

# Article 3: Minimal Requirements for a Healthy Project

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Minimal Requirements for a Healthy Project

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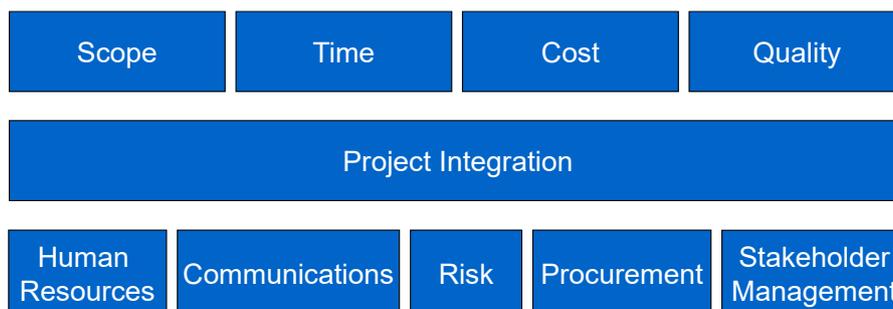
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## 1.0 Introduction

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This article outlines the minimal requirements needed for a healthy project. It does not show you how to achieve them. It is simply a check list with some clarifications.

The structure of the article depends on the 10 areas of Project Management Knowledge defined in the PMI's Guide to the *Project Management Body of Knowledge* known as the PMBOK (Fifth Edition).



The sections of the coming Chapters present items that can be documents, positions (attitudes), procedures or even software. These are considered almost as pre-requisites for a successful or healthy project.

Of course, a proviso, not all of them would apply to all your projects.

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## 2.0 Project Integration

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Quoting the PMBOK, Project Integration Management includes characteristics of unification, consolidation, communication, and integrative actions that are crucial to controlled project planning and execution.

### Project Announcement

Many projects are launched and not announced. This leads to the estrangement of stakeholders and team members, sometimes clients and suppliers. This is not a major undertaking but can be achieved via suitable prompt and concise communication.

### Project Plan

One should not even include this document here as it goes without saying that a project without a plan will fail. A pre-requisite of pre-requisites. What is important is what the plan includes. A project has a triangle surrounded by Quality Management. The triangle includes the scope of the project and the scope of the product, the schedules and the budgets (based on resource assignments). At least these should be specified in detail in a project plan. Included are other aspects which would be noted in later sections: communications plans, objectives, risk analysis, etc.

### Interim Project Plans

Many project plans are left as they were in v1.0. A healthy project will need to update its plans on a regular basis and communicate them. How many times do you come across persons still working on tasks that have become obsolete due to changed plans that were not communicated?

### Project Monitoring Tool

This would have been critical a few years back. Today, most projects are supported by software applications that allow the whole team to plan and monitor their projects online.

### Issues Management

Issues are often part of various collaboration tools. It is necessary that the Project Manager not be the only person in a project to manage issues. The PM is responsible for such management but should open up issues management so all team members (and some stakeholders) can raise, follow and close issues.

## **Standardized Project Processes and Frameworks**

CMMI's second level (above chaotic management) is one where project processes and frameworks are documented even if not optimized. Your project should rely on documented processes that are well disseminated and more importantly, backed up by management commitment.

## **Project Performance Indicators**

Aggressive pressure from management, clients and others often force the project manager to raise data but only about schedules and budgets. Sadly, looking at schedules and budgets means looking at the results and not the causes. Root cause analysis can only be applied when the proper measurements (and resulting indicators) are made, monitored and analyzed. It is not enough to know that a project is "late" (by which time it is too late) but to know early enough that the number of installed items per day was low and how that would affect the schedule.

## **Management Focus on PM Methods**

Management is often unaware of (read: uninterested in) the methods and processes used in projects. Project Managers (or PMO's) should raise such awareness with senior members of management and invite them to regularly monitor such methods and processes. Plans, corrections and evaluations will be speeded up if management is aware of the way projects are being managed.

## **Management Commitment to Projects**

A project manager working on a project that does not have management commitment will find his or her project bobbing up and down in priority, scope, budget and schedule. Not an interesting project to manage.

## **Lessons Learned**

A 60s song by the Kingston Trio was called "Desert Pete". It consisted of a note left by Pete on a bottle filled with water to be used to prime the pump. He urged the "next user" not to leave without refilling the bottle with water so it can be used by the next user to prime the pump. The same applies to projects. Lessons learned when developed at the end of the project, not only serve to raise awareness of recurring issues but become warning signs for new projects.

