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Brains for Hire / Blame for Hire –

The Life and Challenges of a Consulting Project Manager

GIAC (GCPM) Gold Certification

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Abstract

Project management courses and methodologies tend to concentrate on Project Managers dealing with a single project, with one budget and one set of financials. However, when consulting, this is rarely the case – consultants frequently deal with multiple projects, for multiple customers, each with different budgets, priorities, and goals. Consultants must weigh the time demands of multiple projects and fit them all into a single 8 hour day / 40 hour (or often more) week. Consultants also need to consider their own finances, ensuring that they do not over-commit their own personal or corporate resources on any one project, rendering it unprofitable.

Consultants will find that the projects they are offered will be the highest risk, the most unwinnable project imaginable, and they simply need to somehow make them succeed. On the other hand, consultants in project management often enjoy a level of credibility with upper management within the client organization that internal Project Manager may not have.

In this paper we'll discuss aspects of the Project Management Body of Knowledge (PMBOK), and how it can be modified to deliver projects under the unique pressures of a Consulting Project Manager

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1 Introduction

This paper explores many aspects of project management that are unique to consulting, and consulting Project Managers in particular. Discussions will include how consultants managing projects face different challenges than those in the "normal" in-house project management situation. We'll explore some of the ways to maximize the chances of project success when consulting. We'll also discuss how the Process Groups defined within Project Management Body of Knowledge (PMBOK) can be combined, modified, or sometimes outright skipped, under the unique pressures of the consulting situation.

2 Why do Organizations Hire Consultants

An organization might hire a consultant or a consultant team for many different reasons:

- There may be a perceived lack of expertise inside the organization for that task or area. For instance, the customer might feel confident in operating an Intrusion Prevention solution, but may not feel confident enough in their skills to design or implement such a solution.
- Special expertise on the part of the consultant may be a factor, often coupled with an opportunity to educate the internal team as part of the project budget. For example, an organization might have a particularly good reputation in penetration testing. Engaging an external consultant for a project ensures that the best possible skills are brought to bear on the task, and if the client shadows the consultant, this affords an opportunity to see specialized tools and expertise applied to the client's business problem. This approach also provides an excellent opportunity to members of the client's internal team.
- The client may have a lack of time or resources to deliver the project within the required timeframe. In many cases, the client has the skills in-house, but their team might already be committed to other projects or operational tasks.

Consultants filling a Project Management role can find themselves helping in any one of these three situations. They might be there to manage a large project in a team setting, or they might be simply filling a set of technical requirements, and are managing only themselves or a very small team.

In many organizations, the IT department is perceived as a straight-up cost center, so the head count within that department is under continual downward pressure. Over time, this means that many IT departments consist of management, helpdesk personnel, and "project people" who are technical enough to understand and oversee the definition of projects for

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RFPs, but do not have either the skills or the time to actually deliver them. New systems components in situations like this are often delivered exclusively by consultants. These new systems components might fall under the IT budget, or they might be under the budget of other production departments within the organization. Since the client typically does not have formal Project Managers in-house, managing these projects is frequently the responsibility of the consultant as well.

This means that consultants who are called upon to deliver projects not only have to possess the technical skills required for task delivery, but also need good project management skills to ensure that project tasks are delivered on time and on budget, to the mutual benefit of both the client organization and the consulting organization.

3 Why Every Consultant Needs to be a Project Manager

Even when they are not a Project Manager of the overall project, consultants need to be Project Managers for their own set of tasks within the project, the tasks that fall within their scope and statement of work. These tasks are then typically rolled up into the larger project, which is managed by the overall Project Manager.

The "Project Management" budget line item is almost always the first one discounted or cut altogether when consulting projects are under competitive pressure. In situations like this, the people in technical delivery tasks are expected to have a set of project management skills sufficient to carry them to a successful project completion.

4 Multiple Projects, Multiple Financials

When managing a project, the consultant is engaged to monitor the project schedule and project financials. It is the consultant's job to ensure that, at any given point in the project, the client has an accurate, and hopefully positive, picture of the current project schedule and financial situation.

Especially in larger projects, calculations such as Earned Value, Cost Performance Index, Schedule Variance, etc. certainly are necessary for the Project Manager to maintain a clear view of the project; but they usually aren't appropriate in project status communications with the client. Simpler methods of describing project schedule are generally preferred, for instance, graphics or Gantt charts can be very effective for this purpose.

However, the Project Manager must also step back from the project, and maintain a clear view of the consulting organization's finances as well. It is critical for ongoing success in business, and in fact their continued availability for the project at hand, that the consulting practice remains profitable. This perspective is often lost on the customer, but it is truly in the best interest of the client if the consultant turns a profit. If the consultant is losing

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money on an engagement, the work will be rushed, quality of the work will suffer, and the client will not realize the full benefit of the project.

Finally, a consultant with the actual job title of "Project Manager" in a consulting organization will often be responsible for the successful delivery of multiple projects. Not only do they need to manage each of these projects, each with its own associated project tasks and financials, but they need to ensure that their own billable time in that project falls within the allotted project management budget. The temptation to "borrow" hours from another project is always there, but it is not a road that should ever be considered. From an ethical perspective, this is billing a project for work being done on another project. The project that is being "borrowed" from is actually paying for work that was not received – in effect Peter is buying Paul's lunch. From an operational perspective, each project needs to stand on its own financial feet. Errors in estimating are a big part of the "lessons learned" in every project, and hiding these errors simply means that these errors will not only persist in future engagements, but may become a more pronounced trend.

5 Understanding Truth – Differing Views of Scope, Differing Perceptions of Task Progress over the Life of the Project

The accurate definition of project scope is paramount in every consulting engagement, and is usually defined in a formal "Statement of Work" document. Without a clearly defined scope, consultants may find themselves doing work their client didn't intend them to do, or doing the required work, but taking longer than the client may have (rightly or wrongly) budgeted for. The danger in this situation is that if a client is invoiced without a clear understanding of what was to be done, and what was accomplished, receiving payment for the work done can be a real problem.

So, with scope definition established as important, what challenges are commonly dealt with when defining scope?

In too many cases, the customer wants "it." Getting them to define what "it" is can be a challenge, and "it" may change from day to day. Diagrams can help in resolving this issue, and past experience in other projects can help in posing solutions using phrases like "this is what we've seen with other clients." In the end, the client needs to clearly understand what the work is, how the tasks involved will be completed, and how much it is estimated to cost them. Most importantly, they need to formally agree, with a signature on a final scope statement or statement of work, and another signature when all of the project requirements are met at the close of the project or phase.

Aside from scope, task progress is also frequently viewed with rose-colored glasses. For instance, application development projects are often rife with project tasks that are "going

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great", or are "90% completed", until the deadline looms and it's found that key tasks are either not close to being finished, or well off the defined path. If a Project Manager is managing a project in which additional technical expertise is needed to interpret or verify task progress, peer review is a powerful tool to keep status updates from team members realistic. Peer review is also an important tool in ensuring quality in many types of projects, and is extremely valuable in ensuring that similar projects have a consistent implementation. Peer review lends itself to creating configuration and delivery templates for almost any repeatable process. Especially in technical consulting, delivering technical solutions in a consistent manner using templates not only ensures consistent quality, it also reduces implementation costs considerably.

6 Scope

6.1 Scope in Large Projects - The Importance of Subprojects

If project phases last too long, it is easy for operational tasks within that business area to become part of the project.

For instance, in a large network project, a Firewall / IPS (Intrusion Prevention System) project phase might be separated out as a subproject. If this is not done, every website that is blocked by content control and every internet problem now becomes the Project Manager's problem until the entire project is complete. The customer's helpdesk might refuse to touch any gear or function that has not been "turned over."

For this reason, going through a full Closing Phase for each subproject or logical project segment is key. As work is completed, full documentation should be turned over to the client, and sign-off from the client, and especially sign-off from any affected helpdesk or support group, should be obtained. Any required formal or informal training should be completed as part of the Closing Phase to ensure that operational support does not creep back into the lives of people delivering project tasks, impacting their time on future project phases to the point that committed delivery dates suffer.

In addition, defining a scope, project plan, and resources for each project segment ensures that each subproject stands on its own feet both financially and schedule-wise. If a subproject is running behind schedule or over budget, while scheduling aspects might impact other project segments, but isolating the financial impacts becomes simpler. This is especially true if the consultant or team delivering the subproject estimated the time and budget for that phase in the first place. It becomes much simpler in this case to control each subproject, isolating its costs to its own separate budget, and holding it to its own project schedule. This can be carried to the point of forcing consultants to work for a reduced rate

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to keep their subproject on budget, with the goal of avoiding the temptation to "steal" budget from future project phases.

6.2 Scope and Methodology for Small Projects

Smaller projects are all about maximizing effort on the direct project deliverables and minimizing overhead costs. Project Management on a small project (less than $20,000) is very likely limited to a single Gantt chart, with no baselines or updates, with simple emails for status updates. Investing significant time into a formal methodology is simply not in the cards for smaller projects.

However, this does not mean that the PMBOK (Project Management Body of Knowledge) methodology is somehow bypassed or ignored. Identifying and managing stakeholders, risk, budget, and time are just as important in a small project as in a large one. In fact, since smaller projects generally have smaller absolute profit and generally have smaller contingencies, these are perhaps even more important. However, the time and budget in a small project simply aren't available to implement the full methodology in a formal way.

