict Management	
	• Facilitation	
	Meeting Management	
	4. Meetings	
	Direct and Manage Project Work	
1. Project management plan	1. Expert Judgement	1. Deliverables
Any component	2. Project management information system (PMIS)	2. Work performance data
2. Project documents	3. Meetings	3. Issue Log
Change Log		4. Change requests
Lessons Learnt Register		5. Project management plan updates
Milestone List		Any component
Project Communications		6. Project document updates
Project Schedule		Activity List
Requirements Tracebility Matrix		Assumption Log
Risk Register		• Lessons Learnt Register
Risk Report		Requirements Documentation
3. Approved change requests		• Risk Register
4. Enterprise environmental factors		Stakeholder Register
5. Organizational process assets		7. Organization Process Assets updates

	Manage Project Knowled	dge
1. Project management plan	1. Expert Judgement	1. Lessons Learnt Register
• Any component	2. Knowledge management	2. Project management plan updates
2. Project documents	3. Information management	Any component
Lessons Learnt Register	4. Interpersonal & Team skills	3. Organization Process Assets updates
Project team assignments	Active Listening	
RBS - Resource Breakdown structure	• Facilitation	
Source selection criteria	• Leadership	
 Stakeholder Register 	Networking	
	 Political awareness 	
3. Deliverables		
4. Enterprise environmental factors		
5. Organizational process assets		
	Monitor and Control Project	t Work
Project management plan	1. Expert Judgement	1. Work Performance Reports
Any component	2. Data Analysis	2. Change requests
2. Project documents	Alternative Analysis	3. Project Plan updates
Assumption Log	Cost-Benefit Analysis	Any component
Basis of estimates	Earned Value Analysis	4. Project document Updates
Cost forecasts	Root Cause Analysis	Cost forecasts
• Issue Log	• Trend Analysis	• Issue Log
• Lessons Learnt Register	Variance Analysis	• Lessons Learnt Register
Milestone Lists	3. Decision Making	• Risk register
Quality report	4. Meetings	Schedule forecasts
• Risk register		501164416 101 664515
• Risk reports		
Schedule forecasts		
- Seriedate forcedsts		
3. Work Performance Information		
4. Agreements		
5. Enterprise environmental factors		
6. Organizational process assets		
o. Organizational process assets	Perform Integrated Change	Control
1. Project management plan	1. Expert Judgement	1. Approved change requests
Any component	2. Change Control tools	2. Project management plan updates
2. Project documents	3. Data Analysis	Any component
Assumption Log	Alternative Analysis	3. Project document updates
 Basis of estimates 	Cost-Benefit Analysis	Change Log
 Cost forecasts 	4. Decision Making	
• Issue Log	• Voting	
 Lessons Learnt Register 	Autocratic decision making	
Milestone Lists	 Multi-criteria decision analysis 	
Quality report	5. Meetings	
 Risk register 		
 Risk reports 		
Schedule forecasts		
3. Work Performance Information		
4. Agreements		
5. Enterprise environmental factors		
6. Organizational process assets		

Close Project or Phase				
1. Project Charter 1. Expert Judgement 1. Project document updates				
2. Project management plan	2. Data Analysis	• Lessons learnt register		
All components	Document Analysis	2. Final product, service or result transition		
3. Project documents	 Regression Analysis 	3. Final report		
Assumption Log	• Trend Analysis	4. Organizational process assets updates		
Basis of estimates	Variance Analysis			
Change Log	3. Meetings			
• Issue Log				
• Lessons Learnt Register				
Milestone Lists				
Project Communications				
 Quality control measurements 				
Quality reports				
Requirements Documentation				
Risk Register				
Risk reports				
4. Accepted Deliverables				
5. Business Documents				
Business Case				
Benefits management plan				
6. Agreements				
7. Procurement documentation				
8. Organizational process assets				



