

## **Deeply Practical Project Management Summary Checklists**

### **1. Project Management Overview**

*“The loftier the building, the deeper must the foundation be laid.”*  
– Thomas Kempis, 1380 – 1471.

Here is a summary checklist of the key points the PM should understand:

- The main value of project management is that it helps you easily plan the effort before you start, and then smoothly status and manage it once underway.
- Project management can help any kind of effort in any domain, small or large, in industry, government, or non-profit.
- Project management processes can be used by anyone in any role or position, and help the whole organization function as one integrated team.
- All projects should come from a documented “need”, a problem or opportunity that provides a good reason to carry them out instead of doing something else.
- If there is not enough information available to initiate a project, first conduct a “Feasibility Study” or “Needs Assessment”.
- Project management applies to small projects by not skipping any steps, but only spending 5% of the project effort in the planning stage.
- Documented processes are invaluable because they capture best practices so our limited human capacity doesn’t have to remember or re-invent them.
- The Project Management Institute (PMI)® PMBOK® collects the world-wide standard PM best practices refined by projects over the last century.
- A PMI PMP certification is usually required just for large or contracted projects, but is worthwhile at any level and respected around the world.
- Projects are temporary and unique – that's when the PM processes are really useful.
- Programs are collections of inter-related projects that interact monthly or less, and are managed as a group to optimize a program level objective.
- The five project management stages are Initiation, Planning, Execution, Monitoring & Control, and Closing, and can repeat across multiple project phases.

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- The ten project management knowledge areas are Integration, Scope, Time, Cost, Risk, Quality, Human Resources, Stakeholders, Communications, and Procurement.
  - Project management uses two key techniques: (1) breaking down complex items into simpler pieces, solving the pieces, and rolling them up to solve the whole; and (2) doing one thing at a time to lay down a baseline and avoid thrashing.
  - Several powerful automated software applications support various parts of the project management process, most importantly the Gantt chart tool, with free open source options available.
  - All optional programs and projects should flow from the strategic plan, to optimize organization achievement and maximize senior management support.
  - The most important concept in project management is the triple constraint, stating that scope, time, and cost are fundamentally inter-related, and whenever one changes the other two must be rebalanced – the project manager's main job.
  - The top three drivers of project success are (1) define the scope first, (2) manage scope changes, and (3) obtain user feedback as early as possible throughout the project to find the items inevitably missed when they are easiest to manage.
  - The project manager must have the title “Project Manager”, with their accountability and authority to ensure project success publicly assigned by the sponsor in the charter, and have direct access to the customer whenever required.
  - Project managers need organization skills, project management skills, domain experience, and soft-skills since project teams are human systems.
  - The essentials of good team communications are active listening, confirming communications, and being aware that communications overhead increases exponentially as the size of teams rise.
  - All teams go through the stages of forming, storming, norming, and then performing, so be aware of the progression, hasten it with more team interaction early, and communicate the norms you want the team to adopt to help establish their identity.
  - The essentials of a good team foundation are removal of interruptions, and establishing a culture of mutual trust through honesty, delegation, and formal and informal team building.

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- The foundations of good team dynamics are rotating leadership, open conflict of ideas, and mutual accountability – the sign of a maximum performance team.
  - The essentials of negotiation are: be optimistic and look for win-wins; know your top-line, bottom line, what you can add and give up along the way, and your BATNA; have conversations like “if I did this, could you do that” and “if you did that, I could do this”; agree the easiest items first; and aim for sustainable 55%/45% wins.
  - The essentials of leadership are: ensure the goals are correct and clear; motivate the team; work constantly on increasing the level of trust, and provide the resources the team needs and solve the problems they cannot.

## **2. Project Initiation**

*“We succeed only as we identify in life, or in war, or in anything else, a single overriding objective, and make all other considerations bend to that one objective.”*  
– President Dwight D. Eisenhower, Speech To Nation, April 2, 1957.

Here is a summary checklist of all the key points of the initiation stage:

- The purpose of initiation is to baseline the key information the project manager needs to conduct effective planning, especially the project objective, and determine how much effort to spend in planning.
- The best practice recommends the prospective project manager lead the initiation stage and production of the charter, in order to ensure the process is implemented properly and to provide continuity through planning.
- The first items to identify are the project sponsor that will provide the budget, and the customer with the need that will use the project result.
- The next people to identify are the rest of the stakeholders, all those that will be affected by or can affect the project, and whose support you need to maintain.
- The most important step in scope definition is to get the stakeholders to agree a single sentence objective identifying the ultimate project outcome and benefit, along with any assumptions and constraints.
- The conceptual solution provides the top-level understanding of how to meet the objective, and is sometimes just a list of the major end deliverables.
- The initiation business case estimates the costs and benefits around +/- 100% accuracy, providing a gate to stop projects that make no sense, or, if it looks reasonable, putting 5% of the estimate aside for the planning budget.
- The charter also identifies the project manager, publicly empowers them with a

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mandate to prepare a project plan, and provides a planning budget and schedule.

