Process

Project Management Professional (PMP) certification exam

10 tasks · PMI Examination Content Outline (July 2026)

Process covers the technical work of running a project: choosing the delivery approach, planning scope, schedule, cost, resources, quality and procurement, delivering value, tracking performance and closing properly. It is the largest domain, and the exam tests it through situations rather than recall: a variance appears in an earned value table, a vendor misses a milestone, a burnup flattens, a team must choose between predictive and agile for a new piece of work, or a phase is ready to hand over. Expect calculations (earned value, float, communication channels, expected monetary value) with figures in the stem or an exhibit, and expect to pick the right tool for the approach, never a predictive control in an agile setting or the reverse. Strong answers follow the plan the project agreed, act on data, and keep delivered value in view beside scope, time and cost.

You should be able to: Given an exhibit of earned value figures, a schedule network or an agile chart, can you calculate the measure, say what it means for the project, and choose the action that fits the approach and the plan the project agreed?

Every task: the key point, the two approaches and the trap

PRO.1 Choose the delivery approach and build one integrated plan for the work

Assess the project's needs, complexity and size before planning: how stable and well understood are the requirements, how new is the technology, how many teams and stakeholders, what regulation applies, and how costly is a late change; tools such as a suitability or tailoring assessment help.

Predictive: The project manager leads detailed up-front planning, integrates the subsidiary plans into one baselined plan, and keeps it current through formal change control.

Agile: Planning is progressive: a vision and roadmap, release planning, then sprint planning each iteration, with the plan adapted continuously from feedback and measured velocity.

Trap: Choosing an approach by preference or habit rather than by the project's characteristics, or treating the plan as finished once baselined; the plan is tailored to the work and maintained as conditions change.

PRO.2 Define the scope, agree it with stakeholders and break it down

Define scope from requirements: collect them through interviews, workshops, observation, prototypes and document analysis, record them with acceptance criteria, and trace each back to a business objective using a requirements traceability matrix.

Predictive: Scope is defined in detail early, baselined as the scope statement, WBS and WBS dictionary, validated through formal acceptance of deliverables and changed only through change control.

Agile: Scope is a prioritised product backlog that the product owner refines continuously; the team commits to a small slice each iteration, and new items are welcome but must be prioritised against existing work.

Trap: Accepting a stakeholder's small extra request directly into the work, or letting the team add features nobody asked for; additions go through change control (predictive) or the product owner's backlog (agile).

PRO.3 Deliver value early and often, and keep checking the value is real

Value is the benefit stakeholders receive, which can be financial (revenue, savings), operational (speed, quality), social or environmental; identify with key stakeholders which components of value matter most and how they will be recognised.

Predictive: Value is defined in the business case and benefits plan, checked at phase gates, and mostly realised when the full product is delivered and adopted.

Agile: Value is delivered in small increments each release; the product owner orders the backlog by value, and feedback and usage data steer what comes next.

Trap: Equating value with finishing all the scope, or ordering work by stakeholder seniority; value is assessed with stakeholders, delivered early where possible and measured against defined benefits.

PRO.4 Work out the people and materials needed, and keep supply matched to need

Define resources from the requirements and WBS or backlog: people (roles, skills, numbers), equipment, materials, facilities and services; a resource breakdown structure organises them by type.

Predictive: Resources are estimated per activity, assigned through the resource plan and schedule, leveled for over-allocation, and released when work is complete.

Agile: Stable, cross-functional teams own their capacity; the team pulls work it can finish, and resource needs are managed at the team level rather than by assigning individuals to tasks.

Trap: Assuming resource leveling never changes the end date, or solving an agile team's capacity problem by adding people mid-sprint; leveling can extend the schedule, and agile capacity is managed by scope and team stability.

PRO.5 Plan purchasing, choose contract types, negotiate and manage suppliers

Plan procurement with a make-or-buy analysis (cost, capability, control, risk, capacity) and a procurement management plan covering what to buy, contract types, selection criteria, timelines and who has authority; a statement of work describes what the seller must deliver.

Predictive: Procurement is planned up front with a detailed statement of work, usually under a fixed price contract, and managed against milestones, inspections and formal change control.

Agile: Contracts allow scope to evolve: work is bought in increments or capacity with regular demos as acceptance points, and the vendor collaborates closely with the buyer's product owner.

Trap: Thinking the seller carries the risk under any contract, or telling a vendor directly to do extra work outside the contract; under cost reimbursable the buyer carries most risk, and every change to contracted work goes through contract change control and the person with procurement authority.

PRO.6 Plan the budget and reserves, track spending and act on variances

Analyse financial needs by aggregating activity or work package estimates into a time-phased cost baseline (the S-curve of planned value), then add reserves to get the project budget; agile teams often budget by team cost per sprint (a burn rate) times the expected number of sprints.

