1. Introduction to Project Management

1.1. Operations Management vs. Project Management (Difference between the two; what is a project?)

1.2. Project Management Foundations – "These are the assorted jigsaw puzzle pieces that you have to work with." A broad overview that touches on the main building blocks (below – Roles, Tasks, Organization, Pitfalls) of project management so that students have a conceptual grasp of the Big Picture, before going into the more detailed information in Sections 2-6.

1.2.1. **Lifecycle:** There are five stages in the lifecycle of a project:

- The five stages of every project (initiation, planning, execution, monitoring and controlling, closing) are discussed later in this course.
- Mention that the process is not necessarily completely linear; introduce the concept of iteration (feedback loops).
- It's important to get a clear sense (document for yourself) of all of the pieces you will need to consider before taking any action.

1.2.2. **Roles:** Who are the players?

- What is a stakeholder? (A stakeholder is anyone with an interest in the successful outcome of the project)
- Who are the stakeholders? (Sponsor, project manager, project management team (optional), project team members, SMEs, "customer")
- Who's in charge? (Sponsor -> PM -> PM team (optional) --> Team members (who have other duties outside of the project) -> SMEs and other consultants -> Customer (customer involvement can drive iterative phases))

1.2.3. **Tasks:** What does everyone do?

- Sponsor: funding, executive oversight
- PM: responsible for achieving project objectives
- PM team: if used, team members tasked with managing sub-parts of the project
- Team members: Responsible for completing tasks assigned by PM
- SMEs and other consultants: Not directly team members, but rather people with subject matter expertise who provide technical and/or advisory info
- Customer: End user of the product* produced by the project whose needs must be met
  * Note: A "product" does not have to be a concrete, material item; it can be a new set of procedures, a new policy, etc.

1.2.4. **Organization:** How does a PM keep everything straight?

1.2.4.1. **Scope** – Defined as a detailed description of the project/product that is created in the Planning stage.

- Initially, however, in order to begin developing the scope, you need to know the objectives of the project; the end result you need to produce or deliver; the business reason for doing the project; and the major stakeholders.
- You get this information from the Sponsor, and perhaps also the Customer or other stakeholder; you might need to go back and forth between the parties in order to isolate the desired outcome.

1.2.4.2. Brief description of **template documents** used by PM. They can include:

- The one-page Charter that documents the initial requirements that satisfy the main stakeholders' needs and expectations.

- The Project Management Plan (optional) sets out, in one convenient place, the various subsidiary plans and components that are needed to complete the project. These might include
  - Project scope
  - List of stakeholders and their roles
  - Contact lists,
  - Work breakdown structure
  - Budget or cost structure
  - Communications methodologies
  - Progress reports
  - Timeline
  - Meeting schedule
  - Issues log
  - Log of requested changes to the scope.

1.2.4.3. Brief description of **Iron Triangle**

1.2.4.4. **Communications:** Briefly mention that:

- The PM will need to set forth a structure for how communications will be managed among various stakeholders, for example: between the PM and the Sponsor; between the PM and team members; between team members and other team members; an understanding of how status reports to the Sponsor will be handled (how often, how detailed, what methods to use), etc.
- There are pitfalls and benefits to various methods such as email, phone, in-person meetings (to be expanded on later).

1.2.5. **Pitfalls** –Brief overview ("Expect changes")

- Some pitfalls are common to most projects, such as: getting team members' cooperation (they don't work for you, your authority is limited); scope changes; schedule changes; budget changes; communication difficulties.
- Similar to pitfalls but less predictable are risks. Risks can be "known unknowns" (weather is often difficult in the winter) and "unknown unknowns" (a stakeholder faction on which you're depending goes out on strike).
- Pitfalls and risks are occurrences that all project managers must handle calmly and effectively.

2. Initiating the Project

2.1. Create the Project Charter:

- Document the initial requirements that satisfy the stakeholders' needs and expectations (a short version of the Scope, which is covered in section 3.2).
- Compile basic information – who (stakeholders), what (desired outcome), when (deadline), why (expected benefit).
- From these you can later determine "how."

2.2. Identify the stakeholders: Identify the people or organizations impacted by the project; document relevant information regarding their interests, involvement, and impact on project success.

3. Planning the Project

- The Project Management Plan (PMP) is the primary source of information for how the project will be planned, executed, monitored and controlled, and closed.
- The PMP is comprised of the group of processes, objectives, and refinements that are needed to develop the course of action required to attain project objectives.

- Once developed, the planning processes are not static; often they are affected by new information. Any significant changes that occur throughout the project lifecycle often trigger a need to make adjustments to process plans. Activities performed during this stage include:

3.1. Collect Requirements and Define Scope
- The Scope is a detailed description of the project and product.
- Assemble the Scope by collecting all requirements from the stakeholders. Begin with the short version that you created in section 2.1, but add to it the details that you learn from discussions with the main stakeholders.
- This process often requires that you make several trips around the "loop" – in other words, what you find out from one stakeholder might not agree with what you've heard from another stakeholder, and you must go back and forth until you arrive at a Scope that everyone can agree to.
- It is vital that you compile and document the Scope before undertaking any project tasks. It is not unusual for stakeholders to request changes to the Scope as the project progresses.

3.2. Create Work Breakdown Structure (WBS)
- Creating the WBS is a process of subdividing project deliverables and project work into smaller, manageable components.
- Start by making major divisions in the work requirements; then, subdivide the major divisions into as many smaller work requirements as is necessary to get a clear picture of what needs to be accomplished in detail.

3.3. Define and Sequence Activities
- Use the WBS to transform the work requirements into individual tasks.
- Arrange the tasks into the sequence in which they must be performed.
- Some tasks can be performed at the same time. Other tasks cannot be started until a previous task is completed, or at least initiated.

3.4. Estimate Activity Resources and Durations
- Use the task list to estimate the type and quantities of resources you will need – material, people, equipment, and supplies.
- Taking into account the available resources, estimate the number of work periods needed to complete the individual activities.

3.5. Develop the Schedule
- Use the information you have gathered to draft an initial work schedule.
- Order the individual tasks in the sequence in which they must be performed. It can be useful to use index cards, shuffling them around until you have reached a satisfactory sequence of events.
- With the tasks in the correct order, you can place the tasks into a schedule. Begin with the end date – the date on which the project is expected to be completed. Then, forget that date for now, and move the date back two weeks to allow for unexpected delays. Beginning with that end date, work backwards in filling in the schedule.
- There are tools you can use to turn this timeline into a schedule that is easily understood at a glance, and which takes into account any dependencies. [Note to self: Add "dependencies" to glossary.] The most common tool is called a Gantt chart. [Use a Gantt chart to point out how to use it.]