Drink all the water you can hold. Wash your face to your feet.  
Leave the bottle full for others. Thank you kindly, Desert Pete.

## **Project Termination Report (PTR)**

So many projects are eager to finish, get the delivery notes signed and the invoices issued which leaves no time for evaluating the project. The PTR should address what was planned (scope, budget and schedule) and what was achieved, examining variances and analyzing the cause of their proper or improper results. Other aspects of the project should be analyzed too: communications, issues management, risk analysis, etc.

## **3.0 Scope Management**

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By far the most critical terminal disease of projects is the improper understanding and agreement by all stakeholders of the scope of the products being produced and the scope of the project itself (necessarily different).

### **The Work Breakdown Structure (WBS)**

Often raised the hat to but infrequently implemented. Many projects jump from key activities to the schedule bypassing the WBS. The PMI gives a lot of prominence to the WBS, giving it its own process under Scope Management. The WBS organizes and defines the total scope of the project in terms of the smallest possible controllable work unit: a task. It represents the work specified in the currently approved scope statement. Without the WBS, we cannot develop schedules, task dependencies, resource types, quantities and rates, assignment of resources to tasks and related planning activities such as risk management and communications. (A pre-requisite for the WBS are the technical specifications).

### **Clearly Defined and Communicated Project Objectives**

Many projects see the light without stakeholders knowing why management even bothered with such a project. Objectives are not enough. These show “what” the management wants. Objectives stated without corresponding goals will not be testable. A goal is a value or a state to be achieved that can verify if an objective was achieved or not. Objectives and goals should be disseminated and known by the project team and key stakeholders.

### **Technical Specifications**

Oh, if only all projects had technical specifications, I would not be writing this document. Oh, yes, we gave them our requirements but the final product was nothing like we wanted. Why can't most projects be jealous of the construction industry? There you have technical drawings that specify down to the color of

each tile how the building will be. I wish someone would compare the rate of project failure in the construction industry with projects in business sectors.

### **Sustainable Action Plan for Product Building**

Another chameleon document that needs to be initially setup and monitored as it changes.

### **Initial Deliverables Register**

If I recount the number of projects that were held up when right in the middle, disputes took place about the naming, breakdown and general delivery schedules of deliverables. Stakeholders can easily start lumping deliverables together or splitting their deliveries causing havoc to project plans. I am not talking about technical specifications. At the beginning of each project stakeholders need to develop a clearly defined deliverables register containing codes, descriptions, expected delivery, etc. The same register can be used to track deliveries.

### **Change Control Procedure (CCP)**

This is another nightmare for the project manager even though many contractors can only achieve profits by relying on change or variation orders. But “changes” cannot be identified and dealt with without clear project plans and technical specifications. Moreover, agreements should be made as to what can be changed, who can raise Change Requests, who can develop reports defining the impact of the requested changes and who can approve such reports.

## **4.0 Time Management**

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This is the first question stakeholders ask: “Are we on time?”. It goes without saying that if the first two PMI areas are handled well (integration and scope), time management will follow.

### **Schedule**

To be developed after the WBS is completed and approved. The term “after” is a condition. A schedule based on the desires of stakeholders set even before the kick-off meeting is doomed to cause havoc.

### **Schedule Control**

Following the requirement for Change Control Procedures, controlling schedule involves more than just monitoring. Mechanisms should be in place

to ensure that changes are controlled, trade-off's are applied when needed and optimization of schedules as and when the project progresses.

## **5.0 Cost Management**

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This process inhabits the same priority neurons in the stakeholders' mind as scheduling. Sadly, reverse planning is often applied. A caricature question will highlight this traumatic experience: we have C dollars and M months, we need to complete Scope S.

Again, without the WBS, this cannot be achieved.

### **Available Resources**

How many times did a project get launched only to realize that we do not have resource X or resource Y? A scramble to find them at this stage will only disrupt the project. A healthy project must start with a list of available resources, and by available is meant those that can be used without excessive costs, schedule or scope change. A quick review of the list will give the project manager enough time to raise any variances as risk items.

### **Internal Costs**

I have met many a project manager who either does not know or is not allowed to know what the cost rates of the internal resources are. This puts the PM out of the trade-off cycle. How can the poor PM shuffle resources around when their rates are not known. This is often severe in public sector projects. Knowing internal costs is a two level process. First they should be known to the organization as a whole. Second, they should be disseminate to the right parties.