How much can the PMBOK methodology be bent in a small project? This is discussed in more detail later in this paper. Remember that in smaller projects, the goal is to keep the overhead of Project Management to a small percentage of the overall project cost.

6.3 Scope Creep and "Wishes"

It is not unusual to uncover new requirements in the course of project delivery; in fact, this can almost always be expected to occur. What is important is that these changes be managed in the context of scope and cost – project change control typically addresses change by adjusting scope, either by adjusting the timeline or the project costs. If both project schedule and costs are fixed, it is important that a firm line be drawn to ensure that new requirements, no matter how important, are not added to the current project.

Another common occurrence is that clients will sometimes discuss requirements that might be related to the project, but are not (yet) in scope. This might happen in casual conversation, or in an email where other items might be discussed, and is just a normal part of communication. However, if this happens without a "wait a minute, that's not in our current scope" response, it is very easy to see these "wishues" (wishes + issues) become tacitly added as project tasks.

When these situations arise, it is best to deal with them by either recording them as input for the scope of subsequent projects or project phases, or as formal change requests to the scope of the existing project. Adjusting scope with appropriate changes to the schedule or cost structure is a normal part of project management. Adjusting scope without these changes is a classic definition of scope creep.

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In consulting engagements, especially when delivering on RFP based projects, scope may not be negotiable. In these situations, change requests might require the client to request additional funding via purchase orders, or even worse, might be subject to another competitive RFP process. In circumstances like this, it might be best to keep these changes as input to subsequent project definitions – an informal "wishues register."

6.4 Change Control

In Request for Proposal (RFP) situations, activities governed by change control may be at a different billable rate, and under a different account code than the overall project. RFP responses are often quoted at a lower than normal hourly rate, and changes to the project may be delivered at standard hourly rates.

While change control requests and change control forms are often done in ad-hoc fashion, the same care on scope should be taken on change requests as on the original scope. Any task descriptions, including change requests, are subject to scope creep, in exactly the same way as the larger project scope.

Similarly, it is common to see that project change requests have a client sponsor and often a smaller "mini project plan" to ensure that change requests are under the same level of control as the larger project.

Proper handling of change requests and project change control should be defined in the Statement of Work.

If a change is approved and is deemed part of the current project, it will almost always affect the schedule and budget, and likely will also impact the critical path of the project. It's important to continually update the schedule and financial calculations as changes are approved.

6.5 "While You Are Here"

"While you are here" is something that every consultant hears often. The size of the "while you are here" task might cover almost anything. Several scenarios and recommended outcomes are summarized below:

Scenario	Recommended Outcomes
A short question and answer, opinion or discussion	If it really is quick, it's an easy decision – take care of the issue and get back to the project and tasks at hand.
A lengthier design discussion, or discussion about future work but not related to the project	If it's a discussion unrelated to the project, but is planning or discussing some future project, then it's also an easy decision – it's presales activity, and is also something that needs to be handled, as non-billable

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	time.
A system outage or other troubleshooting that the client needs recovery assistance with	If the consultant has the expertise to be of assistance, it should almost always offer to help if the client needs it. Consultants have the unique privilege of seeing a wide variety of systems broken in almost every way imaginable. During a system outage, it's likely that the consultant on site will have a lead role in the recovery process. Just be sure that the client knows that the consulting costs involved with resolution are not related to or covered by the project budget. If the client has the situation in hand and does not need assistance, then it is generally best to stay out of their way and not offer opinions from the sidelines. It may be best to work offsite for the day.
Some other task, unrelated to the project	Similarly, it is generally best to offer to help, but be sure that the client knows that helping out in this matter is not covered by the project budget, and it will need to be billed separately. It's usually best to follow on this discussion with an email to confirm. If the requirement is large enough, it may require a Letter of Engagement or Statement of Work of its own.
Tasks related to the project that were missed in the original scope definition	This falls squarely into Change Control territory. In most cases, the consultant should fully describe the activity, associated costs and time estimates, and obtain a signature from the client to authorize the project change. Because this results in changes to the original scope definition of the project, multiple signatures may be required for this. After the change is approved, updates will be required for the project plan, budget, work breakdown structure, risk register, and any other project documents that are affected by the change. All calculations involving the schedule or financials should also be re-run to determine the new status of the project.
Tasks related to the project that are in the original scope, but are not in the project plan	Again, this is governed by Change Control. A completed change control form and signature are required to proceed. Scope is not being modified, the project plan still needs to be updated, as does the work breakdown structure, risk register, and any other

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	affected project documents and calculations.

In dealing with tasks outside of the project, keep track of the impact of the "while you are here" tasks on the project schedule. If the project deadline is going to be impacted, be sure that the client is aware of this impact in addition to the financial one, and that the schedule change is confirmed in writing (an email generally works nicely for this situation). If project deadlines are critical, additional people may need to be brought in to help with the problem – either a team member who isn't on the project's critical path, or an additional consultant with the expertise to assist, but no project responsibilities.

6.6 Salesperson Control

A facet of project management that is very different when consulting is interfacing with salespeople. Salespeople often have different motivations than either the client or the consultants involved in delivering the solution. In a perfect world, people in sales would be focused entirely on solving the business problem for the client, and in many cases that's exactly how they approach the relationship.

However, in some cases the motivations of profit margin and commission can come to the fore. While it's not common, some less-than-savory things can occur in the path between the first handshake and the close of the project. Some situations described below are suitable for mature audiences only!

The easiest sales tactic in the playbook, and one that has been used from time immemorial, is to compete solely on price. When the discounted prices on hardware and software are not enough to win a deal, service pricing is the next target (or sometimes the first target). When a salesperson has "win the business" tunnel vision, it's all too common to see hardware and software sold at close to break even, and services discounted to below cost, such that the entire customer solution is offered at a net loss. Oddly though, the further down this road a salesperson travels, the harder it is to convince them that it is better to simply "walk away" and let a competitor take the loss that the project now represents.

It's been known to happen that salespeople will change statements of work or agreed upon services rates without permission, even modifying engagement documents after they are finalized but before the client receives them.

Both of these situations are very rare, but if they occur, they should be dealt with as quickly as possible to keep any damage internal to the consulting organization. It is the height of bad taste for a client to see disagreements about finances that should be kept internal to the consulting company. More commonly, salespeople are simply overzealous.

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Internally to the consulting organization, sometimes project delivery will be discounted while still keeping profits on the hardware at a high level, but it's important, at least in the initial stages, that both the hardware and services components have a similar profit picture of any project. This can often be done by "transferring margin" between the two components at the outset of the project.

Salespeople will often want to stay involved in the engagement after the project starts, which is commendable, as long as they are not allowed to promote themselves into a competing Project Manager or formal stakeholder. While salespeople sometimes are stakeholders, they're definitely on the other side of the line that divides the vendor from the client; they're stakeholders in the vendor's version of the project, not the client's version.

Salespeople might make commitments after the scope is final - "selling after the close" is the classic phrase that describes this. After the project scope is defined, be sure that the salesperson is not having additional meetings, selling new features and tasks without the notifying the Project Manager.

Be sure that the salespeople on the team are knowledgeable enough about the project that they don't add words like "stateful" or "intrusion prevention" or "penetration test" or "compliant", when they either don't apply to the project, or worse yet, add to the scope of the agreed upon work. From the customer's perspective, both the salesperson and the Project Manager are on the same team, so from their viewpoint, commitments from either carry the same weight.

From a different point of view, one thing that must never be forgotten is that as a Consultant/Project Manager, the salespeople within the consulting organization are without question your best customers. As much as technical people have had issues with salespeople since the first hard disk spun up (and vice versa), without salespeople, Project Managers and technical people would simply not have new projects. While salespeople may not know everything about the projects that in progress, without salespeople, the next project might not be as easy to come by.

7 Time is Fleeting

Time in a project is a resource that, once spent, cannot be recovered. Not everyone views time in the same way, however. Depending on the consultant's role in or relationship to a project, the perception of time may vary considerably.

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7.1 For a Project Manager, Time is Money, and Time is Time

The Project Manager will view time in terms of both project schedule and cost. Every hour spent on non-productive tasks is time that can't be recovered – either that time costs money with no benefit, or, if it involves people or resources required for critical path activities, it adds an hour directly to the project duration. In a consulting situation, adding to the duration of a project will obviously reflect directly on project *cost*, though not always on project *price*. Not only is the time billable, with a per-hour cost associated with it, but time that exceeds the agreed upon project schedule often cannot be invoiced. In addition, missing project deadlines can result in additional penalties. Time, cost and quality are the three critical facets of every project: all are important, and each is in tension with the other two, with decisions favoring one taking away from the others.

7.2 Value the Time of Other Consultants on Your Team

Other consultants on the project will view time in much the same way the Project Manager views it, but often in more pragmatic terms. For instance, time spent at a meeting or on a conference call might directly affect current tasks, for instance, tasks that the consultant might have targeted to complete that day. It's important to value the time of consultants involved in direct delivery of tasks in a project. Key things to remember:

Don't involve consultants in meetings that they do not need to attend. If they can give their input in advance, often the Project Manager can attend on their behalf.

Be considerate of other consultants' time when booking meetings. If a meeting is being booked at a customer site when they are working at another location, consider travel time. From a consultant's point of view, there is almost nothing more wasteful than a mid-day meeting. An 11am meeting for instance means that they need to be in the car by 10, which means that no meaningful work will happen that morning. If the meeting ends at noon, they cannot start anywhere else until 1pm. Unless there is a nearby client who needs 4 hours of time on that particular day, a mid-day meeting can cost a consultant an entire day's worth of billable time.