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Scope

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INPUTS	TOOLS	OUTPUTS
	Plan Scope Management	
1. Project charter	1. Expert judgment	1. Scope management plan
2. Project management plan	2. Data Analysis	2. Requirements management plan
Quality Management plan	Alternatives Analysis	
Project Lifecycle Description	3. Meetings	
Development Approach		
3. Enterprise enviromental factors		
4. Organizational process assets		
	Collect Requirements	
1. Project charter	1. Expert Judgement	1. Requirements documentation
2. Project management plan	2. Data Gathering	2. Requirements traceability matrix
Scope management plan	Brainstorming	
Requirements management plan	• Focus Groups	
Stakeholder engagement plan	• Interviews	
3. Project documents	Questionaire & surveys	
Assumption Log	Benchmarking	
Lessons Learnt Register	3. Data Analysis	
 Stakeholder register 	Document Analysis	
4. Business Documents	4. Decision Making	
Business Case	• Voting	
5. Agreements	 Multi-criteria decision analysis 	
6. Enterprise enviromental factors	5. Data Representation	
7. Organizational process assets	Affinity Diagram	
	Mind mapping	
	6. Interpersonal & Team Skills	
	Nominal Group Technique	
	• Facilitation	
	Observation/conversation	
	7. Context diagram	
	8. Prototyping	

	Define Scope			
1. Project charter	1. Expert Judgement	1. Project scope statement		
2. Project management plan	2. Data Analysis	2. Project document updates		
Scope management plan	Alternatives Analysis	Assumption Log		
3. Project documents	3. Decision Making	Requirements documentation		
Assumption Log	Multi-criteria decision analysis	Requirements Traceability matrix		
Requirements documentation	4. Interpersonal & Team Skills	Stakeholder register		
Risk register	Facilitation			
4. Enterprise enviromental factors	5. Product Analysis			
5. Organizational process assets				
	Create WBS			
1. Project management plan	1. Expert Judgement	1. Scope baseline		
Scope management plan	2. Decomposition	2. Project document updates		
2. Project documents	·	Assumption Log		
Project scope statement		Requirements documentation		
Requirements documentation		·		
3. Enterprise enviromental factors				
4. Organizational process assets				
	Validate Scope			
1. Project management plan	1. Inspection	1. Accepted deliverables		
Scope management plan	2. Decisionn making	2. Change requests		
Requirements management plan	• Voting	3. Work performance information		
2. Project documents		4. Project documents updates		
Lessons Learnt Register		• Lessons Learnt Register		
Quality reports		Requirements documentation		
Requirements documentation		Requirements Traceability matrix		
Requirements Traceability matrix		· · · · · · · · · · · · · · · · · · ·		
3. Verified deliverables				
4. Work Performance Data				
	Control Scope			
1. Project management plan	1. Data Analysis	1. Work Performance Information		
Scope management plan	Trend Analysis	2. Change requests		
Requirements management plan	Variance Analysis	3. Project management plan updates		
Change management plan		Scope management plan		
Configuration management plan		• Scope baseline		
Scope baseline		• Schedule baseline		
Performance measurement baseline		• Cost baseline		
2. Project documents		Performance measurement baseline		
Lessons Learnt Register		4. Project documents updates		
Requirements documentation		• Lessons Learnt Register		
Requirements Traceability matrix		Requirements documentation		
3. Work Performance Data		Requirements Traceability matrix		
4. Organizational process assets				



