

Building a Workplan You Can Manage

From a collaborative WBS workshop to a Gantt chart, baseline, and S-curve

This guide walks an Accountable Entity team through building a project workplan end to end. It follows the PPMM sequence — scope, time, then cost — and continues into the practical act of putting the plan into scheduling software, setting a baseline, and tracking against it. The methodology lineage runs from PMI/PMBOK to IDB/PM4R to PPMM. Throughout, the workplan is the Accountable Entity's instrument: it is informed by, but distinct from, any contractor programme.

What this guide covers

Phase 1	Build the WBS — a collaborative workshop (PPMM Step 2)
Phase 2	Sequence and estimate time — the network diagram (Step 3)
Phase 3	Cost and the S-curve, including pre-RFP contracts (Step 4)
Phase 4	Schedule, baseline, and track in MS Project or similar

The central discipline: the right level of detail

The hardest judgment in workplanning is granularity — enough detail to track meaningfully, not so much that the plan becomes unmaintainable and gets ignored. The ~two-week work-package rule is the dial. If tracking feels impossible, the plan is too coarse; if updating it is a full-time job, it is too fine.

The planning process begins with a thorough understanding of the Project Charter. The goal of this phase is to decompose 100% of the project scope into manageable work packages. The conversation and shared understanding generated in the room are as valuable as the diagram itself — the WBS is a collaborative effort, and the project manager actively engages the people who know the work best.

Run the workshop

- 1 **Assemble the right people.** Bring the project team and key stakeholders — project and activity managers, technical leads, and cross-cutting functions (procurement/SA, fiscal/ESP, Legal). The PM facilitates actively.
- 2 **Anchor in the Charter and design documents.** Use the approved Project Charter (signed by the MCC Project Manager and the MCA Deputy CEO or CEO) and the project design documents so the WBS stays tied to objectives and results.
- 3 **Decompose top-down, on the wall.** Use sticky notes or a whiteboard so the team can move and argue with the structure in real time.
- 4 **Apply the rules as you go** (see below).
- 5 **Verify scope — the 100% test.** Confirm the lower-level deliverables fully produce each higher-level item, and that nothing outside the WBS is needed. Anything not in the WBS is out of scope.

The WBS hierarchy

- **Level 1 — Project Objective:** the desired impact.
- **Level 2 — Components:** major areas or phases (a group of products).
- **Level 3 — Products:** tangible results of a group of deliverables.
- **Level 4 — Deliverables:** tangible work products from completing work packages.
- **Lowest level — Work Packages:** the smallest manageable units, each assigned to one owner.

Hierarchical, not sequential — deliverable language at every level

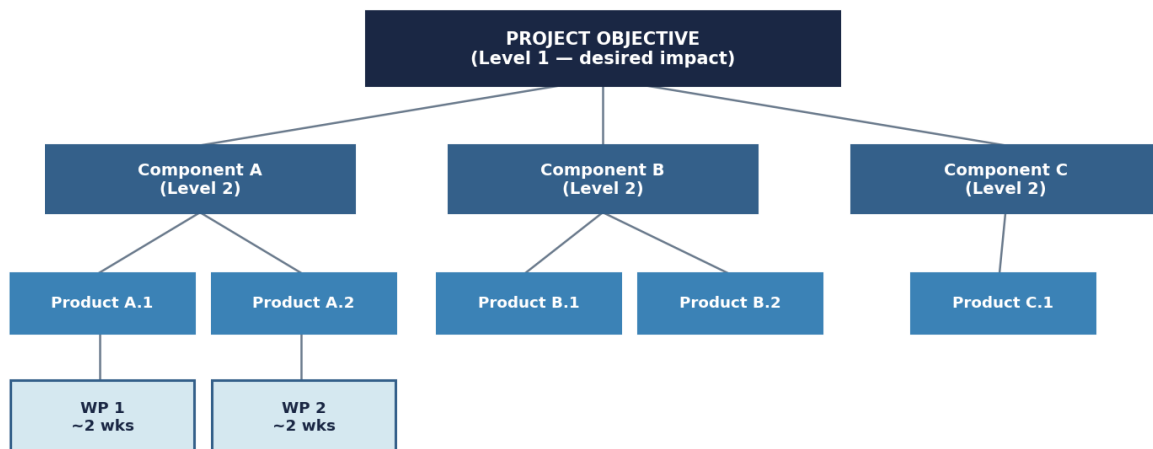


Figure 1. The WBS is hierarchical, not sequential — it captures what is produced, not the order or timing.