The only thing more wasteful than a mid-day meeting would be a meeting that involves lunch at a restaurant. Lunch meetings have many problems from a project perspective; notes are never taken, technical details are rarely discussed, and technical decisions are tough to arrive at because it's never clear if everyone has the same understanding of the final idea. Lunch meetings are important to salespeople, they're wonderful for building relationships, and good ways to celebrate a sale or agreement. Lunch meetings are not, however, good venues for technical or project discussions with clear decision requirements.

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7.3 Value Your Customer's Time

Consider the customer's time when booking meetings. Obtain a general understanding of the customer's requirement and "appetite" for meetings early in the project. Quite often the reason a consultant is engaged to manage a project is because the customer simply don't have the time to do it themselves. This might mean that the client does not have time for a lot of meetings. In this case, regular meetings at fixed times should be booked, with agendas established ahead of time in order to keep the client apprised of project status, and to obtain any required decision inputs from the customer in the minimum amount of time. There are risks in an approach that minimizes meeting times. For instance, if the status meetings are weekly, there is a whole week where one single misunderstood decision could take the project well off course.

At the other extreme, the client might wish to have daily meetings, interspersed with multiple conference calls per day. Even simple decisions might require consensus and agreement from others in the corporation only tenuously connected to the project or the issue being discussed. The client may book meetings with others who do not view the meeting as important; frequently these other people simply might not attend. All of these factors add up to lots of time, time that the Project Manager might not have budgeted for - Consulting Project Managers might also be managing other projects, or might be involved in direct delivery of project tasks. If you find yourself in this position and have not accounted for it when estimating project costs, the situation needs to be discussed with the client as early as possible in the project, before it unduly affects costs. The choices in dealing with this are as follows:

- The time spent in meetings can be aligned more closely with what was estimated when scoping the project,
- The client can agree to adjust the project costs, based on the client's requirement for increased communication and meetings, or
- The Project Manager can agree to keep the project costs the same, and continue to meet and communicate at the level the client expects.

Obviously, the first two make financial sense to all parties, while the third option is skewed in the client's favor, and effectively has the Project Manager working for a much reduced rate. Needless to say, the third option is by far the most common.

It is easy to under-estimate the time required for meetings, especially if it is a first project with that particular client. Coupled with that, it is very difficult to adjust the cost based on meetings – from the client's perspective, while meetings are essential, the time spent in any particular meeting is not associated with any critical project task, so it is easy to undervalue.

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8 In Project Management, Communication is Everything

In project management, communication really is everything. The common wisdom is that 90% of a Project Manager's job is communication, and, in this case, the common wisdom is absolutely right. It is the Project Manager's job to answer the phone, to read email, and reply promptly. It's the Project Manager's job to be at that 4:30 pm meeting, and also at the 8:00 am meeting. Whatever method the client wants to communicate, it's the Project Manager's job to use that method. If the client doesn't have good communications processes, it's up to the Project Manager to suggest better ways of communicating.

Without good communication, the client has no way of knowing when the project is running behind, or if there is confusion on a task outcome or requirement. More importantly, they have no way of knowing how well the project is going, or how the innovative, ground-breaking approach to solving a project problem is going to make the final solution so much better!

9 The Importance of Honesty and the Place of Trust in Projects

9.1 Honesty and Trust with other Contractors

This relationship is often missed in large projects. For instance, in a Datacenter build project, a Project Manager might be working with electrical contractors, HVAC (Heating, Ventilation, Air Conditioning) companies, traditional concrete and drywall contractors, a whole gamut of contractors, all with different areas of expertise, working for different companies, each with their own Project Managers.

In this situation, the Project Manager is in the position of trusting the expertise of the other contractors as well as trusting their projected dates of completion.

The overall Project Manager in this datacenter example has the leverage of contracts, payments, and penalties to hold contractors accountable to the cost and schedule estimates.

However, managers of subcontractors do not have this advantage. For example, if the project component is to deliver the network and server infrastructure, or the logistics of moving existing gear into the new Datacenter when it is complete, things are more difficult. In cases like this, the Project Manager is often at the mercy of schedule changes due to delays in other phases by entirely different companies. It's important to keep tabs on the progress of other project phases – again, we see that communication plays a major role even in managing phases within a larger project. If it looks like the subproject will be affected by a delay in some other project phase, the best approach is to keep some "discretionary" work to fill in time caused by such delays. "Discretionary" in this case

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means necessary, but not time critical work. In the best case, these are tasks that are in the same project but off the critical path, but these can also be other (non project) tasks for the same client, or work for some other client entirely. The important thing is that they are non-critical tasks that can be left in mid-task when the main project is back to an active state.

Working with multiple teams in a project opens entirely new avenues for conflict. In situations like this, it is almost always best to take the high road, as long as the project schedule and bottom line can survive taking that road. Even if it will affect the schedule or budget, over the long-term personal and corporate reputation are almost always worth more than short-term revenue.

For example, in a recent datacenter build, the site electrician had the client convinced that the new UPS units in the server racks would adversely affect the phase angle for the entire building. Since we had an electrical engineer on our team, we were able to "speak the language" and work out with the electrician that the effect on phase angle would be no different than any other single phase device. The electrician then brought up the risk of power feedback and fire, which really had us scratching our heads. Eventually we realized he was describing what would happen if we constructed a male-to-male electrical cable (this would be illegal) and plugged the UPS output into a standard wall plug. At this point we realized what was happening - the electrician was attempting to scare the client into purchasing a room UPS with as much jargon as he could muster. We also realized at that time that we were just not going to keep the client's respect or our own self-respect in a game of mud slinging on this topic, and our best path was to simply ensure that our opinion was noted by the client, then withdraw from the conversation and leave the decision to the client and the "subject matter expert" (the electrician). Since we had originally recommended such a unit, the outcome was clearly to the client's benefit.

This illustrates that when one person or team isn't being honest in their dealings with the client, it can adversely affect other teams and the overall project. In this example we got lucky in that the client's best interest was served, though lots of bruised egos were left in the path of the decision; and no one on our team was left feeling great about how we arrived there from an ethical point of view. If faced with a player who isn't being honest in their dealings, the best option is to move the conversation back on the "right side of the line", so to speak, in any way possible. If this doesn't end up being possible, the next best choice is to simply disengage from the conversation. In some cases, this can simply mean "retiring to your corner" of the project and only dealing with the other party when absolutely necessary.

In extreme cases the only option might be to have a heart-to-heart conversation with the client, and tell them that you simply cannot continue with the project. You have to mean it

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when you say it, and be completely clear about why you cannot continue. This conversation will often ring enough alarm bells with the client that a better way to resolve the situation will be found. Even if it is decided that you and your client should negotiate an end to the current project involvement, you won't be faced with even uglier situations further on. And one thing is certain, once you are in this position, if the other party can't be steered towards more honest dealings, it only gets uglier.

9.2 Honesty and Trust with Your Own Team

As a Project Manager, you are responsible for the timelines and budgets in a project. The easiest way to be honest with the team on both of these fronts is to have them define the details and durations of their own activities when the project is being planned. If there is a formal work breakdown structure created, especially if a full task decomposition is done, is critical to involve as many of the people that have targeted for the project team as possible. Not only will they have input into the timelines, but since the task estimates are theirs, there is an implied commitment that they are capable of completing each task within the estimated time. If the project team cannot be defined that early in the process, try to involve experts who have done similar work in the past. There is reciprocity in this situation - the trust placed in their estimates requires that they be honest in their estimates, and the accurate estimates they provide to the you (the project manager) will allow you to be honest in your project estimates and management.

During the project execution phase, honesty with team members about their compliance with the time, cost, and quality requirements is important for several reasons:

- From a project perspective, timely feedback of this type allows team members to change their behavior to match the aims of the project. If they're running late on tasks, or are missing quality goals, giving them a nudge early in the problem gives them a chance to get back on schedule or improve quality. Also from a project point of view, if this can't happen, it gives the Project Manager a chance to assign additional resources to the affected tasks, thus helping teammates meet the project goals, albeit at a higher cost which needs to be dealt with separately.
- If they're on your team, chances are that you have an ongoing relationship with them across multiple projects. If the tasks they are committed to are beyond their current capabilities, identifying this issue early allows you to adjust the tasks they are assigned to better match their abilities. A better approach, and a more likely one in a consulting situation, is that additional training can be arranged to match their abilities to their tasks. If neither solution is possible, then replacing a person with someone better suited is the final, and normally worst-case, solution. Replacing a key project member in mid-project usually involves bringing someone new into the project team. New players in this situation can rarely hit the ground running – not

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only do they need to get their bearings within the project, but replacing a team member in mid-project pushes the entire project team back into the "Forming" stage of the Tuckman model, reducing the effectiveness of the entire team. Finally, replacing a project team member in mid-project often means engaging consultants from outside your organization, usually at higher cost to the project.

During the project, the Project Manager has several responsibilities in the area of Trust and Honesty. It's the Project Manager's job to hold the individual team members accountable to their original estimate. It's also the Project Manager's job to be forthcoming with the original team members if the project situation has changed. For instance, if scope has changed but the budget and schedule have not changed (as sometimes happens), it's up to the Project Manager to break the news to the team members affected, make it work for them personally, financially and fairly, and somehow still "deliver the goods" for the client. To paraphrase Kermit the Frog – "It ain't easy being a Project Manager."