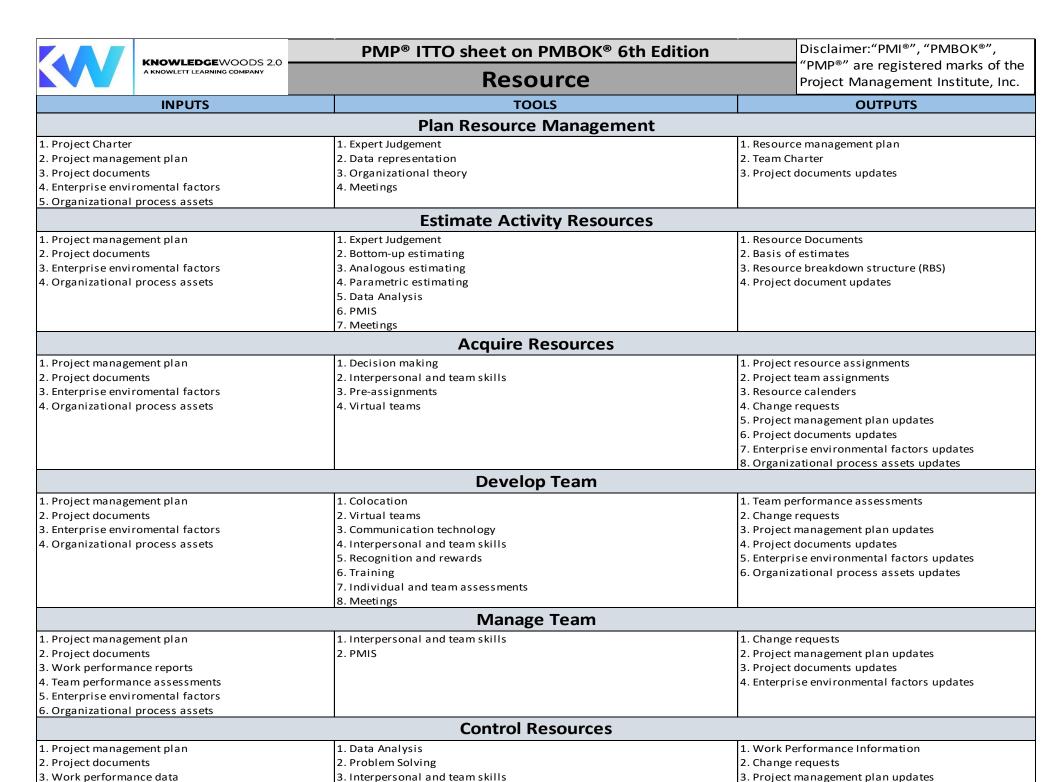
Schedule

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	Scriedule	Project Management Institute, Inc.
INPUTS	TOOLS	OUTPUTS
	Plan Schedule Management	
1. Project Charter	1. Expert Judgement	1. Schedule Management plan
2. Project mangement plan	2. Data Analysis	
3. Enterprise enviromental factors	3. Meetings	
1. Organizational process assets		
	Define Activites	
Project mangement plan	1. Expert Judgement	1. Activity List
. Enterprise enviromental factors	2. Decomposition	2. Activity attributes
. Organizational process assets	3. Rolling wave planning	3. Milestone list
	4. Meeting	4. Change requests
		5. Project management plan updates
	Sequence Activities	
. Project mangement plan	1. Precedence diagramming method	1. Project Schedule network diagram
2. Project documents	2. Dependency determination & integration	2. Project document updates
3. Enterprise enviromental factors	3. Leads and Lags	
1. Organizational process assets	4. Project management information system (PMIS)	
·	Estimate Activity Durations	
Project mangement plan	1. Expert Judgement	1. Duration Estimates
. Project documents	2. Analogous estimating	2. Basis of estimates
. Enterprise enviromental factors	3. Parametric estimating	3. Project document updates
. Organizational process assets	4. Three Point estimating	
	5. Bottom-up estimating	
	6. Data Analysis	
	7. Decision marking	
	8. Meetings	
	Develop Schedule	
Project mangement plan	1. Schedule network analysis	1. Schedule baseline
. Project documents	2. Critical path method	2. Project schedule
. Agreements	3. Resource optimization techniques	3. Schedule data
. Enterprise enviromental factors	4. Data Analysis	4. Project calendars
. Organizational process assets	5. Leads and lags	5. Change requests
	6. Schedule compression	6. Project management plan updates
	7. Project management information system (PMIS)	7. Project documents updates
	8. Agile release planning	·
	Control Schedule	
Project mangement plan	1. Data analysis	1. Work Performance Information
2. Project documents	2. Critical path method	2. Schedule forecasts
3. Work Performance Data	3. Project management information system (PMIS)	3. Change requests
I. Organizational process assets	4. Resource optimization techniques	4. Project management plan updates
•	5. Leads and lags	5. Project documents updates
	6. Schedule compression	
	F	

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	INPUTS	TOOLS	OUTPUTS
		Plan Cost Management	
1. Project charte	r	1. Expert judgment	1. Cost management plan
2. Project manag	ement plan	2. Data Analysis	
3. Enterprise env	ironmental factors	3. Meetings	
4. Organizationa	l process assets		
		Estimate Costs	
1. Project manag	ement plan	1. Expert Judgement	1. Cost estimates
2. Project docum	ents	2. Analogous estimating	2. Basis of estimates
3. Enterprise env	ironmental factors	3. Parametric estimating	3. Project document updates
4. Organizationa	l process assets	4. Three Point estimating	
		5. Bottom-up estimating	
		6. Data Analysis	
		7. Decision marking	
		8. PMIS	
		Determine Budget	
1. Project mange	ment plan	1. Expert judgment	1. Cost baseline
2. Project docum	ents	2. Cost aggregation	2. Project funding requirements
3. Business docu	ments	3. Reserve analysis	3. Project document updates
4. Agreements		4. Historical information review	
5. Enterprise env	iromental factors	5. Funding limit reconcillation	
6. Organizationa	I process assets	6. Financing	
		Control Costs	1
1. Project mange	ment plan	1. Expert judgment	1. Work Performance Information
2. Project docum		2. Data Analysis	2. Cost forecasts
3. Project fundin	g requirements	3. To complete performance index (TCPI)	3. Change requests
4. Work perform		4. Project management information system (PMIS)	4. Project management plan updates
5. Organizational process assets			5. Project documents updates

