PMBOK® Guide 8th Edition

Complete ITTOs Reference Guide

All Inputs, Tools & Techniques, and Outputs for Every Process Across All 7 Performance Domains

For Project Managers · Service Delivery Managers · PMP Exam Candidates

ProjInsights.com · 2025 Edition

PMBOK® Guide 8th Edition: Complete ITTOs for Every Process

This reference guide provides a comprehensive, structured breakdown of every process in the PMBOK® Guide — Eighth Edition, organized by Performance Domain. For each process, you will find the complete Inputs, Tools & Techniques, and Outputs (ITTOs) extracted directly from the guide, along with a concise process description and tailoring tip. Whether you are preparing for your PMP exam, managing an active project, or building your organization's PM framework, this guide is designed to be your definitive desk reference.

What Are ITTOs and Why Do They Matter?

ITTOs — Inputs, Tools & Techniques, and Outputs — are the building blocks of every project management process. They define what goes into a process (Inputs), how work is done (Tools & Techniques), and what comes out (Outputs). Understanding ITTOs at a deep level is what separates a practitioner who follows a plan from one who can construct, adapt, and defend a plan under real-world conditions.

In the Eighth Edition, PMI restructured the previous 49 processes across 10 Knowledge Areas into processes nested within 7 Performance Domains. The ITTO framework remains central, but the context has shifted: processes are now grouped by the outcome domain they serve, and tailoring is explicitly acknowledged as part of every process's application.

How to Use This Guide

- Use the domain sections to navigate to the performance area you are working in
- For each process, review the ITTO table first, then read the description for context
- Use the tailoring tips to adapt each process to predictive, adaptive, or hybrid approaches
- For PMP exam preparation, study the cross-reference table at the end to identify tools that appear across multiple processes
- For real project use, focus on Inputs — they tell you what you must have before starting a process — and Outputs, which tell you what you must produce

DOMAIN 1: GOVERNANCE PERFORMANCE DOMAIN

Governance Performance Domain — Overview

The Governance domain encompasses the framework, functions, and processes that guide project decisions and activities to optimize value delivery. It integrates strategic alignment, decision-making, change management, and the coordination of all project activities. Governance processes run from project initiation through closure and interact with every other performance domain. The Eighth Edition integrates what was previously known as Integration Management, parts of Procurement Management, and Quality Assurance into this domain.

Processes in this domain: Initiate Project or Phase · Integrate and Align Project Plans · Plan Sourcing Strategy · Manage Project Execution · Manage Quality Assurance · Manage Project Knowledge · Monitor and Control Project Performance · Assess and Implement Changes · Close Project or Phase

Process 1.1 — Initiate Project or Phase

Officially authorizes the start of a project or phase and grants the project manager authority to allocate organizational resources. Creates the project charter, which establishes a direct link between the project, the business case, and organizational strategic goals. Performed once or at defined points depending on the development approach.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Business documents (Business case, Benefits management plan) ☐ Agreements ☐ Enterprise environmental factors ☐ Organizational process assets	☐ Expert judgment ☐ Data gathering (Brainstorming, Focus groups, Interviews) ☐ Interpersonal and team skills (Conflict management, Facilitation, Meeting management) ☐ Meetings ☐ Responsibility assignment matrix ☐ Project canvas	☐ Project charter ☐ Assumption log

Process 1.2 — Integrate and Align Project Plans

Develops, consolidates, and coordinates all subsidiary project management plans into a cohesive, integrated project management plan. Establishes the overall tailoring considerations, development approach, and project life cycle. Sets the governance framework within which all project decisions will be made.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Outputs from other processes □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Brainstorming, Checklists, Focus groups, Interviews) □ Interpersonal and team skills (Conflict management, Facilitation, Meeting management) □ Meetings □ Project canvas	□ Project management plan

Process 1.3 — Plan Sourcing Strategy

Documents project sourcing decisions, specifies the source selection approach, determines the scope of external work, and selects appropriate contracts. Supports make-or-buy decisions by evaluating whether work can be better accomplished internally or through external sources. Establishes the framework for acquiring project deliverables from internal or external providers.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (Scope, Quality, Schedule, Financial, Resource management plans, Scope baseline) □ Project documents (Milestone list, Requirements documentation, RTM, Quality metrics, Resource requirements, Project team assignments, Risk register, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Market research □ Make-or-buy analysis □ Source selection analysis □ Document analysis	□ Sourcing strategy plan (Insourcing or outsourcing decisions, Source selection criteria)

Process 1.4 — Manage Project Execution

Leads and performs the work defined in the project management plan to achieve the project's objectives. Coordinates people and resources, manages stakeholder expectations, and implements approved changes including corrective actions, preventive actions, and defect repair. Work performance data is collected and communicated to applicable controlling processes.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Any component) □ Project documents (Change log, Lessons learned register, Milestone list, Project communications, Project schedule, RTM, Risk register, Risk report) □ Approved change requests □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Project management information system □ Meetings (Daily coordination meetings)	□ Deliverables □ Work performance data □ Issue log □ Change requests □ Project management plan updates (Any component) □ Project document updates (Activity list, Assumption log, Lessons learned register, Requirements documentation, Risk register, Stakeholder register) □ Organizational process asset updates

Process 1.5 — Manage Quality Assurance

Ensures project processes are performed in a manner consistent with stakeholder expectations. Translates the project management plan into executable activities incorporating organizational standards, regulations, and policies. Increases the probability of meeting project objectives and identifies ineffective processes and causes of poor quality performance.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan □ Project documents (All components) □ Organizational process assets (Policies, Procedures, Regulations)	□ Audits □ Checklists □ Data representation (Affinity diagrams, Cause-and-effect diagrams, Flowcharts) □ Decision-making □ Problem-solving □ Process improvement	□ Quality reports □ Change requests □ Project management plan updates □ Project document updates