9.3 Honesty with Your Client

Honesty with your client, especially once project execution begins, generally revolves around one of 3 issues – errors in scope, which includes errors in the original estimates of time and money; errors in the technical capabilities of the solution being delivered; or mistakes in implementation. In each and every case, it is always best to own up to errors of this type, as soon as they are realized. Let's explore each of these situations in turn:

Errors in scope includes errors in the original scope document, scheduling errors in the original project plan, tasks that might have been mistakenly left out of the project, or almost anything that affects the time and money aspects of the project. Errors of this type are a common occurrence in any large project, but can be magnified in a smaller project. For instance, consider a 4 hour error in a 2 day project or a 20 day project. The same error in absolute hours has a much higher impact on the smaller project. In larger projects, often these errors can be corrected by taking either time or money out of contingency allowances within the project - either borrowing time from "insurance days" that are in the project to account for just this occurrence, or using part of the management reserve that is allocated to the project (budget that is included as a contingency). However, even if the error is corrected by using contingency reserves (in either time or budget), errors of this type should be discussed with the client as soon as possible. It may be that the client might have an alternate solution to the problem. For instance, if an error puts the project over budget, the client might volunteer to take on one or more project tasks, removing the associated costs and bringing the budget back in line. Or, if the error puts the project behind schedule, the client might allow some project tasks to be accelerated, perhaps allowing some tasks to use an accelerated change control procedure for instance, or otherwise negotiate within the company to see tasks done more quickly than normal to keep the project on schedule.

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In a smaller project, the client might consider that it was just an honest mistake, and allow the additional time or expense into the project plan. In some consulting organizations, Statements of Work often account for errors of this type by specifying that all time estimates are in fact estimates; but organizations that try to slide errors into defined project plans this way typically find that this practice is not well received.

Errors in technical product capabilities are common if the project is using new technology or a product that the consultant is not familiar with. For instance, when implementing a firewall from vendor X, a VPN feature might be assumed, because the comparable product from vendor Y has that feature, and the previous version of vendor X's product had it. In networking projects, an appliance feature might be assumed to be there, but might require an additional license or more functional firmware image, which might cost more money. If the error ends up affecting a technical feature that is a business requirement, or is a requirement stated in the project definition, there generally is not a graceful way out of this situation. Resolving this situation generally comes down to one of three choices:

1. Negotiate to reduce the technical deliverables of the project – clients dislike this tremendously. If this path is taken, the client then needs to explain this deficiency to their own client base and management, who probably had to sign off on the project and associated expense.
2. Negotiate with the client to have the client pay the difference in price to purchase the required product or enhancement – this assumes that the product required in fact exists at any cost. This is similarly unpopular, but can sometimes be worked out, especially if the product list was specified by the client originally. Even in that case, however, the client generally expects that you, the consultant, should have seen this error before final costs were agreed upon.
3. Make up the difference in cost within the consulting organization – this is generally called "eating the cost", and is usually a hard sell within the organization. If the cost is not excessive, often this can be worked out within the larger project cost, sometimes moving profit from one product (generally called "margin") to pay for the required parts.

   If the missing product is a firmware or software upgrade, and the partner relationship with the manufacturer is good, and the overall product sale from that manufacturer to this client is large enough, sometimes a reduced price or zero price sale can be worked out on the back end. Note that there are a lot of "ifs" in this situation; it's not something that can normally be taken advantage of. This is almost

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a fairy tale ending, since in this case both the client and the consulting organization emerge financially unscathed from this error.

The worst case solution to this is that the consultant may end up paying the difference entirely out of the consulting hours associated with the project – this is best known as "working for free." Needless to say, this is universally disliked by all consultants, but is often the only way to resolve the problem. Almost everyone in a consulting position has had a project come in at break-even or at a loss due to this exact situation.

No matter the type of error, whose error it is, or the final solution to the error, the only way to arrive at a solution that works for the client, the consultant, and the consulting organization is to bring the error to the client's attention as soon as possible in the project. It's generally advised to do some preparation for such a discussion; if an error of this type crops up, it's generally best to come to the associated meeting with possible solutions, not just the problem itself. Sometimes this might involve some delay as negotiations for money, time or product ensue within the consulting organization; but if this delay becomes unduly long, discuss the issue and the possible answers with the client, being clear that possible solutions are still under discussion or negotiation.

Mistakes in implementation are most popularly known as the "Oh Shoot Second" (paraphrased) – that moment in time immediately after the fateful keystroke, when it's realized, for instance, that the source code under development has just been deleted, and the last backup is seven days old. Very similar to errors in technical product capabilities, it's best to come to the client with a plan to recover from this situation. This is sometimes not possible, since in many cases the client is at your elbow when this happens. No matter the situation, the only way to keep a good relationship with the client and recover the current project is to be honest with them, and own up to the mistake. If you are managing a team, and one of your team members has made such an error, it is most often your unfortunate job to describe the error, and take the ultimate responsibility yourself.

10 Contracts Contracts Contracts

Contracts are in fact very important, but be sure to avoid becoming buried in contract language or to unduly involve legal counsel. If left to their own devices, it's not uncommon for lawyers on both sides of an engagement to spend more time going back-and-forth on the exact wording of a contract than the duration of the project work itself.

Liability seems to be a hot topic these days. Client contract wording often indicates unlimited liability, with the final value to be determined by the client. In contrast, consultant contract templates will normally define liability limits within the boundaries of

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their liability insurance. The wording around liability in particular can consume large amounts of billable time, unfortunately all for legal people.

It's important to keep track of the overall legal costs, as well as the time spent away from billable consulting activity, when negotiating contracts. If the time and dollars become appreciable, the decision should be made to either somehow include these costs in the engagement price calculations (i.e. raise the price), or to simply walk away – in short, "fish or cut bait."

11 RFP and Bid Responses

11.1 Discounts

It may seem obvious, but the thing to remember in responding to a RFP (Request for Proposal) is that, if the bid is won, the object of the game is to make money at it. It's not in anyone's interest that to see a net loss when delivering services. The consultants lose, especially if they are compensated by billable time rather than activity duration; everyone is incented to do the bare minimum and move on to more profitable work, so the client loses; and obviously the consulting organization loses, since they are working to win work that is less profitable than normal.

However, to win a RFP response, competition is often heavily based on price, especially if the procurement department has a large part in the final decision. If it is a hardware and services engagement, often the hardware sale can be "registered" with the manufacturer to get a cost advantage on that side. This process is time-critical – only the first partner to register with a vendor gets the discount. However, even with that hardware discount advantage, often services will be discounted as well. There is a fine line in this practice – if the hardware is sold at or near cost, and the services are sold at a loss, there is obviously no point in proceeding with a bid or RFP response. It's important to keep these numbers in the in mind, and more importantly in the mind of any salespeople involved, while preparing RFP responses.

It's also important to spend efforts within the organization wisely when responding to RFP's. A critical step before preparing a RFP response is to evaluate the chances for success before even starting. Factors to evaluate that will influence this decision might be (hint - you are looking for a "yes" to each question):

- Has your company delivered similar work before?
- Do you have a prior relationship with the client?
- Is it early enough in the process that you can still register the hardware involved with the manufacturer for a hardware discount?

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- Will the vendor assist you with your response, improving the credibility of your response and reducing the cost of preparing the RFP response?
- Do you have consultants available to deliver the services? Are they available during the project timeline?

Optimally, a "no" answer is preferred for these last two, but a "yes/no" is often the best that can hoped for.

- Is the profit on this engagement enough to "keep the lights on" at your company?
- As the Project Manager, have you identified any risks of magnitude large enough to impact the profit on this project? If so, what likelihood do you place on them occurring?

11.2 Using Consultants in Presales Activity

Similar to legal costs, the use of consulting resources in presales activity is often required. There is just no substitute for a true expert to convince a client that your organization does in fact employ experts who can help them.

However, there are two sides to this coin. The use of consultants in presales activities can become a slippery slope, in that every hour spent in non-billable meetings is, well, an hour spent not billing. Not only that, especially in preparing RFP responses, it's an hour spent not billing and preparing for a project that someone else might win in the end. When engaging a consultant on RFP preparation, be sure that they are working on RFP sections that involve their work, and that they are doing just enough design and activity estimating to accurately estimate the project costs. This also provides them an incentive to do complete and accurate estimates, as they will be held to them during the project. In a perfect world, the design phases defined in the final project plan will account for this time spent, so that if the business is won, the consultant is actually compensated for this time.

Having a billable consultant accompany a salesperson on cold calls, while great for the salesperson, has a very high cost and often a low probability of realizing real consulting work. It is too easy to have presales meetings of this type turn into free design and project planning sessions, where normally billable work is simply given away in hopes of landing a larger engagement. All too often the client thanks you for your efforts, purchases the hardware, then uses the design and project plan to implement on their own.

The use of billable consultants to close a sale is a common practice, but it's important to only use them to actually get final agreements on the design or project specifics for an engagement. In other words, if you bring a consultant to a sales meeting, you should also bring your pen (for final signatures on the statement of work).

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12 Management Loves a Surprise!