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W	KNOWLEDGEWOODS 2.0 A KNOWLETT LEARNING COMPANY	Quality	"PMP®" are registered marks of the Project Management Institute, Inc.
	INPUTS	TOOLS	OUTPUTS
		Plan Quality Management	
1. Project Charte	er	1. Expert Judgement	1. Quality management plan
2. Project manag	gement plan	2. Data Gathering	2. Quality metrics
3. Project docum	nents	3. Data Analysis	3. Project management plan updates
4. Enterprise env	viromental factors	4. Decision making	4. Project documents updates
5. Organizationa	al process assets	5. Data representation	
		6. Test and Inspection planning	
		7. Meetings	
		Manage Quality	
1. Project manag	gement plan	1. Data Gathering	1. Quality reports
2. Project documents 2. Data Analysis 2. Test and evaluation document		2. Test and evaluation documents	
3. Organizationa	al process assets	3. Decision making	3. Change requests
		4. Data representation	4. Project management plan updates
		5. Audits	5. Project documents updates
		6. Design for X	
		7. Problem Solving	
		8. Quality improvement methods	
		Control Quality	
1. Project manag	gement plan	1. Data Gathering	1. Quality control measurements
2. Project docum	nents	2. Data Analysis	2. Verified deliverables
3. Approved Cha	inge requests	3. Inspection	3. Work performance information
4. Deliverables		4. Testing/product evaluations	4. Change requests
5. Work perform	nance data	5. Data representation	5. Project management plan updates
6. Enterprise enviromental factors		6. Meetings	6. Project document updates
7. Organizational process assets			



4. Project documents updates

4. PMIS

4. Agreements

5. Organizational process assets

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A KNOWLETT LEARNING COMPANY	Communications		"PMP®" are registered marks of the Project Management Institute, Inc.
INPUTS	TOOLS		OUTPUTS
	Plan Communications Management		
1. Project Charter	1. Expert Judgement	1. Commi	unication management plan
2. Project management plan	2. Communication requirements analysis	2. Project	t management plan updates
3. Project documents	3. Communication technology	3. Project	t document updates
4. Enterprise enviromental factors	4. Communication models		
5. Organizational process assets	5. Communication methods		
	6. Interpersonal and team skills		
	7. Data representation		
	8. Meetings		
	Manage Communications		
1. Project management plan	1. Communication technology	1. Projec	t communications
2. Project documents	2. Communication methods	2. Project	t management plan updates
3. Work performance reports	3. Communication skills	3. Project	t document updates
4. Enterprise enviromental factors	4. PMIS	4. Organi	izational process assets updates
5. Organizational process assets	5. Project reporting		
	6. Interpersonal and team skills		
	7. Meetings		
	Monitor Communications		
1. Project management plan	1. Expert Judgement	1. Work F	Performance Information
2. Project documents	2. PMIS	2. Change	e requests
3. Work performance data	3. Data Analysis	3. Project	t management plan updates
4. Enterprise enviromental factors	4. Interpersonal and team skills	4. Projec	t documents updates
I	I .		

5. Meetings

5. Organizational process assets

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		Risk		"PMP®" are registered marks of the Project Management Institute, Inc.
	INPUTS	TOOLS		OUTPUTS
		Plan Risk Management		
 Project Charter Project management plan Project documents Enterprise enviromental factors Organizational process assets 		Expert judgment Data Analysis Meetings	1. Risk ma	anagement plan
		Identify Risks	•	
1. Project mangement plan 2. Project documents 3. Agreements 4. Procurement documentation 5. Enterprise enviromental factors 6. Organizational process assets		 Expert judgment Data Gathering Data Analysis Interpersonal and team skills Prompt Lists Meetings 	1. Risk re 2. Risk re 3. Project	
		Perform Qualitative Risk Analysis	•	
Project mangement plan Project documents Enterprise enviromental factors Organizational process assets		1. Expert judgment 2. Data Gathering 3. Data Analysis 4. Interpersonal and team skills 5. Risk categorization 6. Data representation 7. Meetings	1. Project	documents updates