3.6. Estimate Costs
- For each individual task, estimate how much it will cost. It is likely that you will not have to figure in the cost of labor, but you will need to know the costs of supplies and services.
- If possible, try to trim the costs to a point where you will have a "rainy day" fund that you can call on for emergencies. If possible, you want to avoid having to approach the Sponsor with the need

for additional funding. However, at the first sign that financial resources might be insufficient, you should bring it to the attention of your Sponsor – don't wait until the last minute.

3.7. Plan the Quality Requirements
- From the Scope, you know what the requirements are for a successful project deliverables. Identify quality requirements and/or standards for your deliverables.
- Determine how you will demonstrate compliance with these quality requirements.

3.8. Develop Staffing Management Plan
- Use the information you have compiled to identify the roles, responsibilities and skills that are required to complete the project. If there are a number of smaller tasks, consider grouping these sub-tasks together under the leadership of a member of your Project Team. Although not required, some projects can benefit from creating a small team where a member can oversee a set of sub-tasks.
- Include reporting relationships, where appropriate.
- Your project will include team members who have their regular job responsibilities to perform. You will have no direct authority over these team members, yet you need to get their buy-in for the project, and get their cooperation in meeting the deadlines in producing their deliverables. [Note to self: Find out strategies to accomplish this.]

3.9. Develop Communication Plan
- Your project will require a method for insuring reliable communication flows.
- At the top level, the PM must have an agreed-upon schedule and format for providing updates and status reports to the Sponsor and other stakeholders as identified by the Sponsor.
- Plan on how to organize staff meetings: Determine frequency as well as which team members must be present. Depending on the project, it might be beneficial to schedule, for example, a weekly meeting, but the required attendees might rotate, depending on where the project stands in the schedule.
- Plan on a method for communicating between you and team members, and between team members themselves. Telephone? Email?
- While telephone communication is direct and generally immediate, the downside includes time lost in playing phone tag; also, telephone calls are generally one-on-one, and it requires an extra step to keep other team members in the loop.
- Email provides an opportunity to include many team members on an email. The downside to email is a delay in responding, as well as confusion on replies when multiple parties are involved. A team member might forget to "Reply to All" in an email, or conversely could Reply to All when it isn't necessary, and team members become anesthetized to the appearance of many daily emails in their In box.

3.10. Identify Risks
- Every project carries inherent risks. Unfortunately, not all risks can be prepared for. Brainstorm, perhaps with some of your team members, the Sponsor, or certain stakeholders, some possible occurrences. Try to find possible approaches to the different types of risks. [Note – need to flesh this out.]
- Remember that there are two kinds of risks [Note to self: three?] – the "known unknowns" and the "unknown unknowns." [Flesh this out]
- [Not sure if this is the right place for this] Every project is likely to have (a) issues arise, and (b) change requests made. You cannot plan for every single type of issue or change request, but you can plan for how to document them and how to proceed with an action strategy.
- Use an Issues Log to document and address issues that arise during the project that are unplanned, such as a piece of machinery breaking down, necessitating a decision regarding

whether to fix it or replace it, and the delays that will cause. Many times the decision is made beyond your authority level, and you must adapt.

- Use a Change Request Log to document and address occurrences of a stakeholder requesting a change. Such changes usually affect the project's Scope statement (which is one reason it is so important to formalize the scope early on). Actions that impact the Scope statement will require the approval of more than just the requesting stakeholder. Use the Change Request Log to keep track of the progress and disposition of change requests.

3.11. Procurements

- If a situation occurs where financial resources are inadequate and additional funds are necessary to keep the project going, keep in mind that Metra is subject to the procurement regulations of the Federal Transit Authority (FTA). The project Sponsor might or might not be able to procure additional funding.
- There are four levels of funding availability, from Direct Purchase (≤$500) and Micro Purchase (>$500 to ≤$3000), all the way up to Formal Advertised Procurements that require formal Invitations For Bid and Requests for Proposals. The best advice is: Stay within your budget.

4. Executing the Project

With all of the foregoing preparatory work complete, the actual work can now begin!

- This phase calls for performing the work called for in the PMP to satisfy the project specifications.
- During project execution, occurrences can require planning updates to reflect changes to expected activity durations and to resource productivity and availability. Such occurrences often result in Change Requests.

4.1. Directing and Managing Project Execution

- This phase consists of performing the work defined in the PMP to achieve the project's objectives.

4.2. Perform QA

- This is the process of making sure that the product meets the quality requirements set forth in the planning documents. Make sure that the appropriate quality standards are being met.

4.3. Acquire and Develop Project Team

- Here the PM must confirm that the personnel that have been targeted for the project will actually be available at the times they are needed.
- One of the risks you might have prepared for is the not-uncommon situation of losing a team member, or losing a team member for a period when they are required to be present. Sometimes a department manager will agree to make available a worker for a certain period, but an unforeseen situation requires that the manager keep the worker's services within their department for that time.

4.4. Manage Project Team

- This process tracks the performance of team members. Here you will be providing feedback, resolving issues, and managing changes to keep the project on track.

4.5. Distribute information

- Dovetailing with the communications plan you have created, this is process of making relevant information available to project stakeholders as planned.
- Don't be surprised if this process results in Change Requests or Issues.

4.6. Manage Stakeholder Expectations

- Here, the PM communicates with, and works with, stakeholders to make sure their needs are being met and that any issues that arise are dealt with appropriately and promptly. Even if an issue cannot be resolved as soon as you would like it to be, it's always vital to keep key stakeholders informed.

5. Monitoring and Controlling the Project

Many activities in this cycle occur simultaneously with the activities of the previous cycle – in this cycle you:

- Control changes and recommend preventive action in anticipation of possible problems.
- Monitor ongoing project activities against the PMP and the schedule.
- Ensure that only approved changes are implemented.

5.1. Monitor and Control Project Work

- This section calls for you to track, review and regulate the progress of the project to meet performance objectives in the PMP.
- Tools you will find useful here are the timeline and schedule; if you use a Gantt chart, that document can include status codes (red, yellow, green) to indicate the progress of particular tasks, enabling you to recognize possible traffic jams and perform corrective actions quickly.

5.2. Verify and Control Scope

- Be sure to keep an eye on the Scope; it can be easy to be lured off-track by day-to-day activities.
- Also important, you must track and resolve requested changes to the scope.
- Always be on top of any issues that present themselves – use the Issues Log to your benefit, and stay on track.

5.3. Control Schedule and Costs (Resources)

- This task consists of monitoring the status of the project to update project progress and manage changes – in other words, consult, and update if necessary, your Gantt chart, or schedule and timeline, daily.
- Keep track of expenditures, and forecast ahead so you can address any potential problems that might arise.