Managers seem to love announcing new projects to the company. This may sound a lot like a "Christmas Present Syndrome", but they will often make these announcements without notifying the project principals that there even is a project. Premise moves, mergers and acquisitions, and new business applications are prime examples. To be fair, in the case of mergers or acquisitions, the entire process may be confidential, and the general announcement might be at the earliest possible time in the negotiations. But from an IT perspective, having the CEO "surprise announce" things like a new ERP package, complete with project budget and completion date, is an all-too-often occurrence. It then falls to the Project Manager to craft a project schedule and budget that will fit the "fantasy" completion date and budget, since the CEO's estimates simply cannot be changed without damaging the CEO's credibility.

The traditional wisdom is that if project cost and schedule are fixed, the remaining factor that is left to negotiate with is project quality. However, explaining to a senior manager that they have to sacrifice quality is simply not a position that can be defended.

If faced with such a situation, the budget and schedule are obviously fixed, and sacrificing quality is a definite "don't go there" position. If the budget and/or schedule are not realistic, what can often be done is to negotiate changes to scope. In the case of a premise move, this is obviously an all-or-nothing proposition – all you have to change is the price and the timeline. But in the case of an application deployment project, you might negotiate to deliver the sales portion of an application on the original schedule, perhaps delivering service modules or accounting functions at a later date. Or full deployment could be "negotiated down" to a successful pilot completion by the originally committed date.

Finally, as consultants sometimes have the luxury of telling a client that the project goals simply aren't realistic within the project parameters that are outlined. While it may be difficult to explain to the management and salespeople within a consulting company, everyone involved is really better off to walk away from projects that are destined to fail. Concentrating efforts on projects that can succeed, then seeing them through to success, is the best case scenario for all concerned. This approach builds the credibility of both you as a Project Manager, and your company for delivering successful projects time and time again. The benefit of this approach over time is that if you tell your client that their project is not going to succeed, you have a track record of success to back up your opinion. You also have the credibility to help them revise their scope, timelines, or budget.

13 Management Hates to Make a Decision

After announcing a due date, management will often procrastinate on making critical decisions in the project. As an example, after announcing a premise move, they will

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continue to visit sites and negotiate leases to the point of endangering the entire project, especially if they find that project costs are not in line with their initial (fantasy) estimates. In addition, upper management will blithely assume that delaying their decisions will not affect project dates.

If you find yourself managing a project in this position, it is critical to start notifying management as early as possible in the process that *they* are on the critical path, and set hard dates for them. Be sure that communications of this type are in writing (email messages generally work very well). If you are a consultant, you may have the additional lever of not actually working at the company – you have the option of saying "if you are not serious about meeting project dates, I cannot help you", which is generally not something that internal Project Managers can say to their own upper management.

14 Holding Your Customer Accountable

It is very common that after a meeting or a discussion, some action items will be the responsibility of the client. It's also very common that they won't be acted on. This is often a problem of perception – at a high level, the client may feel that since they have hired a Project Manager, everything is now the Project Manager's responsibility. While this is true at that high level, they are still responsible for many things, in some cases for arranging internal resources or purchase orders, for instance.

Another common perception is "a meeting happened, therefore the problem has been dealt with." This is a common ailment, where the afflicted person sees the meeting itself as the solution, and misses the importance of any tasks he or she may have accrued as part of the meeting. While this may seem like a humorous description, it's a very common situation.

Other common occurrences of this type that are seen by consultants might include the following:

- If the customer needs to sign a document to proceed, he/she simply won't. Either the wording implicates them in assuming risk they don't want to take, or the paper goes to the bottom of the pile simply because other things of higher priority have displaced it.
- If the customer needs to order something, they'll put it out for competitive bids, and then delay on making the final purchasing decision. This may be a situation that cannot be avoided, since it is possible that the order you need placed might be larger than your customer's signing authority. Another common reason for procurement delays is that the delay might be to defer the expense to the next financial period, to improve the corporation's financial statements for the current period. It may also

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be that the project you are working on might not be as blessed as you think it is, and your project budget may not in fact be backed by a corresponding "real" budget.

In these situations, it is important that to impress upon the client that doing nothing is simply not an option. A common response might be to email the client with a "we cannot delay this decision past this date" email, then follow it up to ensure that they respond with an acknowledgement in a reply email. It may be the case that the success of the project has to be put on the line in order to get action from the client, but be sure to only do this when it is absolutely necessary. "Crying wolf" to get action from the client can work when it really needs to, but doing it too frequently will not enhance anyone's reputation. Playing this trump card too often increases the risk that when a signature or other action is really required, the bank of credibility won't be there to get it.

15 Communications

15.1 Communications and Project Autonomy

In any consulting situation, the customer is most likely not dedicated solely to any one project. They may be involved in other IT projects, but might also be more concerned with financial and budget issues, or other matters internal to their company. Issues in your specific project are often by no means the most important thing to your client.

An important parameter to establish early in any project is how much autonomy you have as a Project Manager. In some cases, Project Managers may find that they have a free rein to proceed as they see fit.

In many situations, the client may need to be informed about any changes that will affect production systems. In these circumstances, they may need to go to other departments to get scheduling information. This is important to keep in mind, since it can easily affect project dates. For instance, if a client's IT department has weekly change control meetings, any proposed changes may need to be in their system 4-5 days in advance of the meeting. Failing to comply with internal processes of this type may mean that critical project tasks might simply be delayed a week, until the next meeting.

In other cases, the client may want to be very involved and have a say in many project decisions. This is understandable, since in most cases they project deliverables are being turned over to the client's team as a new system they need to support, with a new set of operational tasks. Establish early in the project if this level of involvement is likely to cause additional delays in completing project tasks. If it appears likely, remember that this is not necessarily a bad thing; it's just something to be factored into your timeline. If you find

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yourself in this position, there are a few possible solutions – adjust timelines, adjust scope, or adjust responsibility.

Adjusting timelines is the obvious solution, but is often the most difficult to achieve. Since adjusting the timelines in consulting engagements means both moving the completion date out and increasing the project costs, it is rarely a viable solution.

Adjusting scope is not usually viable, for the same reason. If the client has you managing a project with a defined set of deliverables, asking them to reduce this list of deliverables is probably not going to go over well.

Adjusting responsibility is another approach, and is often overlooked. If the client wants to be involved, this has the potential to be a huge benefit to all concerned. If they are involved, they will reach the end of the project needing much less training on whatever it is you are delivering, which can actually reduce the costs and times involved in training in those phases of the project. If the client wants to be involved in the technical project tasks, you can sometimes move partial or even full responsibility for some tasks to them. It may not always be possible to give the client 100% responsibility for any given task, but keeping them involved and giving them meaningful work that helps the project along can free up valuable time for billable team members. The trick in this approach is to maintain a balance – you aren't trying to get your client to do your work, you are trying to keep them involved to the extent that they want or need to be, and balance the facets that *cost* you time with the facets that *gain* you time.

15.2 Why Can't my Customer Read?

The customer is much more in tune with how any project is perceived in their company than in the mechanics of how it is being delivered. Aside from outage windows and other impacts to their business, it's likely that the customer is more interested in the non-technical aspects of the project, such as roll-out dates, change control, scheduling education dates and the like, as opposed to who is doing what on any specific day.

Because of this, it is not uncommon that emails or other communications to the client go unanswered. In some cases, this situation is perfectly acceptable, especially if these communications are simple status updates. However, if this is a trend, or if the communications require specific acknowledgement from the customer (for instance, if the communication requested a "yes, we can proceed" type of decision), following email up with a phone call. Asking for an immediate response, in person, is often the only way to deal with this situation. This example is very common, and very nicely illustrates the axiom that "90% of a Project Manager's time is spent on communication."

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15.3 Why Can't my Customer Add?

Again, this stems back to how busy the customer is. They wouldn't have an external Project Manager for their project if they had spare time on their hands.

The customer has time to understand "the project is ahead or behind by x days", or maybe "this phase is delayed by x days", and that's about it. Aside from that, being impressed by project management math skills simply isn't on any customer's list of priorities.

Financial project management calculations also generally do not interest any customer. Earned value analysis, Cost Performance Indices and the like, while extremely valuable to the Project Manager, simply do not concern the customer. Remember that the project sponsor probably didn't go to "PMP school", and probably doesn't want every report being sent to them to require a math lesson to understand. In most cases, the project has a fixed cost, and if it is ahead or behind on dollars, the customer simply does not care – it's the Project Manager's problem to resolve.

16 Cost and Schedule

In shorter projects (fewer than 10 days), it is very common to simply track hours, and ensure that the project is completed on schedule. Since hourly rates are fixed, this ensures that both project cost and project schedule are adequately covered. Projects like this often have a single stakeholder, or a single technical contact who has "sold" the project internally, and interfaces with all stakeholders.

The temptation is to carry this approach to larger projects, including projects with many people delivering tasks. However, the simple "are we on schedule?" approach simply does not work in these larger projects. What happens again and again is that people delivering tasks at the beginning of the project bill the hourly rate determined during the initial project phases. At roughly the 50-75% mark in the project, errors in the original estimates, and/or scope changes without proper change control will become very apparent. To compensate for these errors, the rates for the consultants involved will be dropped precipitously. It's not uncommon to see the people delivering the final project tasks, including knowledge transfer and final documentation, at a zero hourly rate. Final documentation and knowledge transfer are both key deliverables and customer-facing activities, and are often the last large deliverables before the client signs off on project completion. We are in fact giving the people delivering these phases an incentive to short-change these tasks, giving the customer a sub-standard deliverable. This can dramatically affect the customer's overall satisfaction with the project and can also impact the final project signoffs.

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A common way to avoid this "continually decreasing hourly rate" situation is to break the large project into smaller subprojects or phases. Each subproject is allocated its own budget, and any overages at any of the stages are borne by the people delivering that phase. Each subproject has its own project metrics to live up to, and the overall project numbers are more easily maintained as a result. This ensures that even the people in the final phases of the project have a reasonable budget to complete their tasks. At the end of the overall project, any surplus can then be allocated back to any phases that missed their mark. Normally overages of this type are first allocated to resources that were saddled with delivering out of scope tasks on their in-scope budgets. Schedule or budget overages due to low estimates on task durations or poor quality requiring rework are properly chalked up to the "lessons learned" category, where the lesson is that hopefully more accurate estimates and better quality will be seen in future projects.

As project size increases, it becomes more and more important to follow more of the PMBOK methodology, especially in the Monitoring and Controlling Knowledge Area. Financial calculations such as Earned Value, Cost Performance Index and Schedule Performance Index become more important as project size grows.

17 Risk Management

Risks that can affect the project are very important to track. For every risk, the Project Manager needs to assess a probability and an impact. With that information in hand, the Project manager can decide with the client to assume the risk, mitigate the risk, or transfer the risk.

Assuming the risk means that no action is taken to mitigate the risk, and if the event occurs, you "take the hit." Common examples of this might be the risk of hurricane or flooding – if the customer's location is not typically subject to these risks, these risks probably won't be planned for or insured against.

Mitigating the risk means that some action will be taken to lessen the risk, or reduce the impact if the event should occur. For instance, the risk of a consultant leaving the team might be mitigated by cross training another consultant, or involving an extra person in some critical tasks. With these precautions, if someone is pulled from the team unexpectedly, a knowledgeable person is ready to assume that person's tasks.

Transferring a risk is all about insurance. For instance, the risk of fire would certainly be mitigated with fire suppression systems, but would also transferred by purchasing fire insurance. In consulting, it's common to purchase liability insurance, and in fact it is often required to have such insurance to a defined level as part of any contract with many clients. On the face of things, subcontracting tasks of higher risk may seem to transfer risk to the

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subcontractor, but remember that as the Project Manager, you typically remain responsible for the task outcome and the success of the entire project. So subcontracting may in fact *increase* your risk, rather than transfer or reduce it.

In all cases, be sure to separate risks that are project risks to the customer from project risks to the consultant. For instance, risks that might involve delays in project tasks or reduction of quality in the deliverables are project risks that affect the project overall, so decisions around disposition of these risks should be shared with the client, especially if they involve additional costs. Risks on the consultant's side of the fence might include the risk that a key team member might be lost to another customer's project, or that key people in the project might be hired away entirely. Risks around customer payment also fall into this category. Risks of this type are the Project Manager's to deal with, not the customer's. Because of this dichotomy, it's common to keep two sets of risk registers for some projects.

It is critical to involve the client in the process of determining disposition of risk. Simply discussing a situation with them, and getting an informal "oh, that'll never happen" is not enough. Keeping a log of emails is a common practice, tracking written requests for confirmation of any decision to get a "yes" or a "that isn't what I meant, exactly." This is important to protect everyone's interests in these matters. Since mitigating or transferring risk almost always involves additional cost, the consultant generally needs to obtain authorization from the client before proceeding. However, while simply assuming the risk is free at the outset of a project, remember that every risk has a probability of occurring, and that assumed risks never manifest at convenient times. Get written authorization from the client that they understand any assumed risks and associated impacts, and that they are ok with simply assuming these risks with no actions to mitigate or transfer them. This is important to the Project Manager in the event that the risk should occur and impact the project. It is just as important to the client, for the same reasons, plus they may not have a full understanding of the risks until they see them in writing. Getting acknowledgment from the client in these matters is in fact a way of transferring the risk away from the consulting organization to the customer. This is actually the right thing to do in these cases, since it's the client's project after all, and the final decision regarding how to deal with any specific risk should be theirs.

The Risk Register should be re-assessed periodically throughout the project. During any assessment of the risk register, consider if any of the listed risks have passed (and can no longer occur), or if new risks have manifested. If a risk has passed, it can be removed from consideration, and any impacts to the project (for instance, funds or time reserved for mitigation) can be factored back into the larger project plan. If new risks have appeared on the horizon, they should be added to the Risk Register, and disposition of these new risks should be discussed with your client.

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18 The PMBOK (Project Management Body of Knowledge) Framework

The PMBOX Framework identifies a 5x9 matrix of Process Groups and Knowledge Areas, with common tasks at the intersection of each. In shorter projects, especially consulting engagements, it is very common to skip some steps, combine steps, or modify delivery, depending on the situation. The table below shows the table as it is normally portrayed. Even when steps are skipped or combined, it's important that the spirit of each step is respected for quality delivery of the project. We'll discuss each of these steps in some detail.

Knowledge Areas	Process Groups				
	Initiating	**Planning**	**Executing**	**Monitoring & Controlling**	**Closing**
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Execution	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Collect Requirements 5.2 Define Scope 5.3 Create WBS		5.4 Verify Scope 5.5 Control Scope	
6. Project Time Management		6.1 Define Activities 6.2 Sequence Activities 6.3 Estimate Activity Resources 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Estimate Costs 7.2 Determine Budget		7.3 Control Costs	
8. Project Quality Management		8.1 Plan Quality	8.2 Perform Quality Assurance	8.3 Perform Quality Control	
9. Project Human Resource Management		9.1 Develop Human Resource Plan	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management	10.1 Identify Stakeholders	10.2 Plan Communi-cations	10.3 Distribute Information 10.4 Manage Stakeholder Expectations	10.5 Report Performance	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Monitor and Control Risks	
12. Project Procurement		12.1 Plan Procurements	12.2 Conduct Procurements	12.3 Administer Procurements	12.4 Close Procurements

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Management					

(Project Management Institute, 2008)

(4.1) Develop Project Charter

The Project Charter is almost always drafted by the client, or in many cases it is skipped entirely in shorter projects. In these cases, the function of the Charter in steering decisions and defining priorities during the project is usually carried by the Statement of Work. In the case of projects governed by RFPs (Requests for Proposals) or Contracts, the Statement of Work will closely mirror these documents, but in more project specific or technical language.

(5.1) Collect Requirements

(5.2) Define Scope

Requirements and scope very often are defined by the client. If this is the case, collecting this information is generally omitted from the Project Manager's responsibilities. Both the requirements and the scope should, however, be accurately re-stated in the Statement of Work. This ensures that everyone's understanding of the Project Requirements and Scope are the same.

(4.2) Develop Project Management Plan

(5.3) Create WBS (Work Breakdown Structure)

(6.1) Define Activities

(6.2) Sequence Activities

(6.3) Estimate Activity Resources

(6.4) Estimate Activity Durations

(6.5) Develop Schedule

The Project Management Plan, Work Breakdown Structure, and estimation of associated Activities, Resources, and Durations, as well as the development of the resulting Schedule, are often all combined into the creation of a single Gantt chart, which represents all of this information pictorially. This chart may be a combination of Gantts for subprojects, often developed by the project team members responsible for those phases. It might also be developed collaboratively with the other project team members. As a consultant, it's important from a customer perspective that the Project Manager represents the entire project with a minimum number of documents, giving the customer a complete view of the proposed project, and later of project status, with a minimum amount of fuss. Remember

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that in most cases the client has not hired a consultant for their stellar project management skills, but has instead hired you to deliver the project goals on time and on schedule to fill a business requirement. The client is usually much more interested in the technical outcomes of the project tasks than in complex project management specifics.

(7.1) Estimate Costs

(7.2) Determine Budget

Project costs are easily extrapolated from the project plan, by taking the total billable hours and multiplying each team member's hours by their individual billable rate. Project contingencies are most often represented by incorporating them into the schedule as additional "insurance" hours on individual tasks. In larger projects, an additional management contingency may also be defined, which will require sign-offs to draw on. The signatures required to draw on this contingency will depend entirely on how it is represented to the client.

The usual method is to simply include it as a line item, in which case the client needs to sign for it since they are only invoiced for this reserve if it is used.

Less often, this contingency is added to the total project price, so the management contingency is controlled by the management or project team in the *consulting* organization as opposed to the *client* organization. In this case, management within the consulting organization would need to sign for any draws against the contingency. Note, however, that charging a customer for a contingency that is never used borders on being a problem ethically. It is strongly preferred to have the client sign for expenditures of this type.

(4.5) Perform Integrated Change Control

Change control is typically defined in the Statement of Work, and a standard (blank) change control request form is usually included in the Statement of Work.

In addition, if the client has change control procedures for system and network changes (which are very different from project change control), be aware of these and conform to them during the final implementation of project deliverables.

While these terms are similar, Change Control within a project is a completely separate process than Change Control as practiced on production IT systems. Change Control within a project controls changes to scope and other factors within the project. Change Control in an IT department typically covers any changes to production IT systems.

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(5.4) Verify Scope

(5.5) Control Scope

(10.4) Manage Stakeholder Expectations

Scope is paramount in Consulting Engagements. Scope should be defined up-front within the Statement of Work. The wording should be clear, and should be both technical enough to clearly describe the work being done, and simple enough to be understood by a non-technical reader.

Scope creep affects not only project deliverables but the bottom line of the consulting engagement. It is in the interest of both the consultant and the customer to control scope. The customer should realize that consultants are people, with human motivations. If a consultant is losing money in an engagement due to uncontrolled scope creep, all too often corners are cut, and the customer project is delivered with an overall quality penalty on both the original and the additional tasks. It is in everyone's best interest to have a clear definition of Change Control to govern changes that affect project tasks and scope.

Very often Managing Stakeholder Expectations is very closely tied to Managing and Controlling Scope. Especially in smaller projects, a consultant will typically have a single direct stakeholder, the client. The client will normally manage Stakeholder Expectations within the company. It makes good sense to informally track what's going on with the client's stakeholders internal to their organization; but in smaller projects (less than 5 days), the single-stakeholder model generally works well. In larger projects (greater than 15 or 20 days for instance), the full PMBOK methodology should be employed for Managing Stakeholders.

(4.3) Direct and Manage Project Execution

(4.4) Monitor and Control Project Work

(6.6) Control Schedule

(7.3) Control Costs

In smaller consulting engagements, managing project execution, monitoring project work, controlling schedules and controlling costs most often are addressed as a single entity – controlling the schedule. If the team members on the project complete their tasks within the committed to timeframes, all of these things fall in line. If one task takes longer than estimated, the schedule is usually affected, especially if the task is on the critical path, and the cost is always affected. Distilling the entire project down to a "time=money" perspective makes managing both of these aspects a single task. It also helps to simplify the schedule / budget conversation with project teammates. Slippage on tasks will affect subsequent tasks, whether on the critical path or not. For instance, if a non-critical path

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task slips by one day, that additional cost needs to be borne, usually by the consulting organization. In addition to this cost, however, is the cost of the *other* consultant who probably reserved that next day to complete dependent tasks, which now cannot be completed. Not only is the second consultant now left with nothing to do, but since delays of this type often involve multiple projects, a one day delay might ripple out to a much longer delay in rescheduling subsequent tasks.

As projects grow, this model becomes more complex. In larger projects, the billing rates of different team members may differ, and multiple cost inputs in addition to consulting rates will complicate the project financials. As in other Process Groups, when projects become larger, it becomes more and more advisable to follow the PMBOK methodology closer to correctly account for these factors.

(8.3) Perform Quality Control

Quality of course is paramount in any consulting engagement. Without quality deliverables, and the clear perception that quality is being delivered, the engagement is in jeopardy. Future work with that same client is generally not easy to come by if less than stellar quality is seen in previous work. Client references and testimonials are also important in consulting work, but to earn such praise, actual satisfied clients are required.

The challenge in quality control in many consulting projects is limited resources. In most cases, the exact resources required to complete the project tasks are available to the Project Manager, with no allowances made for reserves or contingencies. To account for this lack of accommodation for unforeseen events during the project, it's generally advised to put Quality Control line items into the project plan – quite often this is included with wording similar to "Testing" or "Configuration Verification."

Testing an implementation for quality control before going live is the gold standard of tests – it's the "100 cm to the meter" scale model approach. However, in larger projects, this may not be possible until the very end of the project, which means that the impact of small errors made early in the project have the potential to grow to be very large at project completion. Application development projects are a good example of projects that have this issue. A good way to deal with this problem is to break the project into modules or subprojects; and test each module in a test environment, with all previous modules, as they are developed. Another common approach is to implement a peer review process. Have a technical person, with the skillset required to complete the task, review the task deliverable from the primary person on that task. This second approach will definitely cost hard dollars, but is well worth it if even a single issue is circumvented. If possible, both methods should be combined. Peer review in addition to modular testing will generally provide excellent quality control, especially in large projects. Even in smaller projects, periodic peer reviews ensure that things like firewall or IPS configurations are of

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consistent quality across the project team, with everyone conforming to any templates or methodologies that may be in place within the consulting organization.

Quality Assurance in technical consulting often involves the use of design or implementation templates. Templates allow similar projects to be delivered with the same approach and technical resolutions to common issues. It improves quality tremendously, since the knowledge and decision investment is made in the original template, not at every single customer's project. Implementation costs are reduced since tasks involving templates are generally completed much more quickly.

Templates can also be used in the sales process, though care should be taken with that approach. Templates for technical implementation projects represent a significant investment in Intellectual Property, and it's this intellectual capital that customers generally pay consultants for in the first place. Giving templates away is generally regarded as equivalent to working for free – it's simply not commonly done. However, in a complex engagement, such as a Security Assessment, Compliance Assessment, or Penetration Test, templates are can be shared in the sales process, since the template itself is of limited usefulness without the technical skills that dovetail with it.

(9.1) Develop Human Resource Plan

(9.2) Acquire Project Team

In smaller projects, this step is often skipped entirely, since the consultant fills both the role of Project Manager as well as the role of delivering the technical tasks within the project. In many cases, the technical delivery role may be shared with the client.

As the project size increases, additional team members, either from within the consulting organization or subcontractors will be added to the project. Additional members of the client organization may also be added to the project team in larger projects. As project team size grows, more and more rigor needs to be applied in the Human Resource planning area, and in managing the team.

Consultants that start by managing smaller projects and see their practice grow often fall into a trap in this area. The informal team management appropriate to a small projects and a small project team does not translate well to a larger projects, budgets and teams. As project team size grows, more and more of the PMBOK methodology needs to be formally applied in order to keep the team productive.

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(9.3) Develop Project Team

(9.4) Manage Project Team

As discussed, in many shorter consulting projects, developing and managing the project team is simply not required – the Project Manager / Consultant is often the principal or only resource on the project.

In larger projects with larger teams, all the traditional team management models and methods of course should be fully applied. Since team membership in larger projects may include members of the consulting organization, subcontractors, and members of the customer's organization, Team Management and Team Development can become particularly complex. For instance, conflict between contractors in the consulting organization and subcontractors is common. The fact that subcontractors see a lower or higher hourly rate can be a source of friction. Differences of opinion are also common about who should be assigned desirable tasks, due to related opinions on who has the better skill set or the greater entitlement due to position.

It's not uncommon for politics within the customer organization to intrude on the project team – it's not unheard of, for instance, that people who are not invested in seeing the project succeed are forced on the project team. Resistance to learning new processes or tasks is a common obstacle within the customer organization. This is commonly seen at the later stages of a project, when training is required to move project infrastructure or processes into production status. It can also be seen if client resources are assigned project tasks, but need to acquire new skills to complete their tasks.

(10.1) Identify Stakeholders

In smaller engagements, the entire stakeholder issue is often moot. The client that you are working with is the single stakeholder, and it is up to the client to identify, interface with, and manage other stakeholders within the client's organization. The single stakeholder that needs to be considered is the direct client, who in turn becomes a champion (or detractor, depending on performance) both in the project at hand and when future work is being considered.

However, in larger projects, stakeholders can become critical, especially when project budgets are still under discussion when the project starts. In projects that involve several departments or companies, stakeholders from each faction will often have differing goals and views, and it is up to the Project Manager to weigh the differing goals of these groups when determining or negotiating final decisions affecting the project.

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(10.2) Plan Communications

(10.3) Distribute Information

(10.5) Report Performance

Communications is paramount in every project, large or small. At all times, the client needs to know where the project is, what tasks are being done, who is involved, and what the potential risks or problems might be.

In smaller projects, this is generally done with email. Face to face conversations are of course important in reaching decisions involving the project, but the maxim of "if it isn't written down, it never happened" clearly applies to any project management situation. Every decision or discussion should be summarized in writing (email is often sufficient and preferred) and if required, confirmed by the client.

In larger projects, this approach still holds true, but is supplemented with other methods. Having a secure website with the current GANTT chart, showing current progress is a frequent and effective approach. This can be extended to include additional project documents such as the Risk Register (with the state of all current risks), interim documentation, and the status of product deliveries. In a consulting situation, care should be taken with this approach so that project documents that should be internal to the consulting organization are not exposed to the customer. For instance, product *pricing* is certainly required by your client, but it would be unusual that you would want to expose product *costs* to the customer.

(11.1) Plan Risk Management

(11.2) Identify Risks

(11.3) Perform Qualitative Risk Analysis

(11.4) Perform Quantitative Risk Analysis

(11.5) Plan Risk Responses

(11.6) Monitor and Control Risks

As a consultant, a methodology should be in place for monitoring risks – a "this is how we do business" approach to risk that is applied to all projects. What this means is that, across multiple projects a common format will be maintained for all risk registers, and risks on current projects will be similar to risks in past projects, or other current projects.

So what is there left to do for Risk Management? As new projects are started, in many cases the Risk Register will be started by selecting risks from a list of "common risks" template, and adding any risks that are specific to that client or project. This template

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based approach a very abbreviated "Identify Risks" section in the project. The "Plan Risk Responses" will similarly be abbreviated, since Risks from previous projects will generally have responses that can be re-used or modified to use in the current situation.

Qualitative Risk Analysis will be exercised in all projects – often this is a formalized "what does the little man inside you think?" step. Quantitative Risk Analysis will generally only be used on larger projects that demand a formal approach to project management.

Monitoring and Controlling Risk remains key in all projects. As time goes forward in a project, risks in that project's Risk Register will pass, so they can be removed from consideration; and risks further down the list will become current as their associated tasks and events become active in the project schedule.

Every risk represents a potential monetary loss or impact on activities within the project. In smaller projects, the entire set of activities involving risk might consist of a few emails at the outset. However, as projects grow larger in duration and cost, the potential impacts of risk are higher, so more attention is typically paid to risk. In large projects, monitoring and controlling risk is a major part of the Project Manager's job, the Project manager deals with other contractors, client issues as they arise, approved and unapproved scope changes, and any other changes in the project landscape as the project moves forward.

(12.1) Plan Procurements

(12.2) Conduct Procurements

(12.3) Administer Procurements

(12.4) Close Procurements

In consulting engagements, the entire procurement cycle involving actual products required in the project is typically the client's responsibility. However, it is always prudent to keep a close eye on due dates, and to verify with the product vendor that delivery dates are realistic. In particular, subcomponents can be a problem – if a critical server is delivered on time, for instance, but the memory is on back-order, any tasks dependent on that server will be adversely affected.

Oddly enough, it's also important to verify that the product has in fact been ordered. It's not uncommon to see orders delayed by procurement processes such as RFPs. While not as common, purchases can also be delayed if it is advantageous to defer expenditures to the next financial period. Sometimes procurements might be delayed because the entire project budget is not approved within the client organization. To mitigate this risk, budget approvals should be verified before project work begins.

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In technical projects, often work performed is tied to products involved. For instance, a firewall project obviously cannot proceed without the firewall itself. Commitments in procurements should be measured as carefully as any other project commitment. Missing a date in delivery of a product will cost real services dollars, since the person that is scheduled to work that day may not have product to actually complete the tasks.

Often this is done by factoring in an error factor for product delivery when scheduling project tasks; something like 5-8 days is often sufficient. Extreme cases can require an entirely different solution however. For instance, in implementing telecommunications projects, initial delivery estimates for implementing a fiber optic link might be 4 weeks, but the actual delivery might not be completed for 6 months or more. In cases like this, it's generally best to position with the client that schedule dates will not be assigned for any affected project tasks until the critical milestone is met (in this example, the fiber link being installed).

From the consultant's point of view, the closing procurements process can be summed up in a single word - invoicing. In larger projects, invoicing is generally negotiated on a regular monthly or bi-monthly schedule, or by delivery of critical project milestones. In smaller projects, invoicing is usually on completion of the project. Thankfully, managing accounts receivable is generally not the responsibility of the technical consultant or the Project Manager, unless the consulting organization is very small.

Keep in mind that the consulting work itself is part of the customer's procurement cycle. The project is not completed until the client completes final acceptance, and the client completes the procurement cycle with the consulting organization. The customer's "Close Procurements" phase should coincide with the consultant's "Close Project or Phase" phase.

One exception to this over simplification of the closing process is subcontracting. If specific tasks are subcontracted in the project, or if subcontractors are employed as regular team members, the entire Procurement Knowledge Area applies. Plan Procurements consists of interviewing candidates, establishing rates and verifying that the subcontractor's desired rates can be borne by the project. Conduct procurements will consist of actually hiring the subcontractor, with the associated Non-Disclosure Agreements and any other Legal, HR or associated paperwork required. Administer Procurements translates to paying the subcontractors on the agreed upon schedule. Cash flow is simplified if the Project Manager can negotiate the subcontractor's payment schedule to match the payment schedule that has been established with the customer. Closing Procurements with subcontractors also involves ensuring that the subcontractors have completed their tasks as defined in the agreements, all documentation is complete and in the right hands, and final payments are disbursed.

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(4.6) Close Project or Phase

Closing a project may seem like a simple task, but the act of closing a project or phase draws on every project document. As a consultant, it is often required to go back to the original RFP or contract, as well as the statement of work and project plan to verify that all the original requirements of the project are met. In addition, all approved changes must be accounted for. Considerable tact is often required in this phase in order to arrive at a consensus with the customer, especially when the customer's view of completion does not agree with that of the consultants on the project team.

Outside of the customer relationship, the lessons learned at the close of a project or project phase are also key. Common lessons learned might include:

- Issues with contracts, especially interpretation of language, and particularly keeping consistent language between RPFs, contracts, statements of work and design documents
- Issues with time and effort estimates at the outset of a project differing from the actual task time and effort requirements
- Assessment of the profitability of an engagement, particularly if the hourly rate or time estimates were modified from the original values to "win the business"
- Estimates of just how much time the management of the project entails
- Estimates of how many meetings are required in managing the project, in particular the final cost estimates for those meetings in equivalent services revenue
- In some cases lessons learned might be specific to the customer, and might involve noting their preferences for meeting frequency or a document template that might have worked particularly well for their organization. Client specific lessons learned are almost always useful in future projects with that client.

Also, documents generated during the course of the project are key, from several perspectives:

- Ownership of final documents can be important. Often documents are explicitly defined as jointly owned by both the customer and the consultant. But in cases involving Intellectual Property or other confidential information, often some or all project documents will clearly be solely owned by the client.
- Ownership of template documents generally remain the property of the consultants involved. However, when a subcontractor is using templates from the Project Manager's organization, care should be taken in the crafting of a NDA (Non Disclosure Agreement) that covers this situation. Remember that a subcontractor today could easily be a competitor tomorrow.
- Design documents, deliverable documentation, and final "as-built" documentation can often be "sanitized' and used as templates for similar documentation in future

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projects. These documents add to the intellectual property of the consulting organization. This process lends itself to an ever-improving quality cycle within the consulting organization, where processes and documentation in similar projects build on each other as similar work is done. This is often one of the factors that motivates clients to engage consultants in the first place – the volume of work within the client organization may not be conducive to generating documents and processes of this type. Working with a consulting organization not only brings expert resources to bear on a project, but brings to bear an expert's set of processes and documents as well.

There are a few aspects of the lessons learned processes that are often overlooked:

- The lessons learned process should involve the entire team, not just the project manager. The people delivering the technical tasks within the project may have a very different view of how the project was delivered – for instance, they may have useful constructive criticism of the project management process. Salespeople will often have a better idea of the customer's perspective of the project, so are valuable to include in the lessons learned process. In addition, salespeople are important to include at this stage to give them a more complete view of their customer's business particulars and possible future opportunities. The fact that salespeople are a frequent source of project issues such as accidentally committing to project scope changes or adding excessive discounts into project costs also makes them very important attendees at this project stage.
- A separate lesson learned process is often required with the client. The frank opinions that are required in the lessons learned meeting(s) involving the consulting team normally means that a separate customer meeting is advised. Clients appreciate the opportunity to give their opinion on the project delivery, any issues or solutions and final project outcomes. They will often have a different perspective that can be used to contrast against the conclusions made during the project team's closing meetings.
- Formal Customer Satisfaction Surveys also belong in this project stage. These are different than a lessons learned meeting. Customer Satisfaction Surveys are usually formalized questionnaires that the management in the consulting organization will use in making higher level business decisions, employee evaluations and in developing customer relationships rather than as guidance for future projects.
- A critical document project that is almost never completed is the Project Profit and Loss (P&L) Statement. This document will often highlight many of the issues described in this paper – for instance; errors in pricing, errors in task duration estimates, or lack of contingency allocations in the schedule or budget. The perception is often that this is a complex document to assemble, but if project

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metrics are tracked appropriately during the project execution phase, the final Profit and Loss Statement can be generated quickly and easily. Unfortunately, the story that the Profit and Loss Statement is often not one that management within a consulting organization wants to hear.

- A personal "lessons learned" process can be useful if formalized. The internal "I'll never do *that* again" or "*that* worked rather well" conversation you may have with yourself on the drive home is a useful thing to record, and use as part of an ongoing process of self-improvement. Similarly, at the end of a project or project phase, it's useful to take a moment to evaluate personal satisfaction with the project, your role in it, project deliverables you might be involved in, and also your personal work/life balance.

Finally, remember that the Closing Phase is not just for the end of the project. Closing is important for each logical section of the project, and can be an excellent way of ensuring that unpopular tasks such as documentation will be done in the project phase in which it needs to be completed. It is also an excellent way of confining cost over-runs to the project phase that they occur in, forcing the team members who over-run on costs to deal with the consequences within their project phase.

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19 Conclusion

The Project Management Body of Knowledge (PMBOK) remains the foundation for "covering all the bases" in the management of any project. However, especially in smaller projects, the PMBOK is very much "built to be bent." Process groups will often be combined, abbreviated or skipped altogether. Even when skipping steps, remember that the important points still should be covered. While the full framework is not always covered, the spirit of the PMBOK framework should be maintained to deliver successful small projects.

As projects grow in scope and budget, the leeway in bending the PMBOK is lessened. When projects grow into the truly large category, following the PMBOK becomes more and more important in delivering successful project outcomes. The way to deal with complexity in projects is to increase the rigor in defining and sticking with established processes, in this case the PMBOK framework.

When managing a project as a consultant, an entirely new set of dynamics enters the stage. The financial perspective of the consultant's company needs to be considered during project delivery, as well as the client's budget and schedule requirements. This parallax view of the project presents a unique set of challenges to the Project Manager Consultant. The consultant needs to keep multiple balls in the air; they need to ensure that each engagement completes profitably, while at the same time keeping the client's best interest at the fore, and managing the delivery of the project tasks within the client's budget and on schedule.

In some cases, the consultant will be delivering a project on his or her own. In other cases, an entire team of consultants and/or subcontractors will be involved. In yet other cases, the team might include members of the client organization, or be entirely comprised of client team members. All of these cases bring their own set of possible conflicts and challenges. In larger projects, the Project Manager might only manage one phase of a large multi-phase project. When considering this spectrum of project sizes, it becomes obvious that every consultant needs good project management skills to be successful.

For every Project Manager Consultant, the goals are always to achieve project success, maintain trust and honesty with your client, and, at the end of the day, make a profit.

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