### **Resource Rates and Estimating Databases**

Again, we often scramble in the middle of a project to get quotations and prices for items that suddenly go missing or short. More importantly, if we follow proper cost control, it is also frequent that we will be squeezed in time when we have to add internal resources to the project whose internal cost rates are not known. Many companies have estimating databases but these are mostly for external products and not for internal costs.

### **Resource Assignments / Control**

Assigning resources and controlling (tracking) their use is a difficult part of most software applications. When we reach the stage of tracking the use of resources in either Microsoft Project or Oracle's Primavera, we hit steep

learning curves and difficult practices. These often result in a weakness when tracking costs, earned value and assignments. Though this is a critical factor for healthy projects, it is not an easy process. The French have a great phrase which is missing in English: “à plus forte raison”, roughly meaning, “more of a reason” to master such practices.

## 6.0 Quality Management

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I will simplistically define three meanings of Quality here (oh, not again). Defining the quality of a product is equivalent to defining its scope. These are the features we need. This was covered earlier. A second usage is testing to ensure that we got the product with the required quality is called Quality Control and is strictly a testing or verification or validation process. A third usage implies improving the Quality of a product or a process involves practices that ensure ongoing and incremental improvements. At the risk of a slight disagreement with the PMI, I will consider Quality Management in this section as Quality Control and Assurance.

### Test Scripts for all deliverables

Although not many sectors will use the phrase “test scripts” to define the instructions issued to test the product’s scope, scripts or whatever various sectors call them, are necessary documents that are developed after technical specifications. They specify the process needed to verify that a product has been properly built, delivered, installed or operated. Without pre-approved test scripts, it is not possible to clear deliverables without conflict and delays.

### Clear Acceptance Criteria

These should not be confused with Test Scripts. A test script checks that a deliverable was built as specified. Acceptance criteria cover practices which are mostly related to the environment of testing. For example, who shall attend the testing activities? Who shall be responsible for signing off the certification report? What are the resources needed for testing? Where is testing to be done, on which equipment, in which sites? What are administrative requirements to be met during delivery: licenses, certificates of origin, etc.? What happens when either side do not attend testing activities, or delay them or not provide suitable pre-requisites defined in testing plans?

### Quality Standards

Without the need to specify quality standards in test plans and scripts, a project manager should always base himself or herself on company standards.

These are often hidden in inaccessible computer folders. Improving quality of products and projects should rely on standards developed for such and monitored for compliance.

### **Quality Assurance Tasks**

Many companies do not have a Quality Assurance (QA) unit or worse, they refer to Quality Control (QC) units as their QA. In practice, QA and QC are to be separated from each other. Quality Assurance is the Quality Control of “Quality Control”. QA units should be outside the project team. QA units have clear responsibilities. During planning, QA has two major tasks: to verify that test scripts actually do the job and to verify that test plans are valid and robust. During execution, we have one major task: to verify that proper testing is taking place. At all times, the QA is responsible for escalating problems that cannot be resolved using regular project practices.

## **7.0 Human Resources**

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The PMI considers this one of the 10 areas of PM knowledge. Many aspects of managing HR are critical and should be on the PM’s checklist for healthy projects.

### **Roles and Responsibilities**

One of the key grievances in projects is when team members feel that their roles in the project are not clear, or they are overlapping with other roles. Roles are often assigned without clarification of responsibilities. For a healthy project to survive, both roles and responsibilities should be well defined.

### **Team Management Procedures**

Team members rely on consistent approaches and treatment. Projects that are managed without such clear processes will result in unease, conflicts and reduced motivation. Project Managers need to communicate such procedures to their teams and ensure that they are well disseminated and understood. These can be procedures issued by the PM’s themselves or they might be company standards. PM’s should also monitor performance indicators and keep their teams aware of the results.

### **Staff Acquisition Procedures**

Changes to project plans often result in approved acquisition of some staff. This becomes a problem when such procedures are bogged down by administrative hurdles that the PM has no idea were in place. The PM must

have access to such procedures and must plan for them during planning and consider them as risks if they should arise when the project starts.

### **Collaboration Tools**

There are many platforms today that are excellent platforms for staff to collaborate with one another: storing and sharing documents, managing schedules and resources, reviewing standards, managing issues and notifications, communicating with the outside world. Collaboration tools remove the need for centralization. They increase transparency and accountability while avoiding the hoarding of information.