Process 1.6 — Manage Project Knowledge

Utilizes existing knowledge and creates new knowledge to achieve project objectives, enhance decision-making, and contribute to organizational learning. Manages both explicit knowledge (documented, shareable) and tacit knowledge (experience-based, embedded in individuals). Involves fostering a collaborative environment that enables knowledge transfer throughout the project.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS

□ Project management plan (All components) □ Project documents (Lessons learned register, Project team assignments, Resource breakdown structure, Stakeholder register) □ Deliverables □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Knowledge management □ Information management □ After-action reviews □ In-progress postmortems □ Storytelling □ Retrospective meetings □ Interpersonal and team skills (Active listening, Facilitation, Leadership, Networking, Political awareness)	□ Lessons learned register □ Project management plan updates (Any component) □ Organizational process asset updates

Process 1.7 — Monitor and Control Project Performance

Tracks, reviews, and reports overall project progress to meet performance objectives and provide stakeholders with a clear view of project status. Relies on continuous measurement, data collection, and analysis of leading and lagging indicators. Enables early identification of problems, informed decision-making, and corrective or preventive action.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Any component) □ Project documents (Assumption log, Basis of estimates, Cost forecasts, Issue log, Lessons learned register, Milestone list, Quality reports, Risk register, Risk report, Schedule forecasts) □ Work performance information □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data analysis (Alternative analysis, Cost-benefit analysis, Earned value analysis, Root cause analysis, Trend analysis, Variance analysis) □ Decision-making (Voting) □ Meetings □ Project dashboards □ Visual controls □ Information radiators	□ Work performance reports □ Change requests □ Project management plan updates (Any component) □ Project document updates (Cost forecasts, Issue log, Lessons learned register, Risk register, Schedule forecasts)

Process 1.8 — Assess and Implement Changes

Reviews all change requests and manages changes to deliverables, project documents, and the project management plan. Maintains the integrity of baselines through formal change control. In predictive projects, all baseline changes require an approved change request. In adaptive projects, changes are managed through backlog management and sprint planning.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Change management plan, Configuration management plan, Scope baseline, Schedule baseline, Cost baseline) □ Project documents (Basis of estimates, Change log, RTM, Risk report) □ Work performance reports □ Change requests □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Change control tools □ Data analysis (Alternative analysis, Cost-benefit analysis) □ Decision-making (Voting, Autocratic decision-making, Multicriteria decision analysis) □ Meetings □ Integrated change control □ Backlog management	□ Approved change requests □ Project management plan updates (Any component) □ Project document updates (Change log)

Process 1.9 — Close Project or Phase

Finalizes all activities for both successful and unsuccessful projects, phases, releases, iterations, or contracts. Benefits include archiving project information, completing planned work, releasing resources, and confirming the extent to which value has been delivered. This process provides a formal ending and captures organizational learning.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (All components) □ Project documents (Assumption log, Basis of estimates, Change log, Issue log, Lessons learned register, Milestone list, Project communications, Quality control measurements, Quality reports, Requirements documentation, Risk register, Risk report) □ Accepted deliverables □ Business documents (Business case, Benefits management plan)	□ Expert judgment □ Data analysis (Document analysis, Regression analysis, Trend analysis, Variance analysis) □ Meetings	□ Project document updates (Lessons learned register) □ Final product, service, or result transition □ Final report □ Organizational process asset updates

□ Agreements □ Procurement documentation □ Organizational process assets		

TAILORING TIP

Governance ITTOs scale with project complexity. Adaptive projects replace formal gate reviews with sprint reviews and retrospectives. The Project Charter may become a lighter-weight project brief. Integrated change control in adaptive environments is managed through backlog prioritization rather than a formal Change Control Board.

DOMAIN 2: SCOPE PERFORMANCE DOMAIN (INCLUDING QUALITY)

Scope Performance Domain — Overview

The Scope domain ensures the project encompasses all — and only — the work required to deliver the project's objectives. Quality management is integrated within this domain in the Eighth Edition. Scope carries a unique and central place in project management because the project's value derives from the outcome delivered in alignment with its scope. In adaptive projects, scope is managed through a continuously refined product backlog rather than a fixed scope statement.

Processes in this domain: Plan Scope Management · Elicit and Analyze Requirements · Define Scope · Develop Scope Structure · Monitor and Control Scope · Validate Scope

Process 2.1 — Plan Scope Management

Creates a scope management plan that defines how the project scope will be defined, developed, monitored, validated, and controlled. Also creates the requirements management plan. Provides guidance to ensure that value is delivered to stakeholders throughout the project life cycle.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan □ Project documents (Requirements documentation, Risk register, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Interviews, Focus groups, Questionnaires and surveys) □ Data analysis □ Test and inspection planning	□ Project management plan updates (Scope management plan, Requirements management plan)

Process 2.2 — Elicit and Analyze Requirements

Defines and documents stakeholders' needs associated with the features and functions required in the product, service, or result. In adaptive environments, requirements are collected as user stories prioritized in a product backlog. Provides the direction and starting point to define a deliverable that adds value to stakeholders.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS

□ Project charter □ Agreements □ Business case □ Project documents (Assumption log, Lessons learned register, Stakeholder register) □ Project management plan (Requirements management plan, Scope management plan) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Decision-making □ Data gathering (Benchmarking, Brainstorming, Focus groups, Interviews, Questionnaires and surveys) □ Data analysis (Document analysis) □ Data representation □ Interpersonal and team skills (Nominal group) □ Design thinking □ Prioritization/ranking □ Meetings	□ Requirements documentation

Process 2.3 — Define Scope

Develops a detailed or high-level description of the project, product, and value to be delivered, including quality requirements and standards. In predictive approaches this is done at project start; in adaptive approaches it is done at the start of each iteration. Also identifies how the project will demonstrate that quality requirements are met.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Assumption log □ Project management plan □ Requirements documentation □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Decision-making □ Data analysis □ Decomposition □ Interpersonal and team skills (Facilitation) □ Product analysis	□ Project documents (Project scope statement, Requirements documentation)