Rules that keep a WBS usable

- **Deliverable language.** Name items as completed results — "Bidding documents approved" — not as activities.
- **Decompose at least two sub-levels;** most WBSs run 3–5 levels by complexity.
- **Aim for ~two-week work packages.** If you can't estimate a deliverable's time or cost, break it down further.
- **Hierarchical, not sequential.** The WBS defines scope; timing and dependencies come in Phase 2.
- **It is the baseline for estimates.** Time and cost are built up from the work-package level.

Output of Phase 1

An agreed WBS diagram, with named work packages in deliverable language and a clear owner for each. Just as important: a team that now shares one understanding of the project's scope.

With scope defined, the next task is to plan, schedule, and sequence the work packages within the project's time constraints. This phase turns the static WBS into a logical, time-aware network and identifies the critical path — the chain that drives the overall duration.

Build the network diagram

- 1 Lay out the work packages as a network.** Take only the lowest-level work packages and arrange them as nodes between a Start (S) and Finish (F) milestone.
- 2 Define dependencies** using the Precedence Diagramming Method: Finish-to-Start (FS, most common), Start-to-Start (SS), and Finish-to-Finish (FF). Identify which packages run in parallel and which are strictly sequential.
- 3 Estimate durations** with the technique that fits the data — analogous (historical comparison), parametric (statistical model), three-point (optimistic/likely/pessimistic), or expert judgment.
- 4 Calculate the critical path (CPM).** Find the longest chain of dependent work packages; this sets the minimum project duration. Critical-path packages have zero slack — any delay there moves the end date. Off-path packages carry float.

Critical path (red) has zero slack; off-path packages carry float (slack)

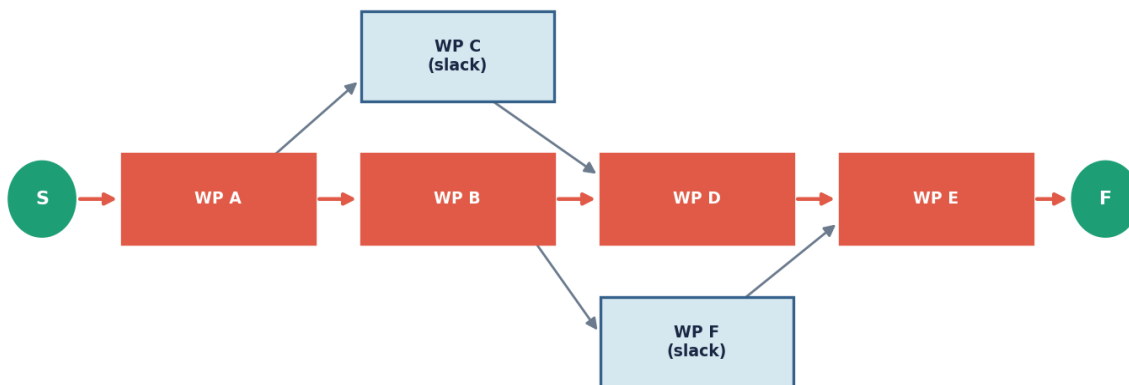


Figure 2. A network diagram. The critical path (red) has no slack; off-path packages (light) have float.

Tracking the mobilization delta

A recurring, costly risk pattern is the gap between the Commencement Date and the Start of Permanent Works. Build this gap into the network explicitly so it can be watched, rather than discovered late.

Output of Phase 2

A network diagram showing dependencies, durations, and the critical path — the structural basis for both the schedule and the time-phased cost baseline.

This phase establishes the time-phased cost baseline. A practical reality of MCA programs shapes the method: for many contracts a true bottom-up estimate cannot be produced until the RFP is developed and priced. Every contract therefore sits in one of two states, and you place its cost on the timeline accordingly — then move it to the sharper method as soon as better data exists.

State	What you know	Distribution method
Pre-RFP / pre-award	Only the estimated total contract value. No work-package-level pricing.	Uniform (straight-line) across the contract's planned duration.
Post-award / priced	Bottom-up cost per work package, plus schedule sequence and durations.	Time-phased S-curve from work-package costs.

3A. Pre-RFP contracts: uniform distribution

Until the RFP is created and the contract is priced, you cannot credibly say which periods carry more cost. Inventing a curve adds false precision. Spread the **estimated total contract cost evenly** across the contract's active window, then replace it on award.