## **8.0 Risk Management**

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### **Risk Analysis Document**

The PMI considers Risk Management as a project management area of its own. It is made up of 6 processes. Risk analysis is no more the practice of “doomsday managers”. The Risk Analysis Document (RAD) results after the application of the first 4 processes in Risk Management (planning, identification, quantitative and qualitative risk analysis). It has an almost standard and simple to produce format. Yet, the actual exercise itself is often shunted or worse still, smoothed (for reasons such as avoiding blame of others, being stamped as “pessimist” or “unsure” or simply to avoid additional reparative costs up front).

### **Risk Response Plan**

The 5th PMI process requires the PM to provide responses to the events that cause a project to have a high exposure to damage. There are different types of responses (avoid, transfer, mitigate or accept risks). PM's might be pessimists or optimists which will affect the results of risk responses. Being too careful will cost the company money. Being frivolous with risks will do the same. Finding the optimal point is critical. This is the first double edged sword you will meet in a project. There are is one more under Communications.

### **Risk Monitoring and Control**

Many Risk Analysis Documents (RAD's) are included in a project plan because someone or the tender documents requested. What happens to a project as it progresses (or doesn't) will affect the RAD and prompt the PM to revise the risk analysis. Monitoring risks on a regular basis is crucial as risks get retired, modified or when new risks are identified.

## 9.0 Communications Management

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### Communications Plan

Many projects swim in a sea of communications that results in the double edged sword case I mentioned for risk management. Too little communication and the project will swing off track. Too much communication will burden the team and cause them to be careless about information. A communications plan should be setup for each party at the beginning of the project (team, management, clients, suppliers, etc.) It should also be monitored. (How many times do we agree on having a monthly progress meeting only to find the teams slipping and ignoring such meetings?).

## 10.0 Procurement Management

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This is one area in the PMI which is project-size and company dependent. It is critical in public sector projects because procurement procedures are more constrained in such organizations. Therefore, these items apply to organizations that have a more than “regular” level of procurement procedures.

### Knowledge of Procurement Procedures

If there are procurement procedures, the PM should know about them. It does not help in the middle of a 5 month project to find out that you need 6-8 to acquire a specific equipment because 3 quotations are required and reasonable bidding and evaluation periods. Though not much can usually be done to improve such cycles, but it is of benefit to either include them in the schedule or to consider them in the Risk Analysis Document.

### Tendering / Bidding Procedures

Opposite to purchasing for the company are cases where a project is setup to respond to tenders. Such situations are when the PM is assigned to a project way after it was bid for and will hence have no say in its parameters. The PM should be fully aware of the way and the project was bid for and must question any anomalies in the project assigned to him or her that result from such procedures.

### Contract Management

Project Managers are not lawyers nor administrators. They often collide with these when disputes develop in a project because of contractual issues with clients or with suppliers. PM's should be aware of contractual standards and

requirements. They should have direct and quick access to those managing such contracts. It is a pre-requisite for a healthy project for the PM to be conversant in the field of contract management to avoid such disputes.

### **Vendor Related Processes**

Large organizations will often have procedures to select sources, evaluate vendors and products before contracting. The PM should be aware of these as these often consume time and will disrupt schedules and results.

## **11.0 Stakeholder Management**

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Recently, in PMBOK 5, the PMI added a 10th area of PM knowledge called Stakeholder Management. Stakeholders are the only parties responsible for expressing “what” is required from a project. Later designs will then specify “how” these will be delivered. There is an overlap between this area of knowledge and Scope Management. The reason is that Scope and Stakeholder Management both address the issue of requirements analysis. Let us agree on relegating the analysis of requirements to Scope Management while this process is responsible for “dealing” with stakeholders.

### **Stakeholders List**

This is a document that should be fully detailed at the beginning of the project and updated as and when new stakeholders are identified or earlier stakeholders change role or stop becoming stakeholders. Without this list, scope management cannot be achieved since scope management starts with the identification of stakeholder requirements. Stakeholders are unforgiving about being forgotten.

### **Stakeholder Awareness and Buy-in**

Are the stakeholders aware of the ins and outs of the project (or what really concerns them)? Are they “bought” into the project? Without such buy-in, the PM will face changes of mind, slow approvals and even rejections.

### **Communications with Stakeholders**

Many a PM stayed up all night when a stakeholder blocked progress in the project because that stakeholder was not kept “happy” by being informed. Often, not getting asked what they required and or reducing the communication levels with them leads to the estrangement of stakeholders by the PM. Stakeholders when well treated will be around to lift you up when your project falls down.