
Module: Business Processes
Unit: Good Practice in the Project Cycle
Lesson: Activity in the project cycle 2

# Activity in the project cycle 2

## Introduction

Controlling and executing a project take the majority of effort in the project cycle and effectively go hand in hand.

Project execution involves undertaking the activities in the project plan in the order specified in the project schedule and to the standards defined by the project. Project control is the process of monitoring, evaluating and comparing planned results against actual results. It is through project monitoring and control that the PM can evaluate project progress against the triple constraints of requirements, schedule and cost (and any other objectives or success criteria set for the project), and take corrective action.

## Role of Communication in Execution and Control

Effective communication is at the heart of successful project control and execution, and a culture of open project communication must be established from the beginning of the project.

## Project Kick-off Meeting

At the start of project execution, the PM should hold a formal project kick-off meeting with the project team and the customer/client. The meeting may be a few hours, a day or longer - depending on the size of the project. The purpose of the project kick-off meeting is to build team morale and ensure that everyone is clear on what is involved in the project. Specifically, the PM should address the following:

- Roles and responsibilities of all team members.
- Roles and responsibilities of customer/client. Most projects today involve pro-active involvement of customers. For example in establishing customer requirements and hence the specification.
- Walkthrough Project Plan; this will focus on and communicate the planned broad project activities in clear and precise terms.
- Standards and metrics to be adopted on the project.
- Rules of engagement on the project.

## Project Meetings and Project Reports

Following the project kick-off meeting, the PM should monitor performance through regular project meetings and project reports, as set out in the Project Communication Plan. The purpose of project meetings is to ascertain project progress, status and identify issues.

Project reports are an important vehicle in project monitoring and execution. Project reports (status and progress reports) are two-fold. The PM receives status and progress reports from team leaders (and maybe team members) on their sphere of activity and then issues project reports to management, the project steering committee, project team and other stakeholders. Reports are thus a vital part of project communication.

An electronic Project Office aids communication immensely. It should be the repository of all project documents so that the necessary information is easily accessible by project team members at any time. The Project Office can also be made accessible by clients and management for access to certain documents.

## Managing Global and Virtual Project Teams

Increasingly projects are distributed across multiple locations, frequently across the world. It is hard enough fostering communication with the person who works half way down the corridor; how does one achieve it in a geographically-distributed project environment? Below we reproduce a post from the United States based PM Coach website, accessible at:

http://thepmcoach.pmbookclub.c om/.../managing-global-and-vir tual-project.html ( Permission to reproduce pending )

My company is working to expand its market position around the globe. Through the creation of new, carefully selected office locations and actively pursuing targeted acquisitions, my company is expanding its footprint in the United States and abroad. As a result of its expansion, some project managers at my company are struggling to make the transition from a "traditional" project environment where project teams meet face-to-face in conference and war room, to a global and virtual environment. This paper will introduce project managers to the skills and techniques that will assist them in effectively managing and leading global and virtual project teams.

## Leading Global Project Teams

As my company expands its reach to locations outside the United States, its project managers will experience new challenges that are different from what they are used to in a more traditional project environment. The primary challenges fall into three areas: language barriers, cultural differences and time zone challenges.

