

‘TRICK SHEET’
on
Project Management
ITTO’s
(Input, Tool & Techniques, Output)

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Based on PMBOK 5th Edition

<i>Integration Management</i>					
Process	Description	Group	Input	Tools & Technique	Output
Project Charter	Formal authorization of the project or phase	Initiate	Project Statement of Work (SOW) Business case Agreement/Contract Enterprise Environment Factor (EEF) Organizational Process Assets (OPA)	Expert judgment Facilitation techniques	Project Charter
Develop Management Plan	Document actions to define, prepare, integrate, and coordinate subsidiary plans into the PMP	Plan	Project Charter Outputs from Planning Process Enterprise Environment Factor (EEF) Organizational Process Assets (OPA)	Expert judgment Facilitation techniques	Project Management Plan
Direct & Manage Project Work	Execute the work defined in the project mgmt plan to achieve requirements in scope statement.	Execute	Project management plan Approved changed requests Enterprise Environment Factors (EEF) Organizational Process Assets (OPA)	Expert judgment PMIS Meetings	Deliverables Work performance information Change requests Project Management Plan Updates Project Documents Updates
Monitor & Control Project Work	Monitor and control the processes to meet the performance objectives.	Control	Project management plan Schedule Forecasts Cost Forecasts Validated Changes Work performance info Enterprise Environment Factors (EEF) Organizational Process Assets (OPA)	Expert judgment Analytical techniques PMIS Meetings	Change requests Work performance Reports Project Management Plan Updates Project Documents Updates
Perform Integrated Change Control	Reviewing change requests, approving change requests and controlling changes.	Control	Project management plan Work performance reports Change requests Enterprise Environment Factors (EEF) Organizational Process Assets (OPA)	Expert judgment Meetings Change Control Tools	Approved Change Requests Change Log Project Management Plan Updates Project Document Updates
Close Project or Phase	Finalize all activities to formally close the project or phase.	Close	Project management plan Accepted deliverables Organizational Process Assets (OPA)	Expert judgment	Final Product, Service or Result Transition Organizational Process Assets Updates

Scope Management					
Process	Description	Group	Input	Tools & Technique	Output
Plan Scope Management	Is the process of creating a scope management plan that documents how the project scope will be defined, validated, and controlled.	Plan	Plan Project Management Plan	Expert Judgement	Scope Management Plan
			Project Charter	Meetings	Requirement Management Plan
			Enterprise Environmental Factor		
			Organizational Process Assesses		
Collect Requirements	Defining and documenting stakeholders' needs to ensure project objectives are met.	Plan	Scope Management Plan	Interviews	Requirement Documents
			Requirement Management Plan	Focus Group	Requirement Traceability Matrix (RTM)
			Stakeholder Management Plan	Facilitated workshops	
			Project Charter	Group Creativity Techniques	
			Stakeholder Register	Group Decision Making Techniques	
				Questionnaires and Surveys	
				Observations	
				Prototypes	
				Benchmarking	
				Context Diagrams	
	Document Analysis				
Define Scope	Developing detailed description of the project and product as a basis for future decisions.	Plan	Scope Management Plan	Expert Judgement	Project Scope Statement
			Project Charter	Product analysis	Project Documents Updates
			Requirement Documents	Alternative Identification	
			OPA	Facilitated Workshop	
Create WBS	Subdividing major deliverables into smaller components	Plan	Scope Management Plan	Decomposition	Scope Baseline
			Project Scope Statement	Expert Judgement	Project Documents Updates
			Requirement Documentation		
			EEF		
	OPA				
Validate Scope	Formal acceptance of the completed project deliverables.	Control	Project Management Plan	Inspection	Accepted deliverables
			Requirement Documents	Group Decision Making Techniques	Change requests
			Requirement Traceability Matrix		Work Performance Information
			Verified Deliverables		Project Documents updates
			Work Performance Data		
Control Scope	Monitoring status of the project and product scope and managing changes to scope baseline.	Control	Project Management Plan	Variance analysis	Work Performance Information
			Requirement Documentation		Change requests
			Requirement Traceability Matrix		Updates: Plan, Docs, OPA
			Work Performance Data		
			OPA		

Time Management (ITTO)