### **3. Project Planning**

*"Plans are worthless, but planning is everything."*  
– President Dwight D. Eisenhower, Speech, Nov. 14 1957.

Here is a summary checklist of all the key points of the planning stage:

- Planning is the most important project stage, where we put together an execution strategy that can get the job done and be easily monitored and controlled, and determine the scope, schedule, budget, and risks with an accuracy of +/-10% so we know what we are getting into before we start.
- Planning needs a core project team of subject matter experts from each project area to prepare their part of the plan, and lead the work later during execution.
- The main solution to the most common cause of project failure – incomplete scope definition – is to take the time to interview everyone and baseline the requirements, the needs not wants, what not how, complete, consistent, and provable.
- A top-level solution definition is required to plan the project, sometimes a diagram or just a list of major deliverables, not too detailed, enough to prepare a plan with +/- 10% accuracy.
- The work breakdown structure identifies all the deliverables, both passed to the customer at the end of the project as well as all the interim outputs produced during the project just to get it done, and make everything else in planning easy.
- The WBS can be organized hierarchically or by phases or in a combination, whatever is clearest for human communication, with categories being merely a convenience, and identification of the deliverables being what really matters.
- Deliverables must be broken into smaller pieces when: (a) there are different leads responsible for different parts; (b) there is waiting time within the deliverable; (c) it can be started earlier but not completed until later; (d) it is longer than two weeks so must be divided into "work packages" for later monitoring and control.
- Every requirement is traced to at least one deliverable that meets it, while some deliverables have no requirements because they are just project work.
- The precedence diagram flowcharts how the deliverables come together, showing the fundamental logic of the project, and is the most important practical tool for planning, communicating, and managing the project.

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- Estimating deliverable time, cost, and resources is most accurately done by an activity breakdown performed by the person that will be responsible for the work, and is the key step that results in an overall project plan estimate with +/- 10% accuracy.
  - Estimation with the PERT or 3-Point technique is not as good as activity breakdown, but is better than just a single point guess, providing about +/- 50% accuracy.
  - Estimation with the Delphi technique is not as good as activity breakdown, but is better than just a single point guess, providing about +/- 33% accuracy, and is used mainly for estimating risk probability and time.
  - Estimating can also be done with the analogous method, by comparing to something similar, particularly useful for the +/- 100% initiation project estimate, and by using historical data when comparable information is available.
  - All estimates must be factored by a productivity ratio, often between 70% and 85%, to take account of realistic human efficiency, and then factored again by an availability percentage if resources are only available part-time.
  - The precedence diagram and deliverable estimates are loaded into a Gantt chart tool, given a start date, and the tool maps the work across the calendar, and determines the critical path of back-to-back deliverables driving the schedule end date.
  - Work packages are entered underneath the deliverables in the Gantt chart for later tracking, and activities can be added underneath the work packages if different activities have different resource requirements.
  - After scope, the critical path is the most important project item to baseline during planning, enabling you to prioritize later monitoring and control on the deliverables driving the end date, and because schedule delays also drive increases in cost and risk.
  - Milestones are not new items, but rather simply a subset of the existing deliverables that show significant achievement and are of interest to the stakeholders, and whose status will be reported each month – as a rule of thumb about one every two months.
  - Use the Gantt tool to determine the resource loading and resolve any over-allocations using float if possible, adding resources if schedule constrained, or extending schedule if resource constrained.
  - Include a resource plan with an organization chart, cross-reference of the team members to their deliverables, and plans for management of any critical resources.

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- Costs are easily rolled up from the deliverable activity breakdowns, including all direct fixed and variable costs, and for larger projects graphed across time in a “cumulative cost curve”.
  - Cost accounts are assigned to the deliverables for later tracking, and can bundle several consecutive short duration deliverables if all done by one person.
  - Create deliverables in-house when you can do them better, faster, and less expensively, or need to maintain them or build more, and procure deliverables from contractors when they can do it better, faster, and less expensively, or the product has significantly benefited from long use by others.
  - Fixed price contracts are best when the scope is very well defined and will not change, while cost plus contracts are best when the scope will likely change, however require you to exercise closer project management oversight.
  - Select contract winners on lowest price only for the simplest procurements, and for more complex work use best value scoring to get the best proposals from all bidders.
  - Risk planning adds time and money into the project to take account of uncertain events (80% or less probability) that could negatively impact the project.
  - Risks are most commonly identified by brainstorming by the core project team with a standard risk checklist, and are baselined in standard risk statement form.
  - Risk probability, time, and cost can be estimated with historical information, the Delphi technique, or a bottom up calculation, and then probable time and probable cost are calculated for each risk and rolled up to determine the whole risk budget.
  - Risk response planning assigns an owner closest to the risk, a trigger, identifies secondary risks, and develops a plan to avoid or mitigate the risk now during planning, or later during the project if required.
  - The risk register should include at least 5 risks, maximum 10, typically amounting to 5% to 15% of the project time and cost, and more or less depending on the project.
  - The risk cost goes into a controlled account requiring justification to draw down, and all the time is bundled into a buffer that goes at the end of the project before the “key customer event” to take the hits from schedule slips instead of the customer, and so it can be used for anything that goes wrong anywhere on the project.
  - Risk upside, also called opportunities, are identified, and their time and cost advantages estimated, although they are usually not factored into the budget