5.4. Perform QC

- In this stage, you monitor – and record – the results of executing the quality activities to assess performance and recommend necessary changes.
- If the results of quality control tests indicate a substandard product, it is important to inform stakeholders promptly, and to propose corrective action and any additional costs.

5.5. Report Performance

- Collect and distribute performance information, such as status reports, progress measurements, and forecasts.

5.6. Monitor Risks

- Remain vigilant about possible risks. Performing regular “walk-arounds”, if possible, is helpful not only in staying updated about daily activities, but often a PM can get a sense that something isn’t quite right, and follow up on it. It is difficult to get a sense of impending difficulties from emails and status reports alone.

6. Closing the Project

- This cycle calls for performing all finalizing activities of the project.
- Obtain acceptance (“sign-off”) by the Sponsor and any stakeholders that were given this authority in the Scope.
- Conduct a post-project review to create a summary document of the project’s activities and results.
- Record all occurrences that resulted in adjusting the process.
- Document lessons learned.
- Archive all relevant documents in the repository selected for this purpose.
- If necessary and if tasked by the Sponsor, complete all documentation concerning procurement activities.

GLOSSARY TBD

A work breakdown structure (WBS) is the best way to understand the detailed work of a project when you have to build a schedule from scratch. It lets you break the project down into the major phases, deliverables, and work components that will be built by the project. You can then break down these work components into the activities that are required to build them. The WBS is not the same as the final schedule (which requires sequencing, resources, estimated effort, estimated duration, etc.). Here are five tips to keep in mind when building your WBS.

Note: These tips are based on an entry in our IT Leadership blog.

1. 1: Create a WBS dictionary for large projects

Normally, you wouldn't need a WBS dictionary. But if your WBS has hundreds (or thousands) of detailed activities, there may just be too much to keep track of by hand. In this case, it might make sense to place all the important information in a WBS dictionary. The dictionary helps keep track of all of the summary and detailed activities, including a short description, the WBS numeric identifier (1.1, 1.1.1, 1.1.2, etc.), and the estimated effort. If you enter your WBS dictionary into a specialized tool, the tool can also help to keep track of changes to the WBS as well.

2. 2: Use the summary activities as milestones

Your WBS should contain both detailed and summary activities. (A summary activity is one that is broken down further; a detailed activity is one that is not broken down further.) Although a schedule usually includes only detailed activities, it makes sense to include the summary activities as milestones (i.e., markers signifying that a deliverable or set of deliverables is complete). A summary activity can be used as a milestone since it would indicate that all of the underlying detailed work has been completed.

3. 3: Break activities into two or more detailed activities

I've seen teams that break one activity in the WBS into only one activity at the next level. In my opinion, this doesn't make sense because then the detailed activity represents the same work as the prior summary activity. This doesn't buy you anything.

4. 4: Make the final detailed activities action oriented

The detailed activities on your WBS (the ones that are not broken down further) are ultimately moved to your schedule. For that reason, it's easier if the detailed activities in your WBS are action oriented — just as activities in your schedule would be. For example, instead of describing a detailed WBS activity as "meeting," you should state it as "schedule a weekly meeting." Instead of having a WBS detailed activity for "Testing Plan," you should state it instead as "Create Testing Plan." In this way, the detailed activities can be moved to the schedule with a minimum of wording changes.

5. 5: Don't place requirements on the WBS

If you place a deliverable on your WBS, you can break this deliverable down into the activities that are required to create it. You don't break a deliverable down into the requirements that describe it. Requirements do not belong on a WBS. Only deliverables and activities belong on the WBS.

Question 1: Do you have adequate business sponsorship and leadership?

21 Ways to Excel at Project Management

Good Practice: A senior business sponsor should be identified at the highest possible level in the organization, and named in the Project Definition document.

A Steering Committee must be set up and become operational from the beginning of the project. The Steering Committee is responsible for taking all key decisions about the project and should be composed of senior managers from the business.

The chair of the Steering Committee has ultimate responsibility for the project. The Project Manager leads the project and is fully accountable for delivering the project described in the Project Definition document.

In his article Six Ways to Give Proper Project Leadership Dr. Keith Mathis offers this advice:

- Create an atmosphere of trust.
- Build the right team.
- Spell everything out for your team up-front.
- Monitor and give feedback.
- Keep communication open.
- Keep the end goal clearly in mind.

"The project sponsor is perhaps the second most influential person on the project, after the project manager and in some cases may even wield more influence on project results." - Dave Nielsen
Common Mistakes

- Wasting time and money on projects that do not have enough sponsorship, commitment or leadership to succeed.
- Hoping that people who do not commit early, will find time later.
- Not involving the sponsor with setting direction and keeping the project on track.

Note: Before you start your project, find a committed project sponsor who has enough clout in your organization. Your project sponsor will prove invaluable in helping you overcome organisational roadblocks as they arise.

Put simply, a project without a senior business sponsor is at serious risk of failure.

Defining the Business Objectives and Benefits

Question 2: Have you defined and understood the business objectives and benefits?

Good Practice: A Project Definition document should be prepared early in the project and formally signed off by the Steering Committee. This document defines the goals, objectives, benefits, deliverables, exclusions, assumptions, business sponsors, responsibilities, estimated costs, timescale and serves the following purposes:

- Clearly defines the objectives and scope of the project.
- Provides management and team members with a common view and clear understanding.
- Provides a good starting point for the subsequent definition of more detailed documents, such as, the Project Plan, Project Budget and Functional Requirements Specification.

In a nutshell, "The single best payoff in terms of project success comes from having good project definition early." - RAND Corporation.

Common Mistakes

- Start focusing on solutions, how to achieve something, before gaining a clear understanding of the business objectives that you want to achieve and identifying the business sponsors needed to help achieve these objectives.
- Not returning to the Benefits Statement during the project to make sure they are still valid and achievable.

Quotes

- "The number of projects that set out confidently with little or no idea of what they are supposed to achieve is truly astounding."
- "Some projects start out with a clear idea, but lose track of it by the time they're 20% into the project."
- "Many proud, objective-orientated managers have a list of goals that are, on closer inspection, technology driven, and not business driven. They are headed for a 'successful' project whose results will never be used."
- "Keep in mind that the aim of a project is 'results delivery' not, as is often the case, 'construction activity'. This means thinking about the products the project is in business to deliver."

Planning the Project

Question 3: Have you developed a detailed project plan?

Good Practice: A detailed project plan should be developed and signed off by the Steering Committee. It provides the following benefits:

- Translates the high-level business objectives into a detailed 'roadmap' of concrete deliverables.
- Provides a detailed list of resource requirements.
- Provides a realistic assessment of project timescales.
- Allows estimated project costs to be further validated.
- Allows for issues to be identified early on, such as, tasks taking longer than expected, slippage in target dates and team members not being productive.