Process	Description	Group	Input	Tools & Technique	Output
Plan Schedule Management	Plan Schedule Management is the process of establishing the policies, procedures, and documentation for planning,	Plan	Project Management Plan	Expert Judgement	Schedule Management Plan
			Project Charter	Analytical Techniques	
			Enterprise Environmental Factor Organizational Process Assets	Meetings	
Define Activities	Activity list Milestone list	Plan	Schedule Management Plan	Decomposition	Activity list
			Scope baseline	Rolling wave planning	Activity Attributes
			Enterprise Environmental Factors Organizational Process Assets	Expert judgment	Milestone Lists
Sequence Activities	Identify and document the logical relationships and dependencies	Plan	Schedule Management Plan	Precedence Diagramming Method (PDM)	Project Network Schedule Diagram
			Activity lists	Dependency Determination	Project Document Updates
			Activity Attributes	Leads & Lags	
			Milestone List		
			Project Scope Statement Enterprise Environmental Factors (EEF) Organizational Process Assets		
Estimate Activity Resources	Estimating the type and quantities of resources required	Plan	Schedule Management Plan	Expert judgment	Activity Resource Requirements
			Activity lists	Alternative Analysis	Resource Breakdown Structure
			Activity Attributes	Published Estimating Data	Project Document Updates
			Resource calendars	Bottom Up Estimating	
			Risk Register	Project Management Software	
			Activity Cost Estimates		
			Enterprise Environmental Factors (EEF) Organizational Process Assets		
Estimate Activity Durations	Estimate # of work periods per activity	Plan	Schedule Management Plan	Expert judgment	Activity duration estimates
			Activity lists	Analogous Estimating	Project Document Updates
			Activity Attributes	Parametric Estimating	
			Activity resource requirements	3 Point Estimating	
			Resource calendars	Group Decision Making Technique	
			Project Scope Statement	Reserve analysis	
			Risk Register		
			Resource Breakdown Structure Enterprise Environmental Factors (EEF) Organizational Process Assets		
Develop Schedule	Analyze sequences, durations, resources and constraints to document project schedule	Plan	Schedule Management Plan	Schedule Network Analysis	Schedule baseline
			Activity lists	Critical Path Method	Project Schedule
			Activity Attributes	Critical chain method	Schedule Data
			Project Schedule Network Diagrams	Resource Optimization Technique	Project Calendars
			Activity resource requirements	Leads and Lags	Plan Updates
			Resource calendars	Schedule compression	Project Document Updates
			Project Scope Statement	Scheduling Tools	
			Risk Register		
			Resource Breakdown Structure		
			Enterprise Environmental Factors (EEF) Organizational Process Assets		
Control Schedule	Controlling changes	Control	Project Management Plan	Performance Reviews	Work Perform Information
			Project Schedule	PM Software	Schedule Forecasts
			Work performance data	Resource Optimization Technique	Change Requests
			Project Calendars	Modeling Techniques	Updates: Plan, Docs, OPA
			Schedule data	Leads & Lags	
			Organizational Process Assets	Schedule compression Scheduling Tools	

<i>Cost Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Plan Cost Management	Is the process that establishes the policies, procedures, and documentation for planning, managing, expending, and controlling project costs.	Plan	Project Management Plan	Expert Judgement	Cost Management Plan
			Project Charter	Analytical Techniques	
			Enterprise Environmental Factors	Meetings	
			Organizational process Assets		
Estimate Costs	Develop an approximation of the costs of the resources to complete project activities	Plan	Cost Management Plan	Expert judgment	Activity cost estimates
			HRM Plan	Analogous Estimating	Basis of estimates
			Scope baseline	Parametric Estimating	Project Documents Updates
			Project schedule	Bottom-up estimating	
			Risk Register	3-point estimating	
			Enterprise Environmental Factors	Reserve analysis	
			Organizational Process Assets	Cost of quality	
				Vendor Bid Analysis	
				Group Decision Making Tech	
	PM Estimating Software				
Determine Budget	Aggregating estimated costs to establish an authorized cost baseline.	Plan	Cost Management Plan	Cost Aggregation	Cost Baseline
			Scope baseline	Reserve analysis	Project Funding Requirements
			Activity Cost Estimates	Expert judgment	Project Documents Updates
			Basis of Estimates	Historical relationships	
			Project schedule	Fund limit reconciliation	
			Resource Calendars		
			Risk Register		
			Agreements		
Organizational Process Assets					
Control Costs	Monitoring status of the project to update the project budget and managing changes to the cost baseline	Control	Project Management Plan	Earned Value Mgt (EMV)	Work Performance
			Project Funding Requirements	Forecasting (ETC, VAC etc)	Cost Forecasts
			Work performance Data	To Complete Perf Indx (TCPI)	Change requests
			OPA	Performance Reviews	Project Management Plan
				Reserve analysis	Project Documents Updates
				PM Software	Organizational Process Assets

<i>Quality Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Plan Quality	Identifying quality Requirements and/or standards for the project and product and documenting how the project will demonstrate compliance.	Plan	Project management plan	Cost-Benefit Analysis	Quality Management Plan
			Stakeholder Register	Cost of quality (COQ)	Process Improvement pLan
			Risk register	Seven Basic Quality Tools	Quality Metrics
			Requirement Documentation	Benchmarking	Quality Checklist
			EEF	Design of experiments	Project Docs Updates
			OPA	Statistical sampling	
				Flowcharting	
				Additional Quality Planning Tool	
Perform Quality Assurance	Auditing the quality Requirements and the results from quality control measurements to ensure appropriate quality standards and operations definitions are used.	Execute	Quality Management Plan	Quality Managementa and Control Tools	Change requests
			Process Improvement Plan	Quality Audits	Updates: docs, plan, OPA
			Quality Metrics	Process Analysis	
			Quality Control Measurement		
			Project Documents		
Control Quality	Monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes.	Control	Project management plan	Cause & Effect diagrams	Quality Contraol Measuret
			Quality metrics	Control charts	Validated changes
			Quality checklists	Flowcharting	Validated deliverables
			Work Performance Data	Histrogram	Change requests
			Approved change requests	Pareto Chart	Work performance Info
			Deliverables	Run Charts	Updates: docs, plan, OPA
			Project Documents	Scatter Diagram	
			OPA	Statistical sampling	
				Inspection	
	Approved Change Request Review				

<i>Human Resources Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Plan HRM	Identify, document, assign R & R & reporting structure.	Plan	Project Management Plan	Organization charts and Position Description	Human Resource Plan: <i>✓ Roles & Responsibility</i> <i>✓ Project Org Chart</i> <i>✓ Staffing Mgt Plan</i>
			Activity resource requirements	Networking	
			EEF	Organization theory	
			OPA	Expert Judgement	
				Meetings	
Acquire Project Team	Obtaining required project resources.	Execute	HRM Plan	Pre -Assignment	Project Staff assignments
			EEF	Negotiation	Resource calendars
			OPA	Acquisition	Project Mgt Plan Updates
				Virtual Team	
				Muli-criteria decision analysis	
Develop Project Team	Develop individual or group skills to enhance project performance.	Execute	HRM Plan	Interpersonal skills	Team Perform Assessment
			Project Staff Assignments	Training	EEF Updates
			Resource calendars	Team building Activities	
				Ground Rules	
				Co-Location	
				Recognition & Rewards	
				Personal Assessment Tools	
Manage Project Team	Track team performance, providing feedback, resolving issues, managing changes to optimize project performance.	Execute	HRM Plan	Observation & conversation	Change Request
			Project Staff Assignments	Project performance appraisal	Updates: Plan, Docs, EEF, OPA
			Team perform assessment	Conflict Management	
			Issue Log	Interpersonal skills	
			Work Performance Reports		
			OPA		

<i>Communication Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Plan Communications Management	Is the process of developing an appropriate approach and plan for project communications based on stakeholder's information needs and requirements	Plan	Project Management Plan	Communication Requirement Analysis	Communications Mgt plan
			Stakeholder register	Communication Technology	Project Docs Updates
			EEF	Communication Model	
			OPA	Communication methods	
				Meetings	
Manage Communication	Is the process of creating, collecting, distributing, storing, retrieving, and the ultimate disposition of project information	Execute	Communication Management Plan	Communication Technology	Project Communication
			Work Performance Reports	Communication Model	Project Management Plan Updates
			EEF	Communication Methods	Project Document Updates
			OPA	Information Management Methods	OPA Updates
				Performance Reporting	
Control Communication	Is the process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met.	Control	Project Management Plan	Information Management Systems	Work Performance Information
			Project Communications	Expert Judgement	Change Requests
			Issue Log	Meetings	Project Management Plan Updates
			Work Performance Data		OPA Updates
			OPA		

Risk Management (ITTO)					
Process	Description	Group	Input	Tools & Technique	Output
Plan Risk	Determine approach and plan risk mgmt activities	Plan	Project Management Plan Project Charter Stakeholder register EEF OPA	Analytical Techniques Expert Judgement Meetings	Risk management plan <i>(Methodology, Roles & Responsibility, Budgeting, Timing, Risk Categories, Probability and Impact Matrix, Revised Stakeholder Tolerance, Reporting Formats, Tracking)</i>
Identify Risk	Determine and document characteristics of potential risks	Plan	Risk management plan Cost management plan Schedule mgmt plan Quality Management Plan HRM Plan Scope Baseline Activity Cost Estimates Activity Duration Estimates Stakeholder register Project Documents Procurement Documents EEF, OPA	Documentation Reviews Information gathering Techniques Checklist analysis Assumption analysis Diagramming techniques: <i>(C & E Diagram, System or Process Flow Diagram, Influence Diagram)</i> SWOT analysis Expert judgment	Risk register <i>(List of Identified Risk, List of Potential Responses)</i>
Perform Qualitative Risk Analysis	Conduct qualitative analysis of risks and conditions and prioritize their effects	Plan	Risk management plan Scope Baseline Risk register EEF OPA	Risk Probability and Impact Assesst Probability & Impact Matrix Risk Data Quality Assessment Risk Categorization Risk Urgency Assessment Expert judgement	Project Documents Updates
Perform Quantitative Risk Analysis	Measure probability and consequences of risks and estimate implications for project objectives	Plan	Risk management plan Cost management plan Schedule mgmt plan Risk register EEF, OPA	Data gathering & representation Technique Quantitative Risk Analysis and Modeling Techniques Expert Judgement	Project Documents Updates
Plan Risk Response	Develop options and actions to enhance opportunities and reduce threats to the project's objectives	Plan	Risk management plan Risk register	Strategies for Negative Risk or Threats Strategies for Position Risk or Opportunities Contingent response strategies Expert Judgement	Project Management Plan Updates Project Documents Updates
Risk Control	Monitor residual risks, identifying new risks, executing risk response plans and evaluating their effectiveness.	Control	Project Management Plan Risk register Work Performance Data Work Performance Reports	Risk Reassessment Risk Audits Variance & Trend Analysis Technical Perform Measurement Reserve Analysis Meeting	Work Performance Info Change Requests Updates: Plan, Docs, OPA

<i>Procurement Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Plan Procurements	Determine what, how and when to procure. Prepare procurement documents to support vendor selection and develop the procurement SOW.	Plan	Project management plan	Make-or-buy analysis	Procurement Mgt Plan
			Requirements Documents	Expert judgment	Procurement SOW
			Risk register	Market Research	Make/buy decisions
			Activity resource requirements	Meetings	Procurement Documents
			Project Schedule		Source selection criteria
			Activity Cost Estimates		Change requests
			Stakeholder Register		Procurement Documents
			EEF OPA		Updates
Conduct Procurements	Select from potential sellers	Execute	Project management plan	Bidders Conference	Sellected Sellers
			Procurement Documents	Proposal evaluation technique	Agreements
			Source selection criteria	Independent Estimates	Resource Calenders
			Seller proposals	Expert judgment	Project Plan Updates
			Project Documents	Advertising	Project Doc Updates
			Make / Buy decision	Analytical Techniques	
			Procurement SOW	Procurement Negotiations	
			OPA		
Control Procurement	Manage seller relationship, review seller performance and manage contract related changes	Control	Project management plan	Contract Change Control Sism	Work Performance Information
			Procurement Documents	Procurement Perfrom Review	Change requests
			Agreement	Inspections and Audits	Updates: Plans, Docs, OPA
			Work Performance reports	Performance Reporting	
			Approved change Requests	Payment Systems	
			Work Performance Data	Claims administration	
	Records mgmt system				
Close Procurements	Select from potential sellers	Close	Procurement documentation	Procurement audits	Closed procurements
			Procurement documentation	Procurement Negotiations	Updates: OPA
				Records mgmt system	

<i>Stakeholder Management (ITTO)</i>					
Process	Description	Group	Input	Tools & Technique	Output
Identify Stakeholders	Documenting stakeholders, interest, power and expectations	Initiate	Project Charter	Stakeholder analysis	Stakeholder register
			Procurement Documents	Expert judgment	
			EEF	Meetings	
			OPA		
Plan Stakeholder Management	Is the process of developing appropriate management strategies to effectively engage stakeholders	Plan	Project Management Plan	Expert judgment	Stakeholder Mgt Plan Project Docs Updates
			Stakeholder register	Meetings	
			EEF	Analytical Techniques	
			OPA		
Manage Stakeholders Engagement	Is the process of communicating and working with stakeholders to meet their needs/expectations,	Execute	Stakeholder Management Plan	Communication methods	Issue Log Change requests Updates: docs; plan; OPA
			Communication Management Plan	Interpersonal skills	
			Change Log	Management Skills	
			OPA		
Control Stakeholder Engagement	Is the process of monitoring overall project stakeholder relationships and adjusting strategies and plans for engaging stakeholders.	Control	Project Management Plan	Information Management System	Performance reports Change requests OPA Updates
			Issue Log	Expert judgment	
			Work Performance Data	Meetings	
			Project Documents		