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and schedule, and usually should be given second priority to the primary job of managing the negative risks and protecting the main project.

- Prepare a communications plan describing at least the weekly issue status meeting, monthly project review meeting, and change control board meetings, plus any other planned communications with a description of who will be involved, what will be communicated, when they will occur, and how they will take place.
- Prepare a project management plan documenting the scope, time, cost, and risk baselines, and sections or separate plans as required for stakeholders, resources, communications, quality, procurement, change control, and the requirements usually with a cross-reference to the deliverables that meet them.
- Review the plan with the sponsor, customer, and other relevant stakeholders, request time to work in any changes, provide options wherever possible, and make absolutely sure scope, time, cost, and risk are properly balanced and truthfully communicated before proceeding to execution.

#### **4. Execution**

*“Take time to deliberate, but when the time for action has arrived, stop thinking and go in.”*  
– Napoleon Bonaparte, 1769-1821.

Here is a summary checklist of all the key points of the execution stage:

- The purpose of execution is to assemble the best possible team, design and build the project output, and prepare for delivery and handover.
- Keep the planning leads to ensure continuity and accountability, select the rest of the team based on skills, energy, team temperament, and ethics, choose from the widest set of candidates to maximize diversity and therefore creativity and performance, and include a user representative in as much of the project work as possible.
- Build a cohesive team identity with off-site sessions, team training, and team meals, and work continually to maximize team trust since it's the largest contributor to scope, cost, and schedule performance.
- The more important the project, the more important it is to colocate the team in one building / floor / room to minimize mistakes and communication delays.
- Matrix organizations are usually the best compromise, providing the best availability of skills and allowing the project manager to focus on project performance, however the functional manager must use a scheduling tool to manage a realistic loading of their personnel across projects, ideally allocating people to one project at a time until that work is complete.

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- Completely delegate to the team the responsibility for how the work is done so they feel empowered and can grow and learn, accept that mistakes will be made, make sure the team knows they should ask for assistance when needed, and always status and follow-up since you retain overall accountability for success.
  - Motivate the team to do their best by communicating the project need, business case benefits, and personal career advantages, and provide credit and sincere appreciation publicly, privately, and to the team's functional managers.
  - Manage people conflict by first addressing any underlying causes, then bring the parties together and clearly communicate the responsibility for resolution by the parties themselves, and then replace personnel if required to protect the overall project.
  - Prefer verbal communications, face-to-face over phone, reserving email and written communication for data transmission, record of agreements, formal approvals, and contract communications, and hold meetings for regular statusing, brainstorming, problem solving, and reviews.
  - Always hold an internal kick-off meeting for the whole organization even when you think everyone already knows everything, brief the project plan essentials, answer any questions you can and followup with answers to the rest, and repeat with the customer for contracted projects.
  - Even when the requirements are "perfect" and legally locked, hold a requirements review the first week of execution and add clarifications wherever needed, saving many multiples of time and rework later.
  - Prepare one or more designs of all deliverables, and obtain user reviews to obtain critically important feedback and find out what was missed, before expensively locking in the actual creation.
  - When problems arise, the Ishikawa or fish-bone diagram provides a very useful structured tool to help investigate behind symptoms and find the root causes.

## **5. Monitoring and Control**

*"Have no fear of perfection: you'll never reach it."*  
– Salvador Dali, 1904-1989

Here is a summary checklist of all the key points of monitoring and control:

- The purpose of monitoring and control is to track the status of scope, schedule, cost, and risks, and take action to keep performance as close to the plan as possible.