Base the plan on known metrics, how long did an earlier similar project take?

Involve all team members, not just senior management. Develop a plan in iterations over several weeks, by consulting team members and drawing on their experience.

Common Mistakes

- Having no project plan.
- Having a wrong project plan. Do not be swayed by a sexy looking project plan that has been produced to give the Steering Committee a warm, comfortable feeling, but which is not based on reality. A wrong project plan is worse than having no project plan at all.
- As with all methodologies, a healthy dose of common sense and pragmatism is required. Do not be too religious, for example, a 5-day project does not need a detailed project plan.
- Do not lose sight of what the project is trying to achieve. Traditional project management techniques can encourage over planning and an excessive focus on micro-level tasks at the cost of the overall objective.
- Disbelieving evidence from past projects and insisting the current project be done faster with fewer people.

Committing to, or baselining project plans too early.

Note: Trying to manage a large and complex project without a project plan is like trying to cross an unknown continent without a map, you are running blind. The key thing to get right is the balance between planning and action. Take the example of driving from London to Paris: too much planning and other cars will be halfway there before you leave; too little, and you will turn up at the Eurotunnel terminal in Folkestone without passports.

In a nutshell, "A good plan, violently executed now, is better than a perfect plan next week." - General George S. Patton, JR.

Warning Sign! When successive project milestones are missed this is a sure sign of a project that is failing.

Ensuring the Project is a Manageable Size

Question 4: Is your project a manageable size?

Good Practice: A large project should be cut up into more manageable sub-projects, which only depend on completed sub-projects. The project planning methodology provides a good tool to subdivide major projects into more manageable sub-projects with short-term deliverables.

Each project plan should itself be subdivided into a number of key milestones. This helps to provide continual delivery and makes sure progress is measured regularly. For example, a recent large project involved two separate project plans for different stages of the project, development and implementation. Each plan consisted of around 300+ separate tasks and around 30 key milestones.

In his article 7 Steps to Project Success, Peter Draper suggests it is necessary to break up projects into smaller, independent sub-projects that are more easily manageable. These sub-projects must be:

- Small, that is, less than $1m.
- Fast, that is, takes less than 6 months.
- Compact, that is, fewer than 6 people on the team.

- Focused on key benefits and not just deliverables.

Common Mistakes

- Going for a 'big bang' implementation.
- Not being prepared to take the extra cost of splitting the project into separate stages.
- Underestimating the overall complexity and the interactions between all the separate components.
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Defining the Budget

Question 5: Have you defined a detailed project budget?

Good Practice: Define all costs in-the-form-of a project budget. This should be signed off by the Steering Committee or other authority to make sure enough funds are made available. Your budget should include all external costs such as licences, third party services, consultants, consumables, etc.

A few basic rules will help make sure an accurate and realistic budget is produced:

- Assume that people will only be productive for 80% of their time.
- People working on multiple projects take longer to complete tasks because of time lost switching between them.
- People are optimistic and often underestimate how long tasks will take.
- Make use of other people's experiences and your own when creating your budget.
- Get an expert view.
- Include management time in any estimate.
- Always build in contingency for problem solving, meetings and other unexpected events.
- Cost each task in a Work Breakdown Structure to arrive at a total, rather than trying to cost the whole project.
- Agree on a tolerance with your customer for extra work that is not yet defined.
- Communicate any assumptions, exclusions or constraints you have to your customer.
- Provide regular budget statements to your customer, copying your team, so they are always aware of the current position.

Common Mistakes

- Lack of budget ownership.
- Providing funds on an ad-hoc basis.
- Major costs not clearly identified early on; this can result in the project being cancelled later because of lack of funds.
- No control or monitoring of actual spend against planned spend.
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Managing the Risks

Question 6: Are you managing the project risks?

Good Practice: The task of the project manager is to identify the most severe risks and plan to minimise them. Throughout the project, you should continue to focus on the major risks facing the project, which will change over time. This helps to keep the focus on the areas that need to be addressed. You should consider using a risk mapping approach:

- Identify the project objectives.
- Prioritise the objectives.
- Identify the key risks to missing those objectives.
- Take preventive action.
- Track and update risks monthly using a risk log.

There are four risk management techniques your may use to manage the risks to your project:

1. Avoidance: Use an alternate approach that does not have the risk. This is not always possible. There are programmes that deliberately involve high risks in the expectation of high gains. This is the most effective risk management technique if it can be applied.

2. Control: Controlling risk involves developing a risk reduction plan and then tracking to that plan. A key aspect is the planning by experienced people. The plan itself may involve parallel development programmes.

3. Assumption: Simply accepting the risk and continuing. There can be a tendency within organisations to gradually let the assumption of risk take on the aura of controlled risk.

4. Risk Transfer: This means causing another party to accept the risk, typically by contract or by hedging. Liability among construction or other contractors is often transferred this way.

"Never expect initial risk management plans to be perfect. Practice, experience, and actual loss results will dictate changes in the plan to allow different decisions to be made in dealing with the risks being faced. In order for companies to succeed in the twenty-first century, they need to excel in all aspects of their business, which includes risk management, so they can fulfil their own and their customer's goals." 1

Common Mistakes

- Reluctance to focus on risks.
- The Steering Committee not wanting to be presented with 'threatening statements about project failure' and only wanting to hear good news.
- Waiting too long and taking a reactive approach to risks.

Note: "To run away from risks is to miss the whole point. To ensure project success, you need to take the right risks and you need to be aware that, that is what you are doing."

Getting the Right Project Manager

Question 7: Have you appointed an experienced project manager?

Good Practice: An experienced project manager should lead the project. For large projects, this should be a dedicated and full-time role. Full-time and dedicated resource will make sure that a continuous focus is kept on moving the project forward.

In theory, all business projects should be led by the business. In practice, many business functions do not have the required project management skills, experience or disciplined approach. A good working compromise is to appoint two people to work together in a partnership, a Project Manager and a User Representative. The comprehensive nature of these two roles should not be underestimated.

In her article The Top Five Project Management Traits to Master 'the How' Joli Mosier lists the top five traits you need to master the 'how' of project management as:

- A collaborative management style.
- Adaptability.
- Figure-it-out resourcefulness.
- Highly developed communication skills.
- Flexibility.

In his popular article Top 10 Qualities of a Project Manager, Timothy R. Barry identifies the qualities most important for a project manager:

- Inspires a shared vision.
- Good communicator.
- Integrity.
- Enthusiasm.
- Empathy.
- Competence.
- Ability to delegate tasks.
- Cool under pressure.
- Team building skills.
- Problem solving skills.