	Perform Quantitative Risk A	analysis
 Project mangement plan Project documents Enterprise environmental factors Organizational process assets 	 Expert judgment Data Gathering Interpersonal and team skills Representations of uncertainity Data Analysis 	1. Project documents updates
	Plan Risk Responses	
 Project mangement plan Project documents Enterprise enviromental factors Organizational process assets 	 Expert judgment Data Gathering Interpersonal and team skills Strategies for threats Strategies for Opportunities Contingent response strategies Strategies for overall project risks Data Analysis Decision making 	Change requests Project management plan updates Project document updates
	Implement Risk Respon	ses
Project mangement plan Project documents Organizational process assets	 Expert judgment Interpersonal and team skills PMIS 	Change requests Project document updates
	Monitor risks	
 Project mangement plan Project documents Work performance data Work performance reports 	1. Data Analysis2. Audits3. Meetings	 Work Performance Information Change requests Project management plan updates Project documents updates Organizational process assets updates

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		Procurement		"PMP®" are registered marks of the Project Management Institute, Inc.		
INPUTS		TOOLS	OUTPUTS			
Plan Procurement Management						
1. Project Charter		1. Expert judgment	1. Procurement management plan			
2. Business documents		2. Data Gathering	2. Procurement strategy			
3. Project management plan		3. Data Analysis	3. Bid documents			
4. Project documents		4. Source selection analysis	4. Procurement statements of work			
5. Enterprise enviromental factors		5. Meetings	5. Source selection criteria			
6. Organizational	process assets		6. Make or buy decisions			
			7. Independent cost estimates			
			8. Change	•		
			9. Project documents updates			
			10. Organ	izational proces assets updates		
		Conduct Procurements				
1. Project mangement plan		1. Expert judgment	1. Selected sellers			
2. Project documents		2. Advertising	2. Agreements			
3. Procurement documentation		3. Bidder conferences	3. Change requests			
4. Seller proposals		4. Data Analysis	4. Project management plan updates			
5. Enterprise enviromental factors		5. Interpersonal and team skills	5. Project document updates			
6. Organizational	process assets		6. Organiz	ational proces assets updates		
Control Procurements						
1. Project mangem	nent plan	1. Expert judgment	1. Closed I	Procurements		
2. Project documents		2. Claims administration	2. Work performance Information			
3. Agreements		3. Data Analysis	3. Procurement documentation updates			
4. Procurement documentation		4. Insepection	4. Change requests			
5. Approved Chang	ge requests	5. Audits	5. Project management plan updates			
6. Work performance data			6. Project document updates			
7. Enterprise enviromental factors			7. Organiz	ational proces assets updates		
8. Organizational	process assets					



Stakeholder

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INPUTS	TOOLS	OUTPUTS
	Identify Stakeholders	
1. Project Charter	1. Expert judgment	1. Stakeholder register
2. Business documents	2. Data Gathering	2. Change requests
3. Project management plan	3. Data Analysis	3. Project management plan updates
4. Project documents	4. Data representation	4. Project document updates
5. Agreements	5. Meetings	
6. Enterprise enviromental factors		
7. Organizational process assets		
	Plan Stakeholder Engagen	nent
1. Project Charter	1. Expert judgment	1. Stakeholder management plan
2. Project management plan	2. Data Gathering	
3. Project documents	3. Data Analysis	
4. Agreements	4. Decision making	
5. Enterprise enviromental factors	5. Data representation	
6. Organizational process assets	6. Meetings	
	Manage Stakeholder Engage	ement
1. Project management plan	1. Expert judgment	1. Change requests
2. Project documents	2. Communication skills	2. Project management plan updates
3. Enterprise enviromental factors	3. Interpersonal and team skills	3. Project documents updates
4. Organizational process assets	4. Ground rules	
	5. Meetings	
	Monitor Stakeholder Engage	ement
1. Project management plan	1. Data Analysis	1. Work performance information
2. Project documents	2. Decision making	2. Change requests
3. Work performance data	3. Data representation	3. Project management plan updates
4. Enterprise enviromental factors	4. Communication skills	4. Project documents updates
5. Organizational process assets	5. Interpersonal and team skills	
	6. Meetings	