- 1 **Take the estimated total contract value** from the approved budget or cost estimate — not a guess at component pricing.
- 2 **Determine the active window** — planned start and finish periods from the network diagram and Gantt.
- 3 **Divide the total by the number of periods.** Example: a \$1,200,000 contract over 12 months is placed at \$100,000 per month.
- 4 **Plot the cumulative line** — a straight diagonal, not yet an S.
- 5 **Flag it as provisional** in the workplan so everyone knows it awaits higher-resolution data.
- 6 **Replace on award** with a bottom-up, time-phased distribution (3B).

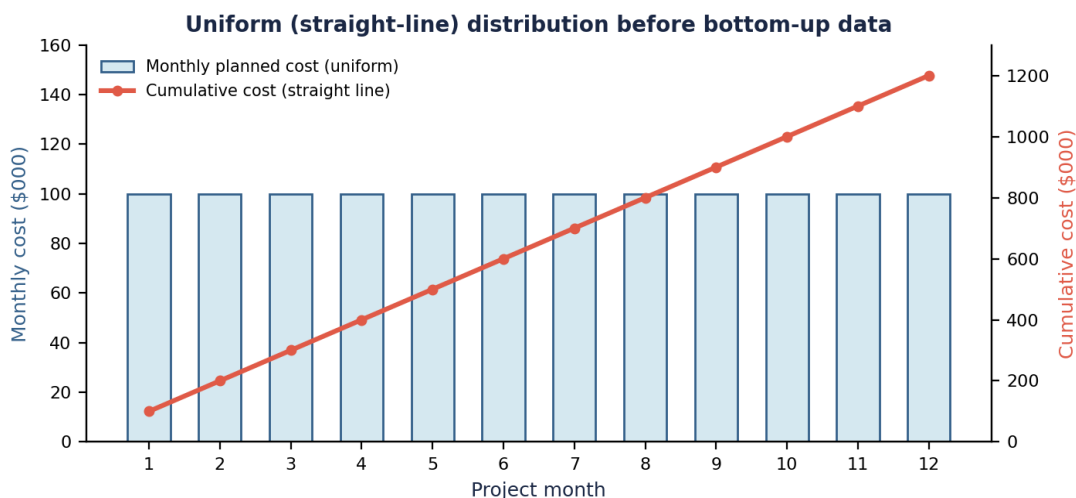


Figure 3. A pre-RFP contract distributed uniformly: equal period bars give a straight-line cumulative curve.

Why uniform, not a guessed S-curve

A guessed S-curve implies you know the rhythm of spend before the work is priced. Uniform distribution makes the uncertainty visible and keeps the portfolio total correct — a placeholder that protects the baseline's integrity, not a forecast of actual spend.

3B. Priced contracts: building the standard S-curve

Once a contract is priced at the work-package level, replace its straight line with a time-phased S-curve. The S-shape emerges naturally because most work starts slowly, accelerates through the middle, and tapers as it closes. The network diagram supplies the sequence and durations that place each cost in the right period.

- 1 **Estimate cost bottom-up.** Price each work package, then aggregate up the WBS to the total.
- 2 **Reconcile to the approved budget** and add contingency reserves for uncertainty as appropriate.
- 3 **Pull the schedule** — each work package's start, finish, and duration from the network diagram and Gantt.
- 4 **Time-phase each work package.** Spread its cost across its active periods; weight longer packages by planned progress.
- 5 **Sum by period** to get the period (incremental) cost across the contract.
- 6 **Accumulate** to get cumulative cost at the end of each period.
- 7 **Plot two series** — period cost as bars, cumulative cost as a line. The cumulative line is your S-curve.
- 8 **Set as baseline** once reviewed and agreed; re-baseline only through formal change control.

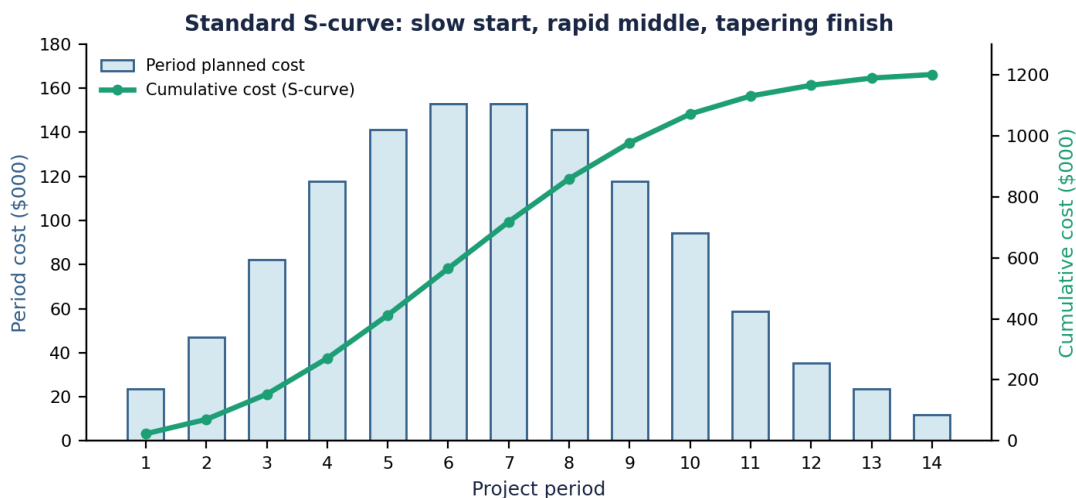


Figure 4. A standard S-curve. Period bars rise then fall; the cumulative line forms the characteristic 'S'.

3C. A note on construction contracts

For construction, a contract-specific S-curve can and should be applied — the contractor's priced bill of quantities and programme give a far richer basis than a uniform line, and civil works spend is strongly S-shaped. Detailed construction S-curve practice (linking programme, valuations, and the mobilization-to-permanent-works ramp) is treated separately. For the workplan baseline here, the standard S-curve method in 3B is sufficient; apply it once the works are priced and refine it against the contractor's programme as that becomes available.

3D. Blending the portfolio baseline

A program rarely has all contracts in the same state at once. The project-level cost baseline is simply the sum of every contract's distribution — uniform lines for pre-RFP contracts, S-curves for priced ones. Add

the period costs across all contracts, then accumulate. As each contract is awarded and its uniform line is replaced by an S-curve, the blended baseline naturally sharpens.

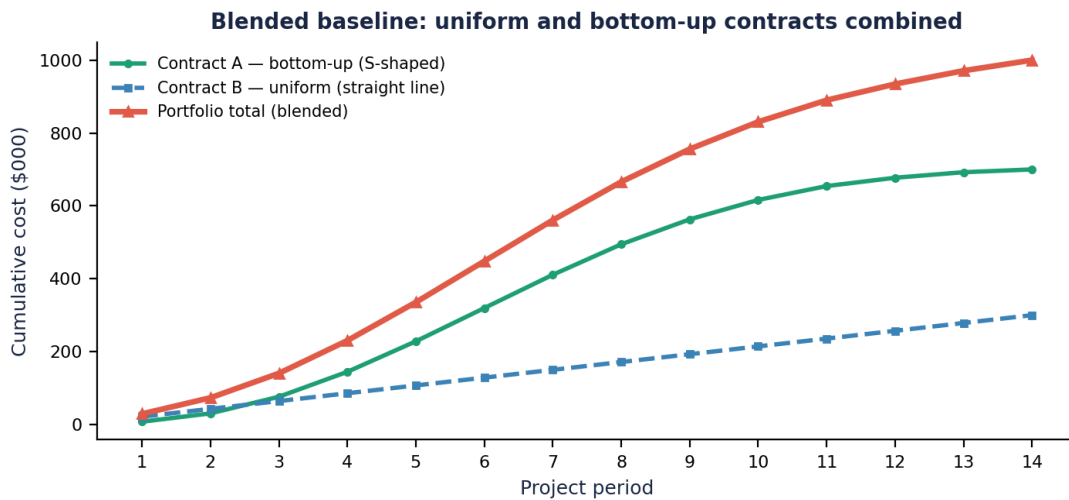


Figure 5. The portfolio baseline blends a priced contract (S-shaped) with a pre-RFP contract (uniform).

Keep the MCA workplan distinct from the contractor programme

The S-curve in the MCA workplan is the Accountable Entity's planning instrument. It is informed by the contractor's programme but is not the same artifact. Hold both at the right level of detail.

The PPMM methodology stops at the network diagram and S-curve; building the schedule in software is the practical next move. Microsoft Project is the preferred tool for MCA workplans, and it is where the three prior outputs — WBS, network diagram, and S-curve — come together into a single living plan.

From plan to live schedule

- 1 **Enter the WBS.** Create the task list using outline/indent levels that mirror the WBS hierarchy; keep work-package names in deliverable language. Summary tasks roll up automatically.
- 2 **Enter durations and link dependencies.** Add each work package's duration, then link predecessors and successors using the FS/SS/FF relationships from the network diagram. The software draws the Gantt chart and computes the critical path automatically.
- 3 **Verify the critical path.** Turn on critical-task highlighting and confirm it matches the path identified in Phase 2.
- 4 **Add resources and cost.** Assign owners and the bottom-up costs from Phase 3 so the schedule carries the time-phased budget. For pre-RFP contracts, enter the uniformly distributed estimate and flag it provisional.
- 5 **Set the baseline.** Once the schedule is reviewed and agreed, save a baseline (e.g., Project → Set Baseline). This freezes the agreed dates, durations, and costs as the reference point. Re-baseline only through formal change control.
- 6 **Generate the S-curve.** Use the time-phased cumulative cost or work data (Task Usage view or a visual report exported to Excel) to plot cumulative baseline cost over time.
- 7 **Track against the baseline.** As work progresses, enter actual start/finish and % complete. Compare actual vs. baseline on the Gantt and on the S-curve to spot slippage and cost variance early, focusing on critical-path packages.

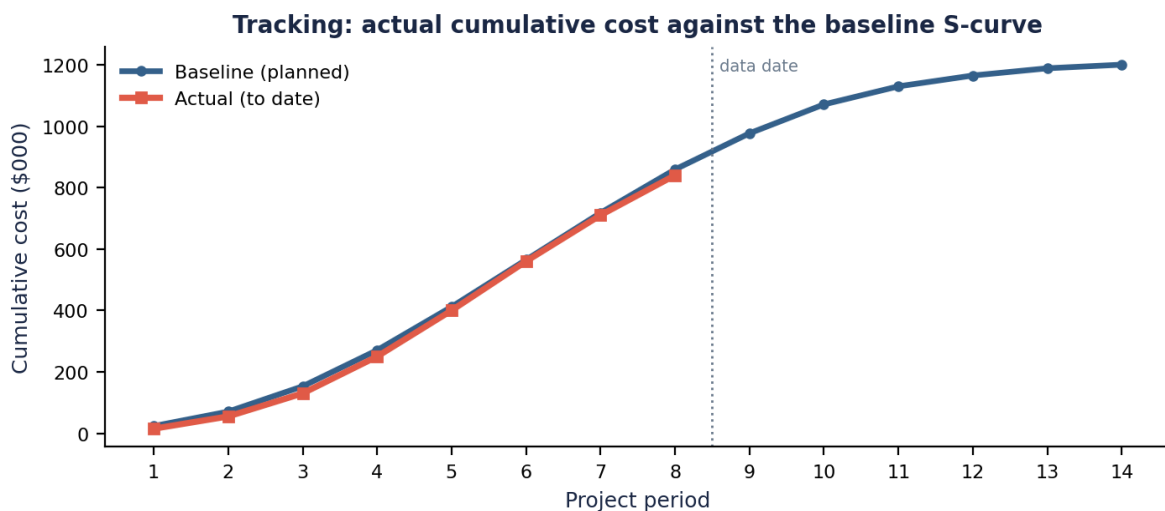


Figure 6. Tracking actual cumulative cost against the baseline S-curve. The gap before the data date is the variance to investigate.

Reading the variance

- **Actual below baseline** — spend is slower than planned: under-delivery, mobilization delay, or slower ramp-up. Investigate which.
- **Actual above baseline** — spend is faster than planned: acceleration or early cost pressure.
- **Widening gap on the steep middle** — the most sensitive zone; small slippages here move the end date and outturn the most.

Psychological safety around schedules

Teams will not share honest schedules showing delays unless the behavioral environment is deliberately designed for it. Treat candor as something to build structurally — through how variance is discussed and responded to — not something to assume. An honest plan that shows slippage early is worth more than an optimistic one that hides it.

End-to-end quick reference

Phase	You produce	Key discipline
1 — WBS (Step 2)	Work Breakdown Structure	Collaborative workshop; deliverable language; 100% scope; ~2-week packages.
2 — Time (Step 3)	Network Diagram	FS/SS/FF dependencies; duration estimates; identify the critical path.
3 — Cost (Step 4)	S-Curve / cost baseline	Uniform line pre-RFP; bottom-up S-curve once priced; blend the portfolio.
4 — Schedule	Gantt, baseline, tracking	Mirror the WBS; set a baseline; track actual vs. baseline; protect candor.

Cost-distribution decision rule

If...	Then...
Contract not yet through RFP / unpriced	Distribute estimated total cost uniformly across its active window; flag provisional.
Contract priced at work-package level	Build a time-phased S-curve from bottom-up costs and the schedule.
Construction contract	Apply the standard S-curve once works are priced; refine against the contractor programme.
Reporting period closes	Plot actual cumulative cost against the baseline curve; investigate the gap.