Common Mistakes

- No project manager appointed.
- Project manager appointed with no prior experience.
- Mistaking enthusiasm or seniority for experience.
- User project manager appointed to lead a large project, as well as his or her existing responsibilities.
- More than one project manager appointed.
- The project manager is not fully responsible and accountable for the project.
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Getting Customer Representation

Question 8: Do you have experienced and effective user representation?

Good Practice: An experienced User Representative should be appointed to work in partnership with the Project Manager. The User Representative will lead the User Group and be responsible for all business information to the project.

It is important to keep the process user driven, and ultimate ownership of the project must rest with the business. You must make sure you have enough user resource to drive the project forward. If this is not available, you should stop the project. Follow a 'no surprise' approach with the user group. This requires regular communication and 'telling it like it is.'

Common Mistakes

- Insufficient user resources made available.
- User Representative made available part-time.
- Underestimating the amount of user information needed during ALL stages of the project.
- Business information ending with a User Requirements Specification.

Note: As the project moves into the design, development and user pilot stages, considerable and continuing business information is needed to define requirements at a lower level of detail and to answer the many questions that arise.

Warning Sign! When users are not a willing part of the project team.

Defining Roles and Responsibilities

Question 9: Have you clearly defined the project roles and responsibilities?

Good Practice: The project manager must make sure that roles and responsibilities are clearly defined for the project. The organisational structure should be kept as-simple-as-possible.

The following structure works well on large projects:

Executive Sponsor

- Highest ranking manager on the project.
- Vocal champion for the project at executive level.
- Secures budget for the project.
- The final decision-maker for the project.

Business Sponsor

- Champion of the project who receives regular updates.
- Approves the project’s goals and objectives.
- Attends regular project review meetings.

- An important decision-maker for the project.
- Usually chairs the Steering Committee.

Steering Committee (also known as the Project Board)

- Composed of senior managers from the business.
- Responsible for oversight, control and key project decisions.
- Meets every 4 to 6 weeks.
- Helps resolve issues, approve scope changes and offers guidance and direction.

Project Team

- Responsible for planning and executing the project.
- Led by the Project Manager, who reports to the Steering Committee.
- Must include a User Representative.
- Must include Vendor Representatives.
- Must include technical expertise.

User Group

- Led by the User Representative.
- Must include subject matter experts (SMEs) from the business.
- Responsible for user acceptance testing the product or service.

Vendors

- Contracted to supply products and services to the project.

The roles and responsibilities for managing the project must be fully documented and adapted to suit the size and complexity of the project and the skills of the organisation.

Common Mistakes

- No clear ownership for the project.
- Lack of leadership and commitment from the Steering Committee.
- Roles and responsibilities are not clearly defined.
- Disconnection between the Project Team and Steering Committee, such as, discussions not open and honest.

Note: Comment from a project team member "...I was never quite sure what I was supposed to be doing..."

One of the many roles of the Project Manager is to actively 'drive' the Steering Committee, making sure that regular meetings take place, providing clear agendas, making sure that key decisions are made, and actions are followed up.

Warning Sign! The Business Sponsor fails to attend scheduled project review meetings.

Getting the Right Resources

Question 10: Do you have enough experienced resources?

Good Practice: A major contributor to the success of projects is the availability of customer and supplier managers, with high levels of experience both in the business and with project delivery and to have them available early. Big projects need substantive and appropriate resources. Dedicated resource provides time to think it through. Two or more people equal different experiences, professional networks and healthy debate.

Getting good people appointed as dedicated resource for projects early is a tough challenge and some compromise is often necessary. A recent global project agreed, at a high-level, to provide people in each area affected on six-month full-time secondments. In reality, only a-small-minority-of areas provided dedicated resources; most people were made available part-time; this resulted in overall timescales being exceeded by six months. Often the business culture and working practice is heavily oriented to 'business functions' and is not always conducive to project based work and team working.

"The challenge for the project manager consists of attracting the right resources, forming a cohesive team, keeping the team motivated, meeting individual aspirations and getting the work done - all within scope, cost, time, and customer satisfaction!" 1

Common Mistakes

- Not enough experienced committed resource from the business.
- Appointed resource overcommitted and unable to devote enough time to the project.

Warning Sign! Resource requirements exceed resource availability.

Once the Definition, Initiation and Planning stages are complete the project moves to the Monitoring & Control Stage. Questions 11, 12 and 13 should be answered.

Monitoring and Reporting Progress

Question 11: Are you monitoring progress regularly?

Good Practice: The project plan should be monitored and updated every week. This is important since tasks are often underestimated, and many new tasks will be identified as the project moves forward.

"...many people use what is called Rolling Wave Planning. This is when you plan down to the level of detail currently known and go back to plan deeper once more information is acquired. Usually rolling wave planning needs to stay at least 2 to 3 months ahead of the actual work being done, but of course this varies slightly by industry." 1

If you create plans at the beginning of a project, put them in a drawer and forget them, why bother creating them in-the-first-place?

"In poorly run projects, problems can go undetected until the project fails. It's like the drip…drip…drip of a leaky underground pipe. Money is being lost, but you don't see it until there is an explosion." - Joy Gumz

Common Mistakes

- Project plans never updated beyond the first draft.
- Using non-binary milestones.
- Reporting tasks as partially complete. Low-level tasks are not complete until they are complete; they should be measured as either 0% or 100% complete.
- Ignoring warning signs and pressing on in the hope everything will turn out right in the end.

Warning Signs!

- The number of open issues continues to rise.
- Contingency plans are used faster than the rate of progress on the project.

Communicating Progress

Question 12: Are you distributing regular progress reports?

Good Practice: Progress reporting is an important part of project management. Regular reports, anything from weekly to monthly, should be issued to the Executive Sponsor, Business Sponsor, Budget Holder, Steering Committee, Project Team, User Group and circulated to all other interested parties. The report should be as-brief-as-possible and summarise key points.

The following format is recommended on a maximum of two pages:

- Report Date
- Project Status
- Project Summary
- Key Issues
- Identified Risks
- Tasks and Next Steps
- Decisions Needed
- Key Future Dates and Milestones
- Budgeted Cost
- Spend to Date

This ensures that people are kept informed, involved and committed. Frequent communication is essential to the well-being of any project.

Regular progress reporting creates a valuable written record of the projects' life. This can be used later to look back and decide how to improve the running of future projects.

Metrics can also be developed to measure project progress in other ways, such as Earned Value, or Activity Float Statistics.

Common Mistakes

- Poor communication channels.
- Lack of honest communication.
- Not asking for help when it is needed.

Warning Sign! Unwillingness to communicate bad news.

Consultation and Leadership

Question 13: Are you achieving the right balance of consultation and leadership?