Process 2.4 — Develop Scope Structure

Subdivides project deliverables and project work into smaller, more manageable components. In predictive projects this produces the Work Breakdown Structure (WBS) and WBS Dictionary. In adaptive projects, this corresponds to decomposing the product backlog into epics, features, and user stories. Provides a strategic view of the project's scope and value.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS

□ Project management plan □ Project documents (Project scope statement, Requirements documentation) □ Approved changes □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Brainstorming □ Decomposition	□ Scope baseline □ Work breakdown structure (WBS) □ WBS dictionary □ User stories □ Product backlog

Process 2.5 — Monitor and Control Scope

Monitors the status of the project and product scope, manages changes to the scope baseline, measures the quality of deliverables, and ensures fulfillment of required standards. Controls how scope change requests are processed while ensuring deliverables meet specified quality requirements. Ensures the product remains relevant and delivering value.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Scope management plan, Quality management plan) □ Project documents (Requirements documentation, Scope baseline, Quality reports, Work performance data, Quality control measurements) □ Verified deliverables □ Enterprise environmental factors □ Organizational process assets	□ Data analysis (Variance analysis, Trend analysis, Root cause analysis)	□ Quality reports □ Verified deliverables □ Change requests □ Quality control measurements □ Work performance information

Process 2.6 — Validate Scope

Formalizes acceptance of completed project deliverables and checks the processes used to achieve quality standards. Ensures deliverables meet established quality standards and gain formal acceptance from stakeholders. Increases the probability of acceptance of the final product, service, or result.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS

□ Project documents (Requirements documentation, Scope baseline, Quality reports, Work performance data, Quality control measurements) □ Verified deliverables □ Enterprise environmental factors □ Organizational process assets	□ Data gathering □ Data analysis □ Inspection □ Decision-making □ Customer talks and tests □ Process analysis □ Review meetings	□ Accepted deliverables □ Change requests □ Project document updates (Quality reports, Work performance information, Requirements documentation, Lessons learned updates)

TAILORING TIP

In adaptive projects, scope is never truly 'fixed.' Replace the WBS with a prioritized product backlog. Replace Validate Scope formal sign-offs with sprint reviews and product demos. The Requirements Traceability Matrix may be replaced by acceptance criteria attached directly to user stories.

DOMAIN 3: SCHEDULE PERFORMANCE DOMAIN

Schedule Performance Domain — Overview

The Schedule domain provides the plan for how and when the project will deliver the scope. The schedule serves as a tool for communication, stakeholder expectation management, and performance reporting. The Eighth Edition emphasizes progressive elaboration of schedules, especially in fast-moving environments. Schedules are living documents — maintaining a realistic schedule requires continuous review and adjustment throughout the project.

Processes in this domain: Plan Schedule Management · Develop Schedule · Monitor and Control Schedule

Process 3.1 — Plan Schedule Management

Establishes policies, procedures, and documentation for designing, developing, managing, performing, and maintaining the project schedule. Produces the schedule management plan, which includes information on schedule development, release and iteration length, level of accuracy, units of measurement, links to organizational procedures, control thresholds, rules of performance measurement, and reporting formats.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project charter ☐ Project management plan (Scope management plan) ☐ Development approach ☐ Enterprise environmental factors ☐ Organizational process assets	☐ Expert judgment ☐ Data analysis (Alternative analysis) ☐ Meetings	☐ Project management plan updates (Schedule management plan)

Process 3.2 — Develop Schedule

Analyzes activity sequences, durations, resource requirements, and schedule constraints to create a schedule model. Developing an acceptable schedule is iterative — the process involves four key steps: (1) Define Activities, (2) Determine Sequence, (3) Estimate Effort and Duration, and (4) Adjust. The resulting schedule baseline serves as the basis for tracking progress.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project charter	☐ Expert judgment ☐ Decomposition ☐ Rolling wave planning	☐ Schedule baseline ☐ Project schedule ☐ Schedule data

□ Project management plan (Scope management plan) □ Development approach □ Project documents (Activity attributes, Activity list, Assumption log, Basis of estimates, Duration estimates, Lessons learned register, Milestone list, Project schedule network diagrams, Project team assignments, Resource calendars, Resource requirements, Risk register) □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Precedence diagramming method □ Logical relationship □ Leads and lags □ Dependency determination and integration □ Estimation techniques □ Reserve analysis □ Data analysis (What-if analysis, Simulation, Alternative analysis) □ Voting □ Schedule network analysis □ Schedule compression □ Critical path method □ Critical chain method □ Resource optimization (Resource leveling) □ Project management information system □ Agile release planning	□ Project calendars □ Change requests □ Project management plan updates (Schedule management plan) □ Project document updates (Activity list, Activity attributes, Assumption log, Basis of estimates, Duration estimates, Lessons learned register, Milestone list, Project schedule network diagrams, Resource requirements, Risk register)

Process 3.3 — Monitor and Control Schedule

Monitors project status to update the project schedule and manages changes to the agreed-upon schedule. In predictive approaches, maintains a realistic baseline through formal change control. In adaptive approaches, monitors velocity, manages the backlog, and conducts sprint reviews and retrospectives to keep the schedule current.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Schedule management plan, Scope baseline, Performance measurement baseline) □ Product backlog □ Project documents (Lessons learned register, Project calendars, Project schedule baseline, Resource calendars, Risk register, Schedule data) □ Work performance data	□ Data analysis (Earned value analysis, Burnup/burndown chart, Performance reviews, Trend analysis, Variance analysis, What-if scenario analysis) □ Critical path method □ Critical chain method □ Project management information system □ Resource optimization □ Leads and lags □ Schedule compression □ Branch and bound	□ Work performance information □ Schedule forecasts □ Change requests □ Project management plan updates (Schedule management plan, Schedule baseline, Cost baseline, Performance measurement baseline) □ Project document updates (Assumption log, Basis of estimates, Lessons learned register, Project schedule, Resource

□ Enterprise environmental factors □ Organizational process assets	□ Velocity □ Daily coordination meetings □ Sprint reviews □ Backlog refinement	calendars, Risk register, Schedule data)

TAILORING TIP

In adaptive projects, the Gantt chart is replaced by sprint boards, release roadmaps, and burndown charts. Velocity replaces EVM for schedule tracking. Rolling wave planning is the norm rather than the exception. For hybrid projects, use predictive scheduling for the overall milestone framework and adaptive planning within individual workstreams.

