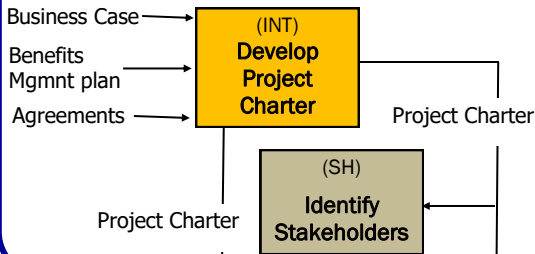


PMP® Exam Prep Process Map

Initiating



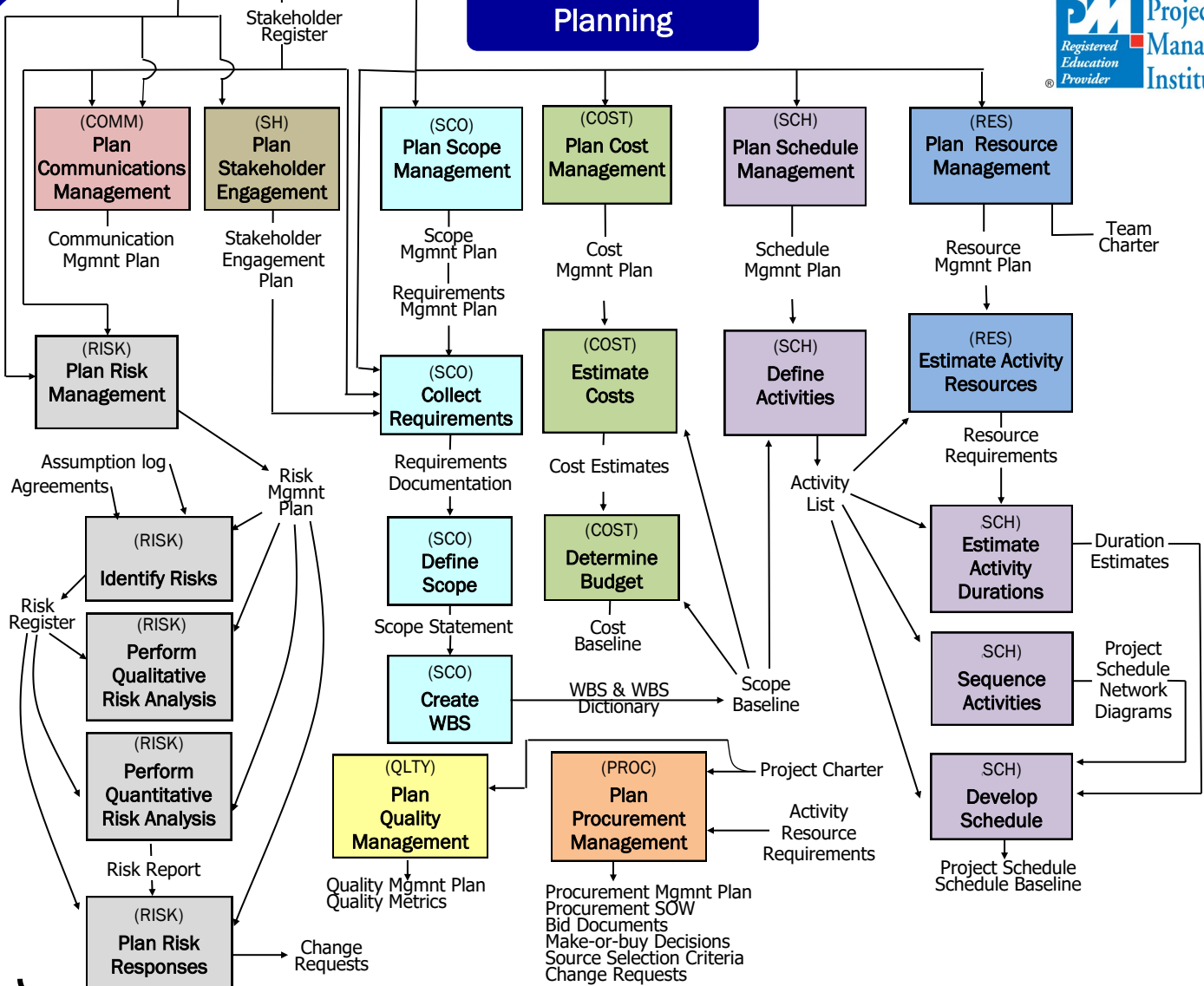
Processes by Knowledge Area



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Based on PMBOK® Guide, 6th Edition

Planning



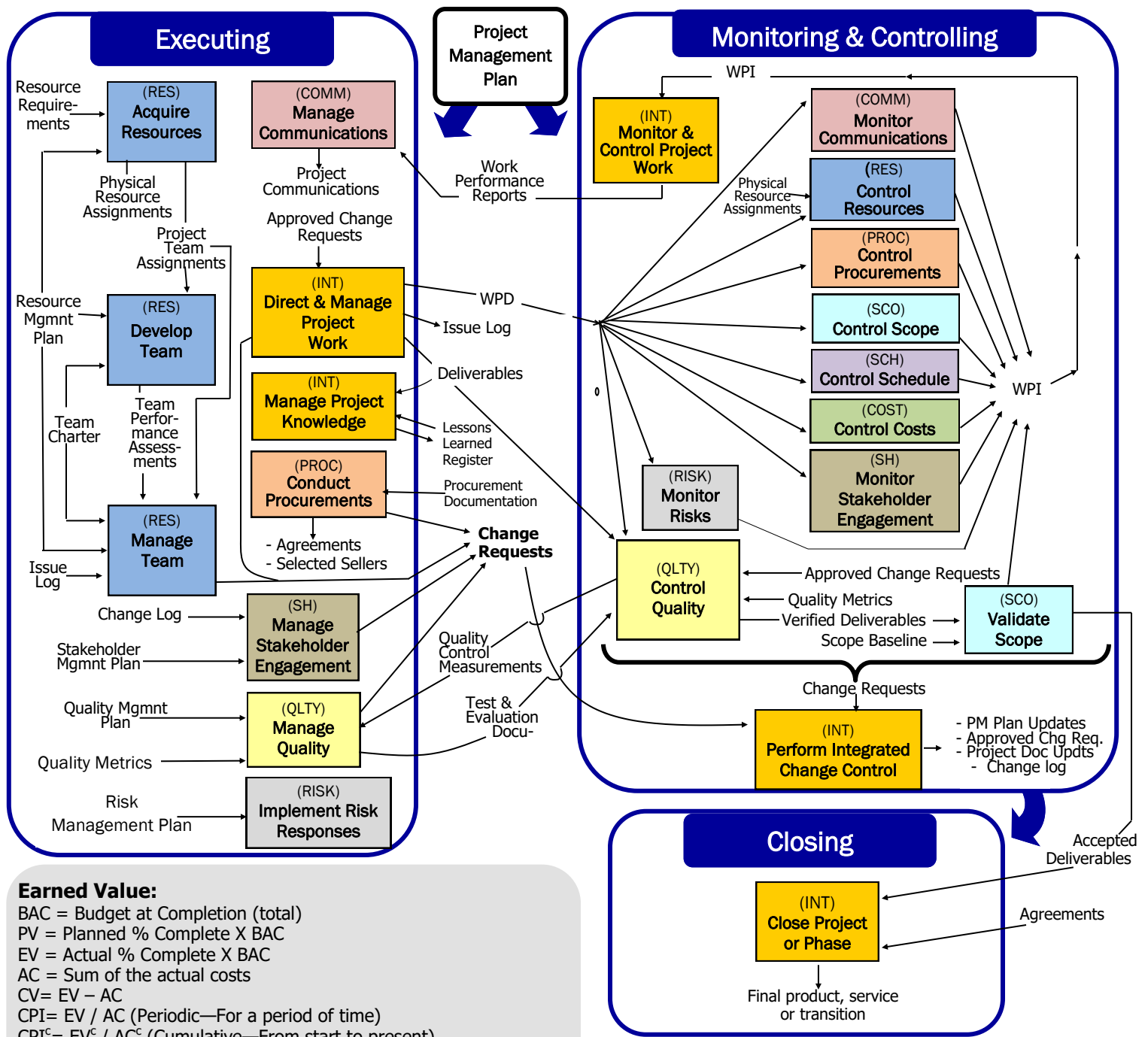
Outputs from Other Processes

Project Charter



- Change Mgmt Plan
- Configuration Mgmt Plan
- Perform measurement baseline
- Project life cycle
- Development approach
- Management reviews

Project Management Plan



Earned Value:

BAC = Budget at Completion (total)
 PV = Planned % Complete X BAC
 EV = Actual % Complete X BAC
 AC = Sum of the actual costs
 CV = EV - AC
 CPI = EV / AC (Periodic—For a period of time)
 CPI^c = EV^c / AC^c (Cumulative—From start to present)
 SV = EV - PV
 SPI = EV / PV

Forecasting:

EAC₁ = BAC / CPI_c (typical variance)
 EAC₂ = AC + bottom-up ETC (re-estimating)
 EAC₃ = AC + BAC - EV (a-typical variance)
 EAC₄ = AC + (BAC - EV) / (CPI X SPI) - poor cost & schedule perf.
 ETC = EAC - AC^c
 VAC = BAC - EAC

To Complete Performance Index:

TCPI meeting BAC = (BAC - EV) / (BAC - AC); (if target is BAC)
 TCPI meeting EAC = (BAC - EV) / (EAC - AC); (if target is EAC)
 (remaining work) / (remaining funds)

Present Value:

$$PV = FV / (1+r)^n$$

PERT Estimate a.k.a. "Three-Point Estimate"

Triangular: $(P + M + O) / 3$; Beta (PERT): $(P + 4M + O) / 6$
 P = Pessimistic; M = Most Likely; O = Optimistic

Standard Deviation of PERT Estimate

$(P - O) / 6$ Pessimistic less Optimistic divided by 6

Communication Channels

$N(N-1) / 2$; Where N = the number of people in the team

Point of Total Assumption (PTA)

The point beyond which the Seller incurs all incremental costs.
 PTA = Target Cost + ((Ceiling Price - Target Price) / Buyer's Share)

WPD: Work Performance Data
WPI: Work Performance Information
OPA: Organizational Process Assets

Process Definitions / PMBOK Guide, 6th Edition

	Process Name	Process Group	Definition
Integration	4.1 Develop Project Charter	Initiating	Creates the project charter which authorizes a project and gives authority to the PM.
	4.2 Develop Project Management Plan	Planning	Draws together all subsidiary plans into a complete project management plan.
	4.3 Direct & Manage Project Work	Executing	Executes the work defined in the project management plan.
	4.4 Manage Project Knowledge	Executing	Manages prior organizational knowledge and current project knowledge to produce or improve the project outcomes.
	4.5 Monitor & Control Project Work	Monitoring & Controlling	Monitors performance in order to meet the performance goals detailed in the Project Management Plan.
	4.6 Perform Integrated Change Control	Monitoring & Controlling	Reviews all change requests to determine if they should be approved or rejected.
	4.7 Close Project or Phase	Closing	Closes all project activity to formally complete the project or phase.
Scope	5.1 Plan Scope Management	Planning	Creates the Scope Management Plan.
	5.2 Collect Requirements	Planning	Collects the requirements to meet the project objectives.
	5.3 Define Scope	Planning	Evaluates the project requirements and creates a more precise Scope Statement.
	5.4 Create WBS	Planning	Divides high-level requirements into smaller, more manageable work packages.
	5.5 Validate Scope	Monitoring & Controlling	A formal scope review to accept the project deliverable.
	5.6 Control Scope	Monitoring & Controlling	Monitors the project scope and protects the scope baseline from unapproved change requests.
Schedule	6.1 Plan Schedule Management	Planning	Creates the Schedule Management Plan.
	6.2 Define Activities	Planning	Breaks work packages into the schedule activities required to create the project deliverables.
	6.3 Sequence Activities	Planning	Determines the relationships between activities in order to create a project network diagram.
	6.4 Estimate Activity Durations	Planning	Determines the resources (labor, materials and equipment) necessary to perform project activities.
	6.5 Develop Schedule	Planning	Utilizes outputs from the other Time Management planning processes to create a project schedule and schedule baseline.
	6.6 Control Schedule	Monitoring & Controlling	Monitors the project schedule and protects the schedule baseline from unapproved change requests.
Cost	7.1 Plan Cost Management	Planning	Creates the Cost Management Plan.
	7.2 Estimate Costs	Planning	Estimates the costs to complete project activities.
	7.3 Determine Budget	Planning	Combines the cost estimates with the project schedule to create a cost baseline.
	7.4 Control Costs	Monitoring & Controlling	Monitors the project budget and protects the cost baseline from unapproved change requests.
Quality	8.1 Plan Quality Management	Planning	Identifies quality requirements and standards for the project work and the project deliverables.
	8.2 Manage Quality	Executing	Ensures the correct standards and procedures are used to achieve the required quality metrics.
	8.3 Control Quality	Monitoring & Controlling	Inspects project deliverables to determine if they meet the quality standards and recommends changes when necessary.

Resource	9.1 Plan Resource Management	Planning	Creates the Resource Management Plan which documents project roles, responsibilities, structure and staffing.
	9.2 Estimate Activity Resources	Planning	Determines the resources (labor, materials and equipment) necessary to perform project work.
	9.3 Acquire Resources	Executing	Obtains the necessary resources to complete the project work.
	9.4 Develop Team	Executing	Works to develop team skills and a working environment that support positive team performance.
	9.5 Manage Team	Executing	Tracks team performance and manages team changes to improve project performance.
	9.6 Control Resources	Monitoring & Controlling	Ensuring resources assigned to the project are available. Monitoring planned vs actual utilization.
Communication	10.1 Plan Communications Management	Planning	Creates the Communication Management Plan.
	10.2 Manage Communications	Executing	Manages project communication in accordance with the Communication Management Plan.
	10.3 Monitor Communications	Monitoring & Controlling	Monitors project communication to ensure that the information needs of stakeholders are met.
Risk	11.1 Plan Risk Management	Planning	Creates the Risk Management Plan.
	11.2 Identify Risks	Planning	Identifies and documents the risks (positive & negative) that may influence the project.
	11.3 Perform Qualitative Risk Analysis	Planning	Assesses the probability and impact of each risk in order to prioritize them.
	11.4 Perform Quantitative Risk Analysis	Planning	Assigns a numeric value to project risks.
	11.5 Plan Risk Responses	Planning	Evaluates risk analysis results to determine how to best respond to each project risk.
	11.6 Implement Risk Responses	Executing	Implements risk response plans.
	11.7 Monitor Risks	Monitoring & Controlling	Monitors risk responses, monitors for risks and continuously evaluates the effectiveness of risk plans.
Procurement	12.1 Plan Procurement Management	Planning	Determines what will be procured and the procurement approach.
	12.2 Conduct Procurements	Executing	Collects responses from sellers, selects the seller(s) and awards the contract.
	12.3 Control Procurements	Monitoring & Controlling	Monitors contract performance, manages procurement relationships and manages necessary changes to contracts.
Stakeholder	13.1 Identify Stakeholders	Initiating	Identifies and analyzes stakeholders to determine their influence and interest in the project.
	13.2 Plan Stakeholder Engagement	Planning	Reviews results from stakeholder analysis and determines the most effective way to engage stakeholders.
	13.3 Manage Stakeholder Engagement	Executing	Manages engagements with stakeholders to ensure needs and expectations are addressed.
	13.4 Monitor Stakeholder Engagement	Monitoring & Controlling	Monitors stakeholder relationships and recommends changes/adjustments when necessary.

* The number of each process is related to the chapter in the PMBOK Guide, 6th Edition. 4.1 = Chapter 4, Section 1.