Good Practice: During all stages of the project, there should be widespread consultation with many parties. However, the project should ultimately be controlled by a small, dedicated 'core' project team, which is focused on achieving a concrete result. This will make sure that when difficult decisions have to be made, they are made clearly, forcefully and quickly.

Engage in lots-of consultation, but do not have too much democracy. If you want to achieve real business results in a realistic timeframe, a small team operating on Stalinist principles is more likely to succeed, than large committees acting as talking shops. This is especially important for regional, cross regional and global projects.

Common Mistakes

- Making a decision and then starting a debate.
- Not getting a real agreement, and then having to revisit the issue.
- Failing to stay goal focussed.

Notes: "The Romans did not build a great empire by having meetings, they did it by killing all those who opposed them."

Questions 14 to 17 should be answered during the Design and Build stages of the project.

Getting Realistic User Requirements

Question 14: Are the user requirements realistic?

Good Practice: For many projects, the total set of user requirements can be ambitious, making it difficult or even impossible to deliver a solution that meets all the requirements, in a way, that is robust, cost-effective, maintainable and can be rolled out quickly to a large user base.

It is important to match the user requirements specification against the available technology and solutions that can be implemented in a timely, robust and practical way. This may result in an agreement that some of the requirements, say 20%, will not be delivered. Such a compromise will make sure the remaining 80% can be

delivered quickly. This compromise is important for global projects with a large user base. On such projects, the speed and ease of implementation is an important consideration in the overall solution.

To be successful at requirements gathering and to give your project an increased likelihood of success, follow these rules:

- Don't assume you know what the customer wants, ask!
- Involve the users from the start.
- Define and agree on the scope of the project.
- Ensure requirements are specific, realistic and measurable.
- Get clarity if there is any doubt.
- Create a clear, concise and thorough requirements document and share it with the customer.
- Confirm your understanding of the requirements with the customer by playing them back.
- Avoid talking technology or solutions until the requirements are fully understood.
- Get the requirements agreed with the stakeholders before the project starts.
- Create a prototype, if necessary, to confirm or refine the customers' requirements.
- Use a recognised notation, such as the Unified Modelling Language (UML), for modelling the software.
- Cross-check the software design against the requirements and review regularly.

Common Mistakes

- Basing a solution on complex or new technology and then discovering that it cannot easily be rolled out to the 'real world.'
- Not prioritising the User Requirements into 'must have,' 'should have,' 'could have' and 'would have,' known as the MoSCoW principle.
- Not enough consultation with real users and practitioners.
- Solving the 'problem' before you know what it is.
- Lacking a clear understanding and making assumptions instead of asking for clarification.

Defining Your Approach

Question 15: Have you based your development on a prototyping iterative approach?

Good Practice: Developing a prototype will breathe some life into the requirements gathering process. People can find it difficult to engage in dry documents; where a screen-based prototype can bring the debate to life.

"Prototyping involves feedback from customers to developers on a trial based product. Each time a new prototype is released, it is usually an enhancement of a previous one. The evolutionary prototype often becomes the final product. Prototyping was first recognised as a software development approach when developers found that they couldn't figure out all the requirements, until work had started on the project." 1

Basing the development on a series of prototypes will create a perception of early delivery to the users and a feeling of involvement in and commitment to the development process.

You should involve a large population of users in prototype reviews as early as possible. This ensures that a large percentage of users will already have seen the system through demonstrations and training sessions

before the 'go-live' date. This provides a high-level of confidence the system meets-user-needs, and it highlights early on, any problem areas needing more attention.

Skipping this step and going straight to build may result in costly rework.

Common Mistakes

- Basing user requirements on large documents only.
- Not using an iterative prototyping approach.
- Not involving enough 'real' users.

Conducting Structured Testing

Question 16: Have you conducted structured testing?

Good Practice: You should test deliverables early. One of the fundamental lessons drawn from delivering IT projects, is the later you leave the testing in the development cycle, the more it costs to fix.

A structured test plan should be developed and then executed by people independent of the development team. Besides testing the deliverables, you should also test the overall infrastructure over which the deliverables will run. The major components in the architecture should be tested before building the final deliverables.

The test development life cycle has the following elements:

- Test plan.
- Test specification.
- Code tests.
- Validate test.
- Run tests.

Test documentation is a necessary tool for managing and maintaining the testing process. Documents produced by testers should answer the following questions:

- What to test?
- How to test?
- What are the results?

"When end users get involved in the final stages of testing, light bulbs go on, and they often have an 'aha' moment. Unfortunately, that is often too late." - Frank R. Parth

Common Mistakes

- No test plans and therefore no testing.
- Testing conducted in an ad-hoc way by the development team.
- Waiting until the deliverable is deployed before testing.

- Using test time as contingency.

Warning Sign! Documentation or testing stages are cut to make up lost time.

Creating an Implementation Plan

Question 17: Do you have a comprehensive implementation plan?

Good Practice: For a large projects with a wide user base, the implementation stage can often be more complex and time-consuming than the development stage. The implementation stage can often benefit from being treated as a separate project. The following ideas are worth considering, especially for large projects introducing new business processes across multiple sites:

- The implementation should be carried out by the people who will live and work with the new system; they will have a strong vested interest in getting it right.
- Conduct a 'company survey' for each site, meet the senior management, gain their support, and fully understand the local working practices. This will help to make sure the new process is fitted in seamlessly with the existing processes and that any nasty surprises are discovered early.
- An implementation 'event' for each site should include a presentation by the Chairperson to the rest of the company to show strong support from the top of the organisation.
- Comprehensive training for all users with different sessions if the process involves different types of user, such as, gatekeepers, project leaders and team members. You can never have enough training. It is better to split training into several short sessions, such as, basic training, with two follow-up sessions at monthly intervals.
- For multiple site implementations, use the idea of a 'showcase' company where the conditions, such as, user buy-in, expertise and motivation are good. A successful implementation in the showcase company will then prove the system and process and act as a centre of expertise for the remaining sites.
- For multiple company implementations, consider running several workshops for the implementation staff, to allow them to learn from one another. A little competition between different companies also helps to spur on the implementation. This approach helps make sure that problems are resolved fast, and that other team members quickly remove 'false' problems. Consider special awards for implementation success. For example, an 'Accreditation Certificate' when a company has successfully implemented the system and met some key (but simple) criteria in the business process. The certificates should be signed by the President or Chairperson and presented to the local implementation team. Consider special awards for implementation success. For example, an 'Accreditation Certificate' when a company has successfully implemented the system and met some key (but simple) criteria in the business process. The certificates should be signed by the President or Chairman and presented to the local implementation team.
- Consider special measures to track implementation progress, for example Gold, Grey and Blacklists. People do not like to be singled out as poor performers. For this approach to work you must select a few simple key measures that cannot be challenged; be scrupulously fair, objective and reject all bribes.

Common Mistakes

- Failure to involve end users.
- Inadequate training.

Questions 18 to 21 should be answered at the end of the project.

Conducting a Post Implementation Review

Question 18: Have you conducted a post implementation review?

Good Practice: It is best practice to go back and review the progress made in delivering the project deliverables and overall business benefits. The post implementation review should be timed to allow final improvements to be made to get the best benefits from the project.

Organisations are beginning to recognise the growing importance of knowledge management as a key to competitive advantage. We must therefore become better at capturing our learning and making this information available to the rest of the organisation. This will increasingly become the duty of every manager.

As the project manager, you are in a unique position to help your customer gain the benefits, detailed in the business case. It can be an extra phase once you have closed the project, or run as part of the project itself. It may not follow on directly from the project end, and start after a short period-of-time, but before the post implementation review, which typically takes place three to six months after the project has been completed.

Opinion seems divided as-to-whether active benefits realisation is the domain of the project manager, but one thing is sure, many projects declared a success never deliver the planned benefit or result.

At the end of your projects hold a formal debrief session, including a post implementation 'Lessons Learned' review with the team.

- Common Mistakes

- Forgetting what has been done and discarding any useful experience that has been gained on a challenging project.
- Being so relieved to finish that we simply move on without reviewing the project's result.
- Disbanding the team too fast before the learning has been captured.
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Realising the Benefits

Question 19: Will the deliverables and benefits of your project survive?

Good Practice: On most projects, the team is disbanded soon after delivery. This can result in the solution withering away and dying over time, especially if it has fallen on stony ground. This can be true for a project that involves a change in working practices, or revised business processes.

On a recent large project, after the usual development and implementation stages, the project team was retained for a third stage called 'benefits realisation.' This was to make sure the roots of the new business process and supporting IT system would grow deep and deliver real business value. A project should only be considered completed when the benefits have been delivered to the business and not when the project has just been delivered. This will make sure that implementation problems are resolved.

To gain benefits you must have change. In their book 'The Information Paradox,' John Thorp and DMR's Centre for Strategic Leadership say that, "It is a central tenet of the Benefits Realisation Approach that benefits come only with change and, equally, change must be sustained by benefits." "People must change how they think, manage and act in order to implement the Benefits Realisation Approach."

Changing the way people think, work and manage is no easy task, but without it your project is in danger of joining a long list of successful project deliveries that never realised their expected benefit or result.

Common Mistakes

- Believing that a project is over once the delivery and implementation is complete.
- Expecting benefits automatically to drop out of the project without any effort.
- Expecting benefits without change.
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Learning the Lessons

Question 20: Have you looked at the lessons learned from your project?

Good Practice: Every project has the potential to help you run future projects more efficiently. Assess the project whether it was a great-success, total failure or anywhere between. Concentrate on the big, important lessons from the project, the ones that will have a significant impact-on your future projects.

In his article, Lessons Learned: Why Don't we Learn From Them? Derry Simmel, board member of PMI's PMO SIG, identifies two common problems preventing-us-learning valuable lessons from past projects:

- We think the lessons don't apply to us.
- We want to get things done.

"The sad truth is that these lessons learned are useful. That time spent in doing the work better is time well-spent. That getting it right the first time is cheaper and easier than doing it now and fixing it later," Derry says.

History has a strange way of repeating itself. If we don't take time to learn the lessons of the past, and-also act on them, we will continue to commit the same mistakes again-and-again. Don't think it won't happen to you, it will!

Common Mistakes

- Being too busy to evaluate projects when they have finished.
- Moving on to your next project before reviewing the last.
- Failing to learn lessons from past projects.

- Not making lessons learned available to other people in the organisation.

Warning Sign! Making the same mistakes time-and-again.

Celebrating Success

Question 21: Have you celebrated the success of your project?

Good Practice: Before moving on to your next project, it is worth spending some time to celebrate your success. It provides a way to say, 'thank you' to your team and helps with motivation. Always publicise your successes both inside and outside the organisation. This will help raise you and your teams profile and credentials for future projects.

"Completion of a project and the steps along the way can be intrinsically rewarding for project team members. Outwardly celebrating successes also can be a source of motivation for the team. When project milestones are reached, they should be communicated to project team members and stakeholders. Small rewards for team members who go above and beyond their duties also should be considered to communicate a job well done. These rewards can come in various forms, from certificates of appreciation to recognition in the organisations staff newsletter or on its website." 1

In the words of American psychologist Frederick Herzberg, "True motivation comes from achievement, personal development, job satisfaction and recognition."

Checklist

Every project is different and, therefore, presents a new set of challenges. The skills needed to manage projects are becoming a standard part of life in organisations today.

Use this checklist to drive your project success:

- Do you have adequate business sponsorship and leadership?
- Have you defined and understood the business objectives and benefits?
- Have you developed a detailed project plan?
- Is your project a manageable size?
- Have you defined a detailed project budget?
- Are you managing the project risks?
- Have you appointed an experienced project manager?
- Do you have experienced and effective user representation?
- Have you clearly defined the project roles and responsibilities?
- Do you have enough experienced resources?
- Are you monitoring progress regularly?
- Are you distributing regular progress reports?
- Are you achieving the right balance of consultation and leadership?
- Are the user requirements realistic?
- Have you based your development on a prototyping iterative approach?

- Have you conducted structured testing?
- Do you have a comprehensive implementation plan?
- Have you conducted a post implementation review?
- Will the deliverables and benefits of your project survive?
- Have you looked at the lessons learned from your project?
- Have you celebrated the success of your project?

By following these twenty-one steps and continuing to develop and refine your skills, you will be well equipped to excel in the modern business environment.

Managing Small Projects

~ By Simon Buehring

As both an active project manager and project management trainer, I often get asked whether the project management best practices that are applicable for large projects can be applied on smaller projects. This is a really important question and one which all project managers must face up to when managing small projects.

Focusing on Project Delivery

One of the arguments against using project management methodologies is that they are very process-centric resulting in vast quantities of project documentation which are simply not practical or desirable on small projects. This is a powerful argument and any method which focuses on producing documentation at the expense of delivering the real business benefits of the project will be a hindrance rather than a benefit. After all, the name of the game in project management is delivering business objectives, not producing reams of documents.

There is an ongoing and active discussion within the software development community about the best way to produce software on projects. More recently, some software professionals have argued for more agile methods of producing software rather than the more traditional heavyweight methods which focused on producing vast quantities of documentation.

Agile methods focus on delivery of software rather than documentation. With this in mind, I think project managers everywhere can learn something from the agile methods employed in software development. In short, this leads us to focus on project delivery rather than project documentation, although the critical choice project managers everywhere need to make is how much documentation is really necessary?

Apply the Best Practices

I am a firm believer in only producing as much as is required by the project. Nothing more and nothing less. A simple rule of thumb is: if it's useful in helping us to deliver the business objectives of the project then produce it, if it isn't useful in helping us to deliver the business objectives of the project then don't waste time to produce it. With this in mind, I believe that in all projects, at a minimum it is best to apply project management best practices.

Let's consider the best practices in turn and see whether or not the overhead lost in applying best practices is worth the benefits which can be gained.

Defining Objectives and Scope

Even on the smallest project there will be objectives which must be achieved. As a project manager, it is in your interest to define what these objectives are since you are likely to be assessed on whether the project meets those objectives. It is your responsibility to ensure the project meets those objectives and you are accountable for this. In short, the buck stops with you.

Now suppose you don't define and write down what the objectives are, you are always going to be at the mercy of any boss who decides he's got it in for you. The defined and documented set of objectives is your insurance policy against your manager later coming along and saying you didn't meet the objectives.

However, there is another reason why you still need to define and document the objectives even on a small project. You want to satisfy the needs of the stakeholders since that is what you are paid to do as a project manager. If the objectives aren't defined, then you won't be able to meet those needs through your project.

Similarly with defining the scope. The scope forms the boundary of your project. If you don't define what it is, the likelihood is that it will grow and grow as the project progresses and although you might have started managing a very small project, before long your project could become very much bigger than when you set out.

You still need to document who are the stakeholders on a small project as well. By defining who these are, you can ensure that you cover all of their needs when you define the objectives and deliverables.

Defining Deliverables

Somebody is going to have to carry out the actual work to produce whatever is delivered from your project. Even if the deliverables might be small and don't take much time to produce, they should still be written down. By documenting these things and then having them reviewed by others allows errors to be found. Your aim should be to document a detailed enough set of descriptions of the products to be delivered.

These descriptions will then be used by the people who will produce the deliverables. Even if these descriptions take no more than a page of text, it is important to write them in a clear and unambiguous way. If you don't write down a description, it means that the person making the deliverable can interpret what is required in unexpected ways which will only result in work being done later to correct the mistakes. So, always define and document the deliverables.

Project Planning

If you were to walk up Mount Everest, you would never do it without a considerable amount of planning. Even if you walk up the hill at the back of your house, there is probably some planning involved - what time do you go? What should you take with you? It is the same on even the smallest project where you will still need to work out which activities are required to produce a deliverable, estimate how long the activities will take, work out how many staff and resources are required and assign activities and responsibilities to staff.

All of these things need to be written down and communicated effectively to the project team members. I've seen lots of people become unstuck because they think they need to use some kind of project management planning software such as Microsoft Project. This is an unnecessary overhead. I've noticed that people tend to waste too much time making their Microsoft Project Gantt charts look pretty, so that they lose sight of the reason why they are using the tool.

Instead, for small projects I find that creating a bar chart in Microsoft Excel is the best. It is simple and more than adequate for small projects. Just make each column a sequential date, write your tasks in the first column, and fill in the cells to represent the time the activity takes.

In addition to the bar chart, you will need to document the milestones on the project. Milestones are the dates by which you need to deliver certain things, or may be the date on which a major activity ends. The responsibilities of each project member must also be documented in the project plan.

Communication

Even in the smallest project team comprised of just a project manager and one other person, the project manager will still need to assign tasks and responsibilities to the other person. It can't be assumed that they will know what they should do without it being effectively communicated from the project manager. If the project manager doesn't assign them specific activities, then the chances are they will go ahead and work on things which are not needed by the project. So, either the project will end up delivering the wrong things, or the project will get delayed since time will need to be spent later on doing the activities which should have been done earlier.

You can communicate the plans via email, or give a print out of the plan to your project team member(s), or better still, call a meeting and run through the plan with the project team members. Remember, if the plan changes, you will also need to communicate the changes to your team as well.

Tracking and Reporting Progress

If we still consider our two person project team - the project manager and one other person - the project manager will need to know the progress of the activities which the other person is working on. This can be done in a variety of ways: a short daily email detailing the work completed, the work still left to do, and a list of any issues/problems. In most cases this will be sufficient.

Alternatively a short 15 minute face to face catch up can accomplish the same thing. Or a combination of the two things might be best. In any event, the project manager still needs to be fully aware of the progress that is being made so that progress can be tracked effectively.

Change Management

Even on our two person project, changes are likely to occur. Requests for change usually come from stakeholders and it is your responsibility as project manager to assess the impact of accepting these into the project. To do this, you need a good estimate of the impact the change will have in terms of the extra effort and cost involved. This will often impact the schedule as well, so by having a clear understanding of how the schedule and budget will be affected you can make the decision as to whether or not you will accept the change into your project.

On a small project there shouldn't be any need for any fancy change control board to decide if the change is accepted. A quick discussion with the key stakeholder(s) should be sufficient for you to come to a decision providing you have worked out the impact on cost and schedule.

One thing you should never do is simply accept the change. Even if you think the change is small, you should never accept any change(s) without fully understanding what its impact will be on cost and schedule. That is a recipe for what we call "scope creep" where the project grows bigger and bigger as more and more changes

are added into the project. Before you know it, your small project has become a much larger one and you will inevitably fail to deliver your project to your original budget and schedule.

Risk Management

There will be risks even on a small project. Make sure you have thought through all the potential risks at the beginning of the project, monitor the top ten risks each week (or top five if the number of risks is small) and keep looking out for new risks. Failing to manage risk properly is one the main causes for projects to fail.

The overhead in managing risks is very low. On a recent project, I drew up a list of what I considered to be all the risks on the project. It came to about 10 risks in all. Of these, five were serious risks. I worked out a plan to avoid or minimise each risk. In all, it took me little over a couple of hours to do this. Then, each week on the project, I would spend say half an hour reviewing all the risks and thinking of any new ones. At the end of the project, whilst some risks actually had materialised, because I'd identified a plan at the start of the project to minimise the impact of these risks, the impact of these risks on the project ended up being minimal.

So, with little up front and ongoing effort, you get a big pay back if you manage the risks throughout the project.

Summary

So, in summary, applying the best practices to even a small project can be done without creating too much paperwork or overhead. The best practices are the things which countless project managers have done on thousands of projects and are deemed to be the "best practice" because they tend to help you to achieve the best results.

Don't think that because you're managing a small project that you can ditch these best practices because if you do, you will regret it later when your project gets in a mess.

Simon Buehring is a project manager, consultant and trainer. He works for KnowledgeTrain which offers training in project management in the UK and overseas. Simon has extensive experience within the IT industry in the UK and Asia. He can be contacted via the KnowledgeTrain project management training website.