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- Know what is important to each stakeholder, actively manage their expectations, never over commit, and give them a full status update at least once a month.
  - The most basic and important project control is the weekly maximum one hour status meeting with the leads to update the issues list and risk register – never cancel this meeting to get work done instead, and keep it going until the end of the project.
  - Solve scope creep, the second most common cause of project failure, by instituting a rigorous change control process, and try hard to implement any new scope in the next project or phase, or trade out other scope equivalent in impact to balance it off.
  - Maximize schedule performance by ensuring the team has the skills and resources required, are fully empowered and motivated, understand schedule delays drive both cost and new risks, and then manage the critical path like a hawk.
  - For critical schedules, hold a stand-up 15 minute meeting each morning, ask each lead what they did yesterday, what they will do today, if there is anything preventing them from accomplishing it, and to let you know immediately if anything blocks them from progress.
  - Compress schedule by crashing – adding more resources such as better tools or a very experienced person that has just done the same job, and fast tracking – starting deliverables before their predecessors are completely finished where really practical and no rework will be needed.
  - Obtain costs reports at least once a month, ordered by cost account that collect all material, services, and personnel time, delegate management to the person best able to manage the cost, and review the reports yourself to maintain oversight.
  - Cost cannot be arbitrarily reduced once planned, and can only be effectively managed by controlling the drivers – scope, schedule, and risks.
  - If costs must be reduced the only option is to reduce scope, a decision that should be made as early as possible to maximize the benefits.
  - “Quality must be planned in, not inspected in”; quality parts and processes reduce time and cost by increasing efficiency and reducing required testing and customer acceptance issues; and continuous small improvements add up to big results.
  - The highest quality goal is for the project output to be “fit for purpose”, and is greatly assisted by peer reviews to find issues the deliverable owners cannot see, and user reviews of all draft work in progress to find requirements that were missed – only working in items essential for project success, and trading out other scope to balance off the impact of new work wherever possible.

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- Delegate ownership of risks to the lowest level possible, watch for the triggers, spend money to manage risks early when they are least expensive, add new risks to the register whenever they arise, and reduce and remove risks very cautiously.
  - When the project is large enough to support the administration, use earned value management to provide objective numerical metrics and projections of cost and schedule performance, based on the amount of work done compared to what was planned to be done, greatly aiding the confidence of stakeholders in project reporting.
  - You can help persuade people to resolve an issue by understanding what is important to them and putting it in their interest, depersonalizing the issue and strengthening your position by putting supporting data on a single piece of paper, when needed establishing they are “standing on a burning platform”, and then, if necessary to protect the project, escalating resolution up the chain of command.
  - Formally status the project scope, schedule, cost, risks, and issues monthly to obtain solid information to help you monitor and control, and to review progress with the sponsor and stakeholders so they are kept fully informed and never surprised:
    - Use a one page report format to keep the reporting manageable, and to ensure the information you need to discuss does not get lost.
    - Ask the stakeholders for assistance with anything they can help with.
    - If the risk budget is being consumed too fast, ask the stakeholders for direction on what is most important to them – scope, schedule, or cost – and after they pick two, let the third one go as little as possible to manage the project to the best outcome possible in the circumstances.

## 6. **Closing**

*“Begin at the beginning, and go on till you come to the end, then stop.”*  
– Lewis Carroll, Alice in Wonderland, 1865.

Here is a summary checklist of all the key points of the closing stage:

- The purpose of closing is to deliver and handover the project result, close contracts, capture lessons learned, transition the team, hold a project celebration, and write a final report.
- Close all contracts, wherever possible using scenario-based scope verification and three-party verification events including the customer, and provide formal written notification of contract closure to prevent any further invoicing.

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- Successful change management requires a respected user champion to sell the project internally to the customer, just-in-time training, user surveys to find problems early, and piloting and phasing wherever possible to build on success.
  - Hold formal scope verification events throughout the project to prove to the customer that the project output was correctly produced – that all requirements, material, services, documentation, and training has been provided.
  - Scenario based verification is the best way to demonstrate to the customer the project output is fit for purpose and sign-off the requirements at the same time.
  - For complex projects, establish agreed delivery criteria up front with thresholds that assure the customer the solution will be solid but don't unreasonably hold up delivery over minor issues that can be easily fixed post delivery.
  - Ensure the operations group has all the documentation, training, budget identification, and other information required to maintain the project result.
  - Document lessons learned, both those to avoid as well as to repeat, with no names or blame, ideally as you go during the project using a Wiki or shared document or after each phase, displayed on a screen in group reviews for maximum participation, and then make sure they are available to others.
  - Watch for team morale issues towards the end of the project, emphasize the importance of the final stages to ensure the whole project is successful, and keep the weekly meetings, monthly reviews, and team building going.
  - Provide performance feedback for all direct reports and ensure they do likewise for their teams, and bring good performing personnel to your next project or help them transition to other projects.
  - Hold some kind of celebration to bring the project to a human closure point, invite everyone, have food, and give a very brief speech acknowledging the effort of the team, thanking them, and wishing them well in their next challenge.
  - Write a final report documenting whatever happened with scope, schedule, and cost, the business case status to the extent known, major risks, most valuable lessons learned, and recommendation for next steps, review the report with the stakeholders, and flow required actions to the organization.