Predictive: A time-phased cost baseline is set early and tracked with earned value; variances beyond thresholds are reported and corrected through governance and change control.

Agile: Budget is often fixed per team and time box, and spending is tracked as burn rate against value delivered; scope flexes to stay within funding, and forecasts come from velocity and the remaining backlog.

Trap: Mixing up the reserves (using management reserve without approval or treating it as part of the cost baseline), or reading a CPI of 1.2 as an overrun; an index above 1 is favourable and a negative variance is unfavourable.

PRO.7 Plan quality into the deliverables, review it and keep improving it

Gather quality requirements from stakeholders, standards and regulations: what 'fit for use' means, measurable metrics and tolerances, acceptance criteria and, where relevant, accessibility, safety and sustainability requirements.

Predictive: A quality management plan sets standards and metrics up front, quality assurance audits the processes, and quality control inspects deliverables before acceptance.

Agile: Quality is built in every iteration through the Definition of Done, test automation and frequent feedback; retrospectives drive process improvement, and defects are fixed before new work where possible.

Trap: Confusing quality assurance with quality control, or responding to defects by adding inspection rather than fixing the process; prevention and root cause correction usually cost less than more appraisal.

PRO.8 Estimate, build, baseline and control the schedule for the chosen approach

Prepare the schedule to suit the approach: a network-based schedule with activities, dependencies and durations for predictive work; iterations, release plans and a roadmap for agile; on-demand flow with WIP limits for Kanban; often a mix of milestones and iterations for hybrid.

Predictive: The schedule is built from the WBS as a network of activities, the critical path is calculated, the approved schedule is baselined and variances are controlled against it.

Agile: Work is planned in fixed time boxes from a prioritised backlog; release dates are forecast from velocity, and progress is tracked with burndown and burnup charts rather than a baselined network.

Trap: Compressing activities that are not on the critical path, or comparing velocity between teams; only critical-path changes move the end date, and velocity is a planning measure for one team.

PRO.9 Measure progress, keep project artifacts current and report status

Develop metrics that answer stakeholders' questions: schedule and cost (SV, SPI, CV, CPI), scope delivered (features or story points done), quality (defect rates), risk exposure and value delivered; reconcile the data (for example timesheets against invoices) so numbers agree.

Predictive: Status is measured against the scope, schedule and cost baselines with earned value and variance analysis, and reported in scheduled status reports to governance.

Agile: Status is visible in real time through the task board, burndown and burnup charts, cumulative flow and the sprint review, where stakeholders see working increments.

Trap: Reporting activity or percent spent as progress, or using a burndown to show scope changes it cannot display; use measures of work actually completed (EV, done increments) and a burnup when total scope moves.

PRO.10 Get acceptance, hand over, and close the project or phase properly

Close the project or phase when its work is complete and accepted, or when it is terminated early (the business case no longer holds, funding is withdrawn); closing a cancelled project properly matters just as much.

Predictive: Closure happens at the end of each phase and the project: formal acceptance, contract closure, financial reconciliation, archiving and a final lessons learned review.

Agile: Closure is lighter and more frequent: each increment is accepted, each release is handed over to operations or users, and a final retrospective and transition plan close the product work.

Trap: Skipping closure activities when a project is cancelled, or releasing the team before contracts are closed and lessons are captured; formal acceptance and administrative closure come before the team disperses.

Key terms

Earned value (EV): The budgeted value of the work actually completed to date, used with planned value and actual cost to measure performance.

Cost performance index (CPI): EV divided by AC; below 1 means each unit spent is producing less than planned.

Estimate at completion (EAC): The forecast total cost, often BAC / CPI when current cost performance is expected to continue.

To-complete performance index (TCPI): (BAC - EV) / (BAC - AC): the cost efficiency the remaining work must reach to finish within budget.

Critical path: The longest sequence of dependent activities, which sets the shortest possible project duration; its activities have zero total float.

Total float: How long an activity can be delayed without delaying the project's end date.

Work breakdown structure (WBS): A hierarchical decomposition of the total scope into deliverables and work packages.

Contingency reserve: Budget or time within the baseline set aside for identified risks, controlled by the project manager.

Management reserve: Budget outside the baseline for unforeseen work, released only with management approval.

Cost of quality: The total of prevention and appraisal costs (conformance) and internal and external failure costs (nonconformance).

Burnup chart: A chart of completed work rising toward a total-scope line, which also shows when scope is added or removed.

Weighted shortest job first (WSJF): A prioritisation method that divides cost of delay by job size so the highest-value, smallest items go first.

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