DOMAIN 4: FINANCE PERFORMANCE DOMAIN

Finance Performance Domain — Overview

The Finance domain addresses the planning, estimating, budgeting, and control of project costs. Financial performance relates to costs, funding, and, in some cases, the value proposition of the project. The Eighth Edition frames financial management through the lens of value — financial data is most useful not when collected, but when used to drive informed decisions. Earned Value Management (EVM) remains a central technique for measuring integrated cost and schedule performance.

Processes in this domain: Plan Financial Management · Estimate Costs · Develop Budget · Monitor and Control Finances

Process 4.1 — Plan Financial Management

Defines how project revenues and expenses will be estimated, budgeted, managed, monitored, and controlled. Provides guidance and direction on how project finances will be managed throughout the project life cycle. Includes establishing financial reporting requirements, cost accounting methods, and funding strategies.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project charter ☐ Project management plan (Schedule management plan, Risk management plan) ☐ Project documents ☐ Enterprise environmental factors ☐ Organizational process assets	☐ Expert judgment ☐ Data analysis (Alternative analysis) ☐ Meetings	☐ Financial management plan ☐ Funding strategy

Process 4.2 — Estimate Costs

Develops an approximation of the cost of resources needed to complete project work. Determines the monetary resources required for the project. Estimates should reflect the type, quantity, and characteristics of resources as well as market conditions, inflation, and risk. Performed periodically throughout the project as needed.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project management plan (Quality management plan, Scope baseline)	☐ Expert judgment ☐ Analogous estimating ☐ Parametric estimating	☐ Cost estimates ☐ Basis of estimates

□ Project documents (Lessons learned register, Project schedule, Resource requirements, Risk register) □ Make-or-buy decisions □ Work package estimation □ Enterprise environmental factors □ Organizational process assets	□ Bottom-up estimating □ Multipoint estimating □ Data analysis (Alternative analysis, Reserve analysis, Cost of quality) □ Project management information system □ Decision-making (Voting)	□ Project document updates (Assumption log, Lessons learned register, Risk register)

Process 4.3 — Develop Budget

Aggregates estimated costs of individual activities or work packages to establish an authorized cost baseline. The cost baseline is the approved version of the time-phased project budget, excluding management reserves, used as a basis for comparison to actual results. Also determines project funding requirements.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Financial management plan, Resource management plan, Scope baseline) □ Project documents (Basis of estimates, Cost estimates, Project schedule, Risk register) □ Business documents (Business case, Benefits management plan) □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Cost aggregation □ Data analysis (Reserve analysis) □ Historical information review □ Funding limit reconciliation □ Financing	□ Cost baseline □ Project funding requirements □ Project document updates (Cost estimates, Project schedule, Risk register)

Process 4.4 — Monitor and Control Finances

Systematically oversees and manages the project's financial health by continuously tracking expenditures, updating financial records, adjusting the cost baseline and revenue forecasts as needed, and implementing corrective actions. Ensures the project remains financially viable throughout its entire life cycle. Enables proactive decision-making to address deviations and optimize resource allocations.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Financial management plan, Cost baseline, Performance measurement baseline) □ Project documents (Lessons learned register, Project funding requirements) □ Work performance data □ Organizational process assets	□ Expert judgment □ Data analysis (Earned value analysis, Trend analysis, Reserve analysis) □ To-complete performance index □ Project management information system	□ Work performance information □ Revenue and cost forecasts □ Change requests □ Funding proposals □ Project management plan updates (Financial management plan, Cost baseline, Performance measurement baseline) □ Project document updates (Assumption log, Basis of estimates, Cost estimates, Lessons learned register, Risk register)

TAILORING TIP

In adaptive projects, budgeting is often done on a quarterly or per-iteration basis rather than as a fixed upfront baseline. EVM can still be applied — use story points as the unit of earned value. Contingency reserves remain essential in all approaches. For regulated industries, additional financial controls (SOX compliance, audit trails) must be built into the financial management plan.

DOMAIN 5: STAKEHOLDERS PERFORMANCE DOMAIN

Stakeholders Performance Domain — Overview

The Stakeholders domain addresses processes and tools related to stakeholder engagement, from identification through monitoring across the entire project life cycle. This domain is closely linked to communications management. Key skills include negotiation, conflict management, active listening, and cultural awareness. Stakeholder engagement is one of the most critical — and most underinvested — determinants of project success.

Processes in this domain: Identify Stakeholders · Plan Stakeholder Engagement · Plan Communications Management · Manage Stakeholder Engagement · Manage Communications · Monitor Stakeholder Engagement · Monitor Communications

Process 5.1 — Identify Stakeholders

Identifies project stakeholders regularly and analyzes and documents relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success. Enables the project team to identify the appropriate focus for engagement of each stakeholder or group. Continuous stakeholder identification acts as a risk management strategy as the project environment evolves.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Business documents (Business case, Benefits management plan) □ Project management plan (Communications management plan, Stakeholder engagement plan) □ Project documents (Change log, Issue log, Requirements documentation) □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Questionnaires and surveys, Brainstorming) □ Data analysis (Stakeholder analysis, Document analysis) □ Data representation (Stakeholder mapping/representation) □ Meetings	□ Stakeholder register □ Change requests □ Project management plan updates (Requirements management plan, Communications management plan, Risk management plan, Stakeholder engagement plan) □ Project document updates (Assumption log, Issue log, Risk register)

Process 5.2 — Plan Stakeholder Engagement

Develops appropriate management strategies to effectively engage identified stakeholders based on their needs, expectations, interests, requirements, and potential impact on the project. Provides an actionable plan to interact effectively with stakeholders. Should be performed periodically and updated as stakeholder situations change.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (Resource management plan, Communications management plan, Risk management plan) □ Project documents (Assumption log, Change log, Issue log, Project schedule, Risk register, Stakeholder register) □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Benchmarking) □ Data analysis (Assumption and constraint analysis, Root cause analysis) □ Decision-making (Prioritization/ranking) □ Data representation (Mind mapping, Stakeholder engagement assessment matrix) □ Meetings	□ Project management plan updates (Stakeholder engagement plan)

Process 5.3 — Plan Communications Management

Plans how to communicate with identified stakeholders both inside and outside the team. Analyzes stakeholder information needs and categories of information to establish the communication processes and plans for the project. Overlaps with stakeholder identification, analysis, prioritization, and engagement to ensure consistency in communication strategies.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (Resource management plan, Stakeholder engagement plan) □ Project documents (Requirements documentation, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Communication requirements analysis □ Communication technology □ Communication models □ Communication methods □ Interpersonal and team skills (Communication styles assessment, Political awareness, Cultural awareness) □ Data representation (Stakeholder	□ Project management plan updates (Communications management plan, Stakeholder engagement plan) □ Project document updates (Project schedule, Stakeholder register)

	engagement assessment matrix) □ Meetings	

Process 5.4 — Manage Stakeholder Engagement

Communicates and works with stakeholders to meet their needs and expectations, address issues, and foster appropriate stakeholder involvement. Allows the project manager to increase stakeholder support and minimize resistance. Performed throughout the project. Requires strong interpersonal skills including conflict management, negotiation, and cultural awareness.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Communications management plan, Risk management plan, Stakeholder engagement plan, Change management plan) □ Project documents (Change log, Issue log, Lessons learned register, Stakeholder register, Risk register, Status report, Project schedule) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Communication skills (Feedback) □ Interpersonal and team skills (Conflict management, Cultural awareness, Negotiation, Observation/conversation, Political awareness) □ Ground rules □ Meetings	□ Change requests □ Project management plan updates (Communications management plan, Stakeholder engagement plan) □ Project document updates (Change log, Issue log, Lessons learned register, Stakeholder register)

Process 5.5 — Manage Communications

Ensures timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and ultimate disposition of project information. Enables efficient and effective information flow between the project team and stakeholders. Fosters flexibility in communication methods to accommodate changing stakeholder needs and project dynamics.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan, Communications management plan, Stakeholder engagement plan)	□ Communication technology □ Communication methods □ Communication skills (Communication competence, Feedback, Nonverbal	□ Project communications □ Project management plan updates (Communications management plan, Stakeholder engagement plan)

□ Project documents (Change log, Issue log, Lessons learned register, Quality report, Risk report, Stakeholder register) □ Work performance reports □ Enterprise environmental factors □ Organizational process assets	communication, Presentations) □ Project management information system □ Project reporting □ Interpersonal and team skills (Active listening, Conflict management, Cultural awareness, Meeting management, Networking, Political awareness) □ Meetings	□ Project document updates (Issue log, Lessons learned register, Project schedule, Risk register, Stakeholder register) □ Organizational process asset updates

Process 5.6 — Monitor Stakeholder Engagement

Monitors project stakeholder relationships and tailors strategies for engaging stakeholders through modification of engagement strategies and plans. Maintains or increases the efficiency and effectiveness of stakeholder engagement activities as the project evolves. Assesses whether engagement efforts are working and identifies adjustments needed.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan, Communications management plan, Stakeholder engagement plan) □ Project documents (Issue log, Lessons learned register, Stakeholder engagement assessment, Project communications, Risk register, Stakeholder register) □ Work performance data □ Enterprise environmental factors □ Organizational process assets	□ Data analysis (Alternative analysis, Root cause analysis, Stakeholder analysis) □ Decision-making (Multicriteria decision analysis, Voting) □ Data representation (Stakeholder engagement assessment matrix) □ Communication skills (Feedback, Presentations) □ Interpersonal and team skills (Active listening, Cultural awareness, Leadership, Networking, Political awareness) □ Meetings	□ Work performance information □ Change requests □ Project management plan updates (Resource management plan, Communications management plan, Stakeholder engagement plan) □ Project document updates (Issue log, Lessons learned register, Risk register, Stakeholder register)

Process 5.7 — Monitor Communications

Ensures the information needs of the project and its stakeholders are met. Maintains optimal information flow as defined in the communications management plan and stakeholder engagement plan. Reviews whether the communication approach is working and adjusts methods, frequency, or channels as needed.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan, Communications management plan, Stakeholder engagement plan) □ Project documents (Issue log, Lessons learned register, Project communications) □ Work performance data □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Project management information system □ Data representation (Stakeholder engagement assessment matrix) □ Interpersonal and team skills (Observation/conversation) □ Meetings	□ Work performance information □ Change requests □ Project management plan updates (Communications management plan, Stakeholder engagement plan) □ Project document updates (Issue log, Lessons learned register, Stakeholder register)

TAILORING TIP	*In agile projects, formal communication plans are often replaced by ceremonies: daily stand-ups, sprint reviews, and retrospectives. Information radiators (dashboards, kanban boards) replace formal status reports. For large or global projects, multilingual communication strategies and asynchronous tools must be explicitly planned. Adjust the Stakeholder Engagement Assessment Matrix frequency based on stakeholder volatility.*

DOMAIN 6: RESOURCES PERFORMANCE DOMAIN

Resources Performance Domain — Overview

The Resources domain covers how effectively and efficiently the project team plans, acquires, develops, and manages both human resources and physical or virtual resources. The Eighth Edition gives elevated attention to team dynamics, psychological safety, and leadership — recognizing that people are not interchangeable resources. Key models include Tuckman's Team Stages, Maslow's Hierarchy, Herzberg's Two-Factor Theory, and McGregor's Theory X/Y.

Processes in this domain: Plan Resource Management · Estimate Resources · Acquire Resources · Lead the Team · Monitor and Control Resourcing

Process 6.1 — Plan Resource Management

Defines how to estimate, acquire, manage, and utilize both physical and team resources. Establishes the approach and level of management effort needed based on the type and complexity of the project. Identifies an approach to ensuring sufficient resources are available for successful project completion, including consideration of scarce resources.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (Quality management plan, Scope baseline) □ Project documents (Project schedule, Requirements documentation, Risk register, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Interviews) □ Data analysis (SWOT analysis) □ Data representation (Hierarchical charts, Responsibility assignment matrix, Text-oriented formats) □ Organizational theory □ Meetings □ Green human resource management □ Resource-based view	□ Project management plan updates (Resource management plan) □ Team charter □ Project document updates (Assumption log, Risk register)

Process 6.2 — Estimate Resources

Estimates team resources and the type and quantities of physical or virtual resources necessary to perform project work. Identifies the type, quantity, and characteristics of resources required to complete the project. Helps anticipate potential resource shortages or surpluses and manage resource allocation risks. Closely related to the Schedule performance domain.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan, Schedule management plan, Scope baseline) □ Project documents (Activity attributes, Activity list, Assumption log, Cost estimates, Resource calendars, Risk register) □ Project schedule □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Bottom-up estimating □ Analogous estimating □ Parametric estimating □ Data analysis (Alternative analysis) □ Project management information system □ Meetings □ Data gathering (Interviews) □ Artificial intelligence □ Predictive analytics □ Virtual reality □ Augmented reality □ Branch and bound □ Genetic algorithms □ Constructive cost model	□ Resource requirements □ Basis of estimates □ Resource breakdown structure □ Project document updates (Activity attributes, Assumption log, Lessons learned register, Risk register)

Process 6.3 — Acquire Resources

Obtains the team, physical, or virtual resources necessary to complete project work. Outlines and guides the selection of resources and assigns them to their respective activities. Failure to acquire necessary resources may affect schedule, budget, quality, and risk. May require negotiating with resource managers, using preassigned resources, or utilizing virtual teams.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan, Procurement management plan, Cost baseline) □ Project documents (Project schedule, Resource calendars, Resource requirements, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Decision-making (Multicriteria decision analysis) □ Interpersonal and team skills (Negotiation, Problem-solving) □ Preassignment □ Virtual teams	□ Physical or virtual resource assignments □ Project team assignments □ Resource calendars □ Change requests □ Project management plan updates (Resource management plan, Cost baseline) □ Project document updates (Lessons learned register, Project schedule, Resource breakdown structure, Resource requirements, Risk register, Stakeholder register)

		□ Enterprise environmental factor updates □ Organizational process asset updates

Process 6.4 — Lead the Team

Guides, develops, and manages the team to enhance performance and achieve project goals. Involves tracking team member performance, providing feedback, resolving and escalating issues, and managing team changes. The process encompasses both management activities (planning, coordinating, measuring) and leadership activities (influencing, motivating, coaching). Aimed at creating high-performing teams with shared ownership, trust, and collaboration.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan) □ Project documents (Issue log, Lessons learned register, Project schedule, Resource calendars, Team charter, Work performance reports, Project team assignments) □ Team performance assessments □ Enterprise environmental factors □ Organizational process assets	□ Colocation □ Virtual teams □ Communication technology □ Interpersonal and team skills (Conflict management, Influencing, Motivation, Negotiation, Team building, Decision-making, Critical thinking, Coaching and mentoring, Training) □ Problem-solving (Six Thinking Hats®) □ Team performance assessments □ Retrospectives □ Recognition and rewards □ Individual and team assessments □ Data analysis (SWOT analysis) □ Meetings □ Emotional intelligence □ Organizational cultural intelligence □ Leadership (Distributed management and leadership, Centralized management and leadership, Servant leadership) □ Tuckman ladder	□ Team performance assessments □ Change requests □ Project management plan updates (Resource management plan, Schedule baseline, Cost baseline) □ Project document updates (Issue log, Lessons learned register, Project schedule, Resource calendars, Team charter, Project team assignments) □ Enterprise environmental factor updates □ Organizational process asset updates

	□ Project management information system □ Virtual collaboration tools	

Process 6.5 — Monitor and Control Resourcing

Ensures physical or virtual resources assigned and allocated to the project are available as planned. Monitors planned versus actual use of physical and virtual resources and performs corrective action as necessary. Concerned with ensuring resources are available at the right time, right place, and in the right amount. Team member performance is addressed through the Lead the Team process.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Resource management plan) □ Project documents (Issue log, Lessons learned register, Physical or virtual resource assignments, Project schedule, Resource breakdown structure, Risk register) □ Work performance data □ Agreements □ Organizational process assets	□ Data analysis (Alternative analysis, Cost-benefit analysis, Performance reviews, Trend analysis) □ Problem-solving □ Interpersonal and team skills (Negotiation, Influencing) □ Project management information system □ Value stream mapping □ Continuous improvement □ Theory of constraints □ Control charts □ Branch and bound	□ Work performance information □ Change requests □ Project management plan updates (Resource management plan, Schedule baseline, Cost baseline) □ Project document updates (Assumption log, Issue log, Lessons learned register, Physical resource assignments, Resource breakdown structure, Risk register)

TAILORING TIP

In adaptive projects, self-organizing teams replace the traditional command-and-control resource model. The Resource Management Plan may be a lightweight team charter. For virtual or distributed teams, invest in collaboration tools, structured communication protocols, and deliberate relationship-building. Retrospectives replace formal performance reviews as the primary team development mechanism.

DOMAIN 7: RISK PERFORMANCE DOMAIN

Risk Performance Domain — Overview

The Risk domain represents a comprehensive approach to creating project resilience. Risk includes both threats (negative risks) and opportunities (positive risks). The Eighth Edition classifies risks as known-known, known-unknown, unknown-known, and unknown-unknown. Risk management is proactive and continuous — not a plan-once activity. The domain advocates for adaptive response mechanisms in addition to planned responses.

Processes in this domain: Plan Risk Management · Identify Risks · Perform Risk Analysis · Plan Risk Responses · Implement Risk Responses · Monitor Risks

Process 7.1 — Plan Risk Management

Defines how to conduct risk management activities for the project. Should begin when a project is conceived and be completed early in the project. Establishes the risk management plan, which defines the methodology, roles and responsibilities, categories, risk appetite and thresholds, timing, and reporting formats for risk management throughout the project.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project charter □ Project management plan (All components) □ Project documents (Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering (Interviews) □ Data analysis (Stakeholder analysis) □ Meetings	□ Project management plan updates (Risk management plan)

Process 7.2 — Identify Risks

Identifies both negative and positive risks. Focuses on distinguishing genuine risks from nonrisks such as concerns and issues. Risk identification should be iterative, allowing for continuous identification as more information becomes available and the project evolves. The risk register and risk report are the primary outputs.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Requirements management plan, Schedule management plan, Financial	□ Expert judgment □ Data gathering (Brainstorming, Checklists, Interviews)	□ Risk register □ Risk report □ Project document updates (Assumption

management plan, Quality management plan, Resource management plan, Risk management plan, Scope baseline, Schedule baseline, Cost baseline) □ Project documents (Assumption log, Cost estimates, Duration estimates, Issue log, Lessons learned register, Requirements documentation, Resource requirements, Stakeholder register) □ Agreements □ Enterprise environmental factors □ Organizational process assets	□ Data analysis (Root cause analysis, Assumption and constraint analysis, SWOT analysis, Document analysis) □ Interpersonal and team skills (Facilitation) □ Prompt lists □ Meetings □ Artificial intelligence	log, Issue log, Lessons learned register)

Process 7.3 — Perform Risk Analysis

Analyzes risks using an iterative approach that may combine qualitative and quantitative risk analysis. Qualitative analysis evaluates risks based on probability and impact throughout the project. Quantitative analysis (when required) assesses the combined effect of risks on project objectives numerically. Prioritizes individual risks for further analysis and response planning.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
□ Project management plan (Risk management plan, Scope baseline, Schedule baseline, Cost baseline) □ Project documents (Assumption log, Cost estimates, Duration estimates, Resource requirements, Risk register, Stakeholder register) □ Enterprise environmental factors □ Organizational process assets	□ Expert judgment □ Data gathering and analysis (Interviews) □ Interpersonal and team skills (Facilitation) □ Risk categorization □ Data analysis (Risk probability and impact assessment, Simulations, Sensitivity analysis, Decision tree analysis, Influence diagrams) □ Data representation (Probability and impact matrix)	□ Project document updates (Assumption log, Issue log, Risk register, Risk report)

Process 7.4 — Plan Risk Responses

Develops options, selects strategies, and agrees on actions to address overall project risk exposure and individual risks. Identifies suitable ways to address overall project risk and individual risks. Allocates resources and inserts activities into project documents and the project management plan as needed. Response strategies for threats: Avoid, Transfer, Mitigate, Accept. For opportunities: Exploit, Share, Enhance, Accept.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project management plan (Resource management plan, Risk management plan, Cost baseline) ☐ Project documents (Lessons learned register, Quality management plan, Project schedule, Resource management plan, Project team assignments, Resource calendars, Risk register, Risk report, Scope baseline, Schedule baseline, Cost baseline, Stakeholder register) ☐ Enterprise environmental factors ☐ Organizational process assets	☐ Expert judgment ☐ Data gathering (Interviews) ☐ Interpersonal and team skills (Facilitation) ☐ Strategies for threats ☐ Strategies for opportunities ☐ Contingent response strategies ☐ Strategies for overall project risk ☐ Data analysis (Alternative analysis, Cost-benefit analysis) ☐ Decision-making (Multicriteria decision analysis)	☐ Change requests ☐ Project management plan updates (Schedule management plan, Financial management plan, Risk management plan, Procurement management plan, Scope baseline, Schedule baseline, Cost baseline) ☐ Project document updates (Assumption log, Cost forecasts, Lessons learned register, Project schedule, Project team assignments, Risk register, Risk report)

Process 7.5 — Implement Risk Responses

Implements sufficient risk response plans to address overall project risk exposure, minimize individual threats, and maximize individual opportunities. Ensures agreed-upon risk responses are executed as planned. Risk owners are responsible for implementing their assigned response plans and reporting on effectiveness.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project management plan (Risk management plan) ☐ Project documents (Lessons learned register, Risk register, Risk report) ☐ Organizational process assets	☐ Expert judgment ☐ Interpersonal and team skills (Influencing) ☐ Project management information system	☐ Change requests ☐ Project document updates (Issue log, Lessons learned register, Project team assignments, Risk register, Risk report)

Process 7.6 — Monitor Risks

Monitors the implementation of risk response plans, tracks identified risks, identifies and analyzes new risks, plans responses for new risks, and evaluates the effectiveness of risk responses and processes throughout the project. Ensures risk owners are assigned to maintain continuity and address emerging risks effectively.

INPUTS	TOOLS & TECHNIQUES	OUTPUTS
☐ Project management plan (Risk management plan) ☐ Project documents (Issue log, Lessons learned register, Risk register, Risk report) ☐ Work performance data ☐ Work performance reports	☐ Data analysis (Technical performance analysis, Reserve analysis) ☐ Audits ☐ Meetings	☐ Work performance information ☐ Change requests ☐ Project management plan updates (Any component) ☐ Project document updates (Assumption log, Issue log, Lessons learned register, Risk register, Risk report) ☐ Organizational process asset updates

TAILORING TIP

In adaptive projects, risk management is embedded in sprint planning, daily stand-ups, and retrospectives rather than as formal standalone processes. Risk-adjusted backlogs allow teams to prioritize work that reduces uncertainty early. Risk reviews are conducted at the beginning of each iteration. For smaller projects, combine risk identification and qualitative analysis into a single workshop session.

CROSS-REFERENCE: TOOLS APPEARING ACROSS MULTIPLE DOMAINS

Common Tools & Techniques Across All Performance Domains

The following tools and techniques appear across multiple performance domains and processes in the PMBOK® 8th Edition. Understanding these cross-cutting tools is critical for PMP exam candidates and helps practicing project managers see how interconnected the performance domains truly are.

Tool / Technique	Appears In (Domains / Processes)
Expert judgment	All 7 domains — virtually every process. The most universal tool in the guide.
Meetings	All 7 domains — used for planning, review, coordination, and retrospectives across all processes.
Data analysis	Governance, Scope, Schedule, Finance, Stakeholders, Resources, Risk — sub-techniques vary by process.
Interpersonal and team skills	Governance, Scope, Stakeholders, Resources, Risk — includes facilitation, conflict management, negotiation, and active listening.
Project management information system (PMIS)	Governance, Schedule, Finance, Stakeholders, Resources, Risk — used for tracking, reporting, and coordination.
Reserve analysis	Finance (Estimate Costs, Monitor and Control Finances), Schedule (Develop Schedule, Monitor and Control Schedule), Risk (Plan Risk Responses, Monitor Risks).
Earned value analysis	Governance (Monitor and Control Project Performance), Schedule (Monitor and Control Schedule), Finance (Monitor and Control Finances).
Change requests (as output)	Governance, Scope, Schedule, Finance, Stakeholders, Resources, Risk — generated across nearly every monitoring and controlling process.
Lessons learned register	Governance, Scope, Schedule, Finance, Stakeholders, Resources, Risk — used as input and produced as output across the project life cycle.
Risk register	Governance, Scope, Schedule, Finance, Stakeholders, Resources, Risk — the central risk artifact, referenced and updated across all domains.
Organizational process assets	All 7 domains — historical information, templates, and organizational policies used as inputs across all processes.
Enterprise environmental factors	All 7 domains — external conditions and internal culture that constrain or influence project decisions.
Stakeholder register	Governance, Scope, Stakeholders, Resources, Risk — central artifact linking stakeholder information to process decisions.

Decision-making	Governance, Scope, Schedule, Finance, Stakeholders, Risk — includes voting, multicriteria analysis, and autocratic decision-making.
Trend analysis	Governance, Schedule, Finance, Risk — used in monitoring and controlling processes to forecast future performance.
Retrospectives	Governance, Schedule, Resources — core adaptive technique for continuous improvement and lessons learned.
Artificial intelligence	Schedule, Resources, Risk — emerging technique explicitly mentioned in the Eighth Edition for estimating, risk identification, and resource planning.
Data gathering (Interviews, Brainstorming)	Governance, Scope, Schedule, Finance, Stakeholders, Resources, Risk — foundational information collection techniques across all planning processes.
Audits	Scope (Quality), Risk — used to verify process compliance and risk response effectiveness.
Decomposition	Scope, Schedule — used to break work into manageable components (WBS) and schedule activities.

APPLYING ITTOs IN REAL PROJECTS

How to Apply ITTOs in Real Projects — Beyond the Exam

ITTOs are not just for PMP exam memorization — they are a practical framework for ensuring process completeness and quality. Here is how to apply them on live projects effectively.

Use Inputs as a Readiness Checklist

Before starting any process, review its inputs. If a required input is missing or immature, you are not ready to run that process. For example, before running Perform Risk Analysis, confirm your Risk Register, Cost Estimates, Duration Estimates, and Stakeholder Register are populated. Missing inputs lead to incomplete analysis and poor decisions.

Use Outputs as Deliverable Checklists

At the end of each process, confirm all outputs have been produced. Use the ITTO tables in this guide as acceptance criteria for your process execution. If Monitor and Control Project Performance has not produced Work Performance Reports and updated the Risk Register, the process is incomplete.

Use Tools & Techniques to Build Your Toolbox

Not all tools listed for a process are required on every project. Select tools based on project complexity, team capability, and organizational standards. A small agile team does not need formal quantitative risk analysis. A complex infrastructure programme absolutely does. Tailor your tool selection deliberately.

Trace Outputs to Subsequent Inputs

One of the most powerful uses of ITTOs is tracing output-to-input chains across processes. For example: the Risk Register produced by Identify Risks becomes an input to Estimate Costs, Develop Schedule, Acquire Resources, and Plan Risk Responses. When a risk materializes, tracing these chains helps you identify every process and document that needs to be updated.

Use ITTOs for Root Cause Analysis

When a project runs into trouble, work backwards through the ITTO chains. If quality is poor, trace back to Monitor and Control Scope (was scope validated?), Define Scope (were acceptance criteria clear?), and Elicit and Analyze Requirements (were requirements complete?). The ITTO framework is a diagnostic tool as much as a planning tool.

CONCLUSION

Conclusion

This guide has documented the complete Inputs, Tools & Techniques, and Outputs for all 27 processes across the 7 Performance Domains of the PMBOK® Guide — Eighth Edition. The ITTO framework remains one of the most practical and enduring tools in project management — not because it prescribes what you must do, but because it defines what effective process execution looks like.

As the Eighth Edition reminds us: the processes are not mandates. They are options. Tailor them. Adapt them. Combine them. The 12 Project Management Principles guide how — and when — each process should be applied. An experienced project manager does not mechanically execute every ITTO table; they use these frameworks as the intellectual scaffolding for building an approach that serves the project, the team, and the organization.

For more project management resources, in-depth guides, templates, and practitioner insights, visit projinsights.com — your go-to destination for modern project management knowledge.

PMBOK® Guide 8th Edition Complete ITTOs Reference Guide
Published by ProjInsights · projinsights.com · 2025