## Language Barriers

English is still the "business language" of choice around the world. However, as project managers begin to work on projects outside the United Stated, they will experience varying degrees of English fluency.Project managers will first notice different accents from project team members. Depending on the individual, accents can range from slight to extreme. The project manager will develop the ability to hear and understand accents over time but initially, understanding requires additional concentration. The project manager might be accustomed to working from his desk in a noisy environment. However, when working with people with strong accents, the project manager should relocate to a quite environment so that he can concentrate and listen carefully to the discussion. In addition, the project manager should feel comfortable asking team members to repeat themselves as they are learning to understand accents. Without this clarification, the team might misunderstand a statement or create an uncomfortable situation if a question or comment is not addressed.The project team should avoid cliches, slang, and humour. In the United States, cliches like "Elvis has left the building" or "Houston, we have a problem" are fully understood. However, that might not be the case for project team members located in other countries. The use of cliches and slang can cause confusion or even offend project team members. The same principle applies to using humour during discussions. Team members with lower fluency levels in English might not understand the subtleties involved with English humour and might interpret the information incorrectly causing additional confusion. Stick to the business at hand and conduct project communications as clearly as possible.Learn some of the basic language of the team members. Project teams will experience names that are unusual for those in the United States. Project managers should ask team members the proper pronunciation of names and practice with the team. A team member can take offence to improper pronunciation of his name. In addition, learn how to say hello and goodbye in the team member's native tongue. The team member will appreciate the effort to learn something unique about them. Even if the person's native tongue is English, they might use different terminology for hello and goodbye. For example, "Cheers" is the common way to end a conversation in England. Completing a conversation or email with "cheers" during calls with counterparts from England helps to build the relationship.In some instances, the English of a team member or a vendor might be so poor that it makes communication impossible. In these cases, use a third party interpreter to bridge the gap. Organizations like Language Learning Enterprises provide on-demand interpretation services for 150 languages across the globe. However, the use of an interpreter can still complicate the discussion. First, the use of an interpreter will take more time than a standard conversation. The interpreter must interpret the initial information and the response. This adds time to each question and comment. In addition, although the interpreter is fluent in both languages, the interpreter might not have a firm grasp of technical or engineering terminology. Work with companies like LLE to try to find an interpreter with the language and technical skills needed for effective project communications.Finally, follow up all discussions in writing. Microsoft Word attachments and e-mail are effective tools for documenting project discussions. Some team members are more comfortable reading and writing in English than they might be speaking. By following up in writing the project manager is able to provide team members with the opportunity to review key information from discussions and clarify areas they might have interpreted differently.

## Cultural Differences

While working with global team members, project managers will learn that what is normal or acceptable in a traditional project environment might not be the same for global team members. For example, in some parts of the country vacation time is considered sacred personal time away from the office. In the United States, most project team members find it acceptable to receive calls with critical questions during a vacation break. However, in other areas, the UK for example, project team members are offended when someone interrupts their personal time for business-related issues. Learn from project team members the behaviour that is expected during vacation breaks.Holiday breaks differ throughout the world. As a project manager works with people from other countries, they must identify the holidays for the local culture and understand the impact of

local holidays on the project schedule and team members. Team members might casually observe some holidays that do not impact the project, while in some situations holidays might shut down all business activities for an extended duration. The project manager must understand the impact to the project and factor holiday breaks into the project plan.Mannerisms can vary depending on the culture or location of your team members. The project manager must learn and understand local mannerisms to ensure the team is communicating appropriately. For example, in India locals consider it impolite to say "no." As a result, a team member from India might say "yes" to a request that he is unable to complete. Project team members in China are usually very reserved in their body movements and facial gestures. As a result, if the project manager uses his hands while speaking he could distract team members and cause them to lose focus.Ultimately, the project manager should research the culture of team members and understand the differences that will impact project communications. When in doubt, ask the team member what cultural difference he should be aware of and take time in the early part of the project to teach project team members about the nuances. Set expectations early in the project that some information might get misinterpreted and that everyone on the team should see clarification when needed.

## Time Zones

What time is the meeting? The answer to that question can be difficult to determine. Establishing a meeting time with someone in another state is challenging enough. Add to the challenge project team members from London, Bangalore and Dubai and the project manager has a potentially significant task on his hands.Daylight saving time (DST) complicates coordinating meeting times. A couple of years ago, the United States changed when it observes DST. Some states within the United States observe DST while others do not. In addition, some countries overseas observe DST while others do not. As with the United States, some areas within countries overseas observe DST while others do not. The lack of consistency across the world can make it difficult for project managers to schedule a meeting and for team members to determine when the meeting is intended to begin. In addition, in a global team environment, participants can be located around the world. Trying to find a time that works for all is problematic at best.To address time zone challenges, use a global meeting planner to identify the local time for each participant. The Meeting Planner at TimeAndDate.com is an excellent tool for this purpose. By adding the location of each participant, the meeting scheduler is able to see the current time differences for each of the participants, adjusted to address local DST for the participant's city location. By scrolling down the scheduler is able to see potential business day meetings times (represented in green) that might work for all participants.Once the scheduler finds a range of times that might work for the team, the scheduler should contact the team members to gain agreement. In the example, the participant from Dubai might be willing to participate at 7 pm, or the participant from Los Angeles might be open to an early morning meeting.Once the team has agreed to a meeting time, the scheduler should include the local meeting time for each participant. If the schedule just includes the local time for the project manager or one of the participants, each of the team members must convert the time specified to their local time. As discussed earlier, DST can complicate this conversion. If the scheduler includes the local time, he will eliminate any potential confusion and increase the likelihood that all participants will attend the meeting at the intended time.In general, when working with global project teams, remember that people tend to view the world from their own vantage point. The project manager and team members should seek to put themselves in the other person's shoes, to realize that others on the team are also struggling with language barriers, cultural issues and time zone challenges. Helping the team bridge these global gaps will improve communications across the team.

## Virtual Teams

As projects become more global and team members are geographically disbursed, project managers will need to become effective at managing virtual project teams. A virtual team is a

project team that has one or more member that participates in project meetings or project work from another location. The virtual team typically uses some form of collaboration technology to connect the team during discussions. Even with technology, virtual teams can struggle to communicate effectively. The following suggestions will help project managers more effectively lead virtual project teams.

### Level The Playing Field

Project managers should level the virtual playing field. In a traditional project environment, a project manager will schedule a conference room or establish a war room for project team members to meet face-to-face. However, in a virtual environment, not all members can participate in the same room. If the project manager schedules part of the team in a conference room and the rest of the team participate through telephone or web conferencing tools, those outside the room are excluded from side conversations or body language that might occur within the conference room. As a result, those participating remotely will feel disconnected from the core team within the room. Instead, project managers should have all team members use the same tools to participate in meetings. If using web conferencing tools, all team members should call in or connect to the conference through their computers. By levelling the playing field, all team members will feel equal and have the same opportunity to contribute to project discussions.

### Get Comfortable Using Technology

In addition, the project manager and team members will need to get comfortable using technology to communicate during virtual team meetings. Telephone and email remain key tools for virtual communication. With the proliferation of web conferencing tools like Webex or LiveMeeting, project teams are also able to share documents and show presentations through a web browser. The project manager should set expectations with the team about what technology he will use during meetings and ensure each team member has the tools and training necessary to participate effectively.

### Conclusion

As organizations continue to change and expand beyond their traditional borders, project managers will be expected to develop the skills necessary to manage effectively global and virtual project teams. By learning the nuances of language barriers, cultural differences and time zone challenges, project managers will position the team to more effectively communicate. In addition, through the effective use of technology to bring geographically disbursed virtual teams together, project managers are able to reach out and lead team members all over the world.

### Monitoring and Controlling the Plan

Timely identification of issues and deviations from the project plan are essential for project success. This is carried out by project monitoring and effective monitoring is necessary for project control. To cover these issues you should now read chapter 8 of the course text, Lewis2007)

**Team Development**

People are your most valuable asset on the project. Successful project execution is dependent on team performance. A PM should be constantly looking for ways to enhance the team's ability to work collaboratively towards project objectives and stay motivated.

Team development is an on-going activity throughout the project, but it is particularly important during the execution phase. This is when it is crucial that the team works well together, especially when project pressures (tight deadlines, unexpected events, issues) are high. So do nt neglect team development activities. As a PM you should develop the "soft" skills of people management.

## my learning space activity

What are some of ways in which a PM can promote team development and motivate the team - especially when the going gets tough in project execution?

## feedback

Here are some ways to enhance your team's ability to function well towards project goals:

- Team building activities
- Rewards and recognition
- Celebrating project successes
- Education and training

**Team building activities**

Facilitate team development by team building activities. Ensure the team building activities are appropriate for the team as a whole, and that no one feels excluded. Team building activities vary - it might just be a short activity during a project meeting, or it could be a facilitated off-site event - perhaps to identify personality types (e.g. Myers-Briggs) and how to work better by recognising different personality types and roles (e.g. Belbin). The chosen team-building activities would depend on the project - its size and duration.

**Rewards and recognition**

Rewards and recognition are an important part of motivation. If a team has worked very hard to accomplish a challenging deadline, the team should be rewarded as a team (perhaps pay for all the team members to go out for dinner with their partners). The reward system should make the linkage between performance and rewards explicit. High performing teams and individuals should also be publicly recognised.

**Celebrate project successes**

Ensure you celebrate project successes. Especially when the pressure is high, it motivates the

team and keeps the team focused on project goals. Achievements such as the completion of the design phase or client acceptance of a unit can be celebrated - perhaps by the team going out for lunch, or some fun activity.

**Education and training**

Education and training undoubtedly enhance team development. They motivate the individuals receiving the education or training and can also enhance team performance. Training can be formal (e.g. attending a course or an e-learning programme) or informal (e.g. mentoring, coaching, team member feedback).

## Earned Value Analysis

PMs are responsible for ensuring that their projects meet or exceed the financial goals set by their organisations. Equally important is that they deliver the work to specification and to schedule.

A technique, known as Earned Value Analysis (EVA), is an excellent way of monitoring project progress against planned outcomes. EVA integrates cost, schedule and work accomplished (the triple constraints) to give the PM an objective view of where the project is against plan. It provides the necessary early warning signals when the project steers off-course.

## EVA

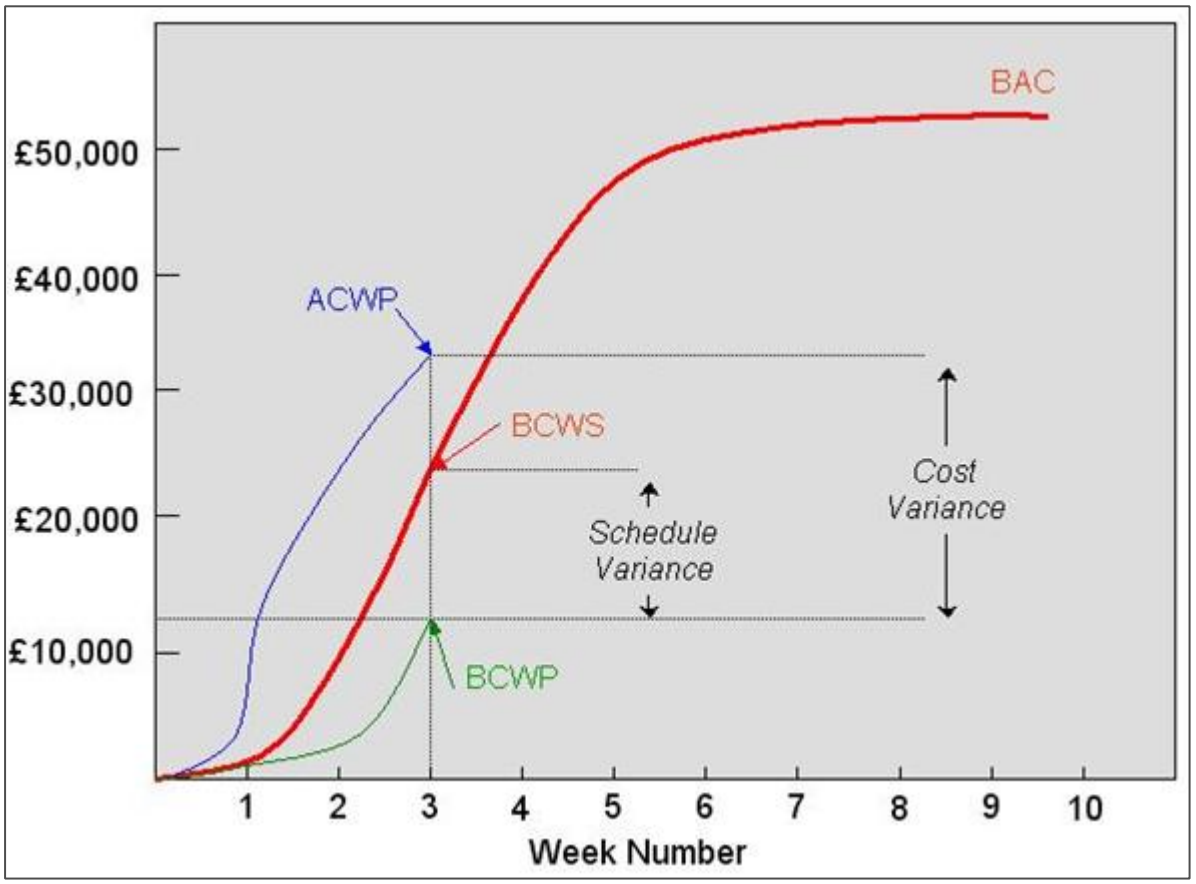



**Figure 4.13 - Earned Value Analysis**

The solid red curve represents the cost baseline. At the top of the curve, is the BAC (budget at completion). The BAC represents the estimated baseline total cost at the end of the project. At any date on the project, the red curve represents the BCWS (budgeted cost of work scheduled). That is the sum of the approved costs for activities scheduled to be performed up to that specified date.

The blue curve represents the ACWP (actual cost of work performed). That is the total costs incurred on the project up to a specified date. It shows the "**actuals**" (as opposed to "planned" or "budgeted" figures).

The green curve represents BCWP (budgeted cost of work performed). That is the total of the cost estimates for activities **completed** on the project up to a specified date. BCWP is also known as **earned value**. Thus work is only earned or credited as it is completed.

Using these curves, the cost and schedule variances can be derived.

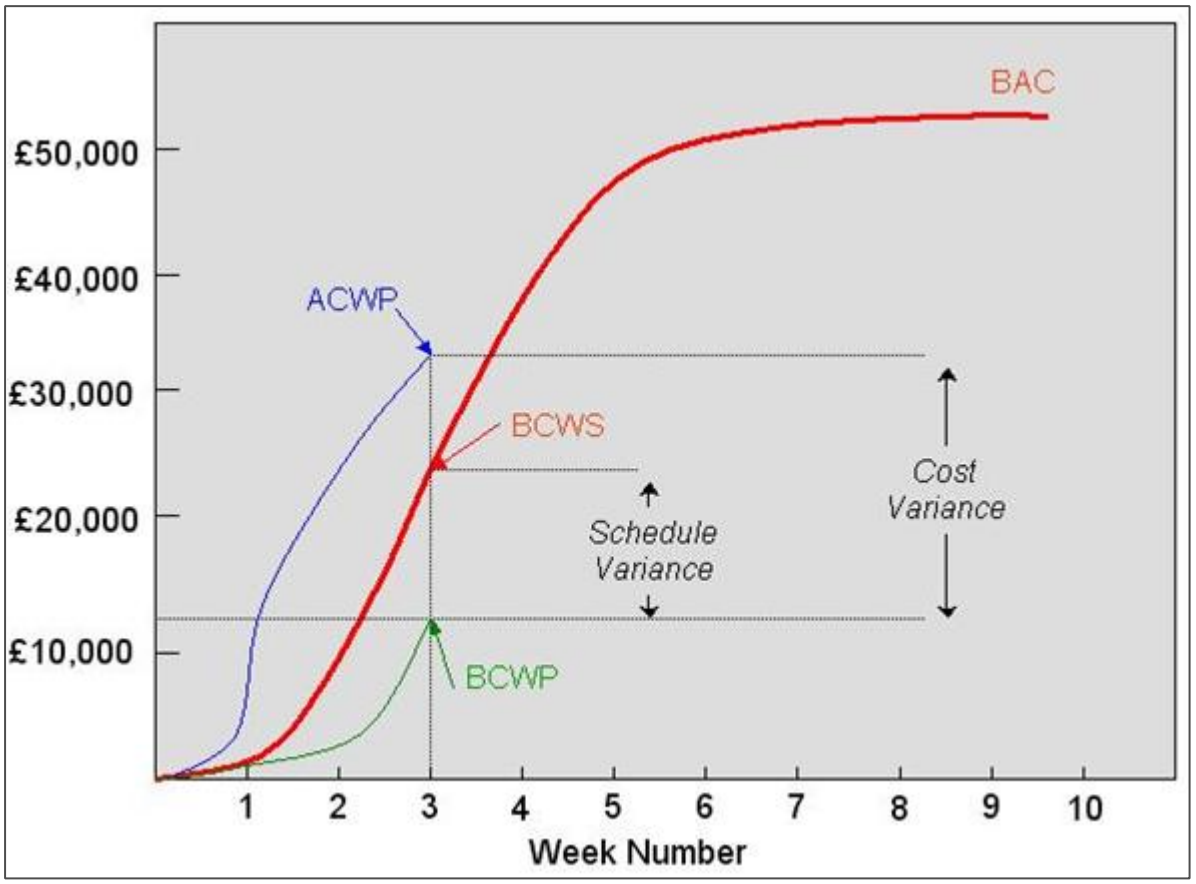



**Figure 4.13 - Earned Value Analysis**

The cost variance (CV) is:

CV = BCWP - ACWP

CV represents the difference between the value of what was really accomplished (earned value) and what was spent to do it.

The schedule variance (SV )is: SV = BCWS - BCWS

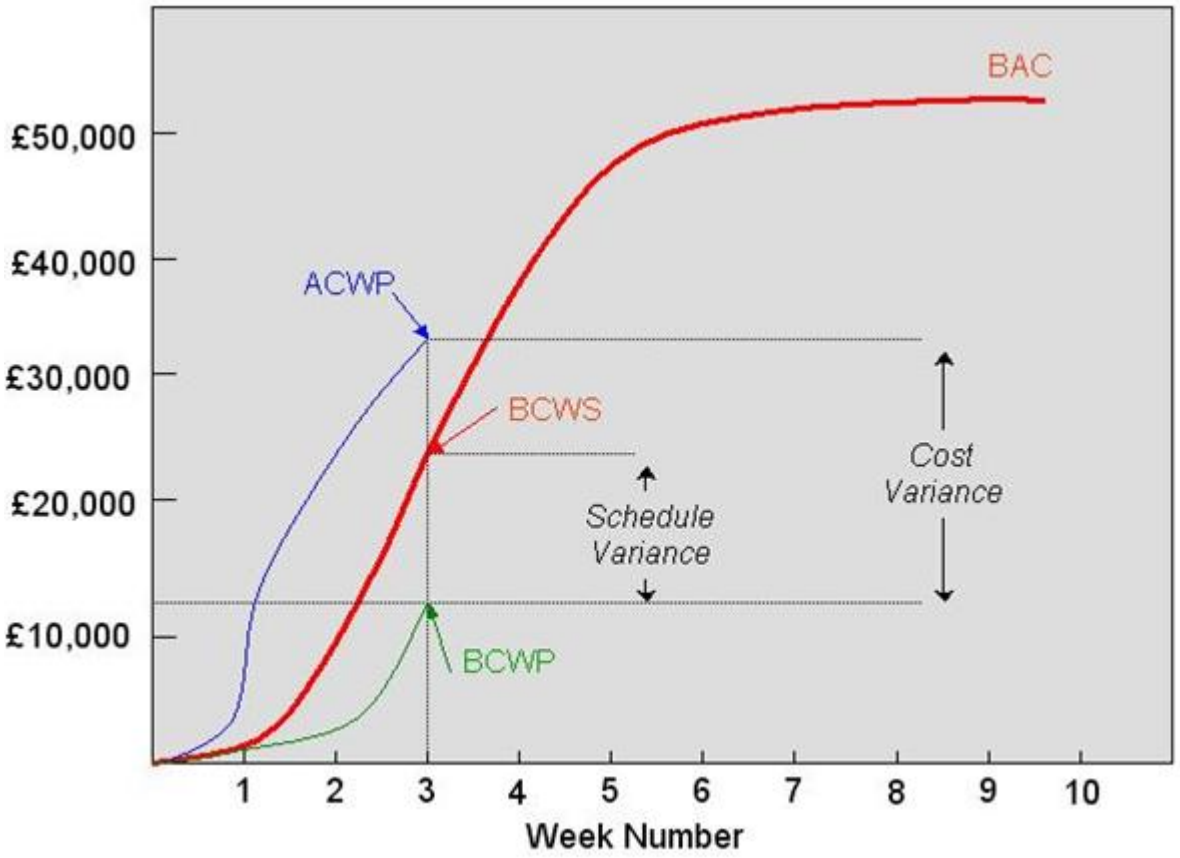
SV represents the difference between the value of what was really accomplished (earned value) and what was scheduled to be accomplished.

Find out more about Earned Value Analysis by reading the article by Suketu Nagrecha, MBA, PMP, CNA posted by the Great Lakes Chapter of the Project Management Institute and accessible at:

http://www.pmiglc.org/COMM/Art icles/0410_nagrecha_eva-3.pdf

You should also now read chapter 9 of Lewis (2007).

Review this EVA chart once again…




How do you think the project depicted on the chart is performing?

Clearly the project is in some trouble.

Not only is there a cost overrun (ACWP is far in excess of BCWP), but the project is also behind schedule (BCWP is less than BCWS).

In EVA work is only earned or credited when the PM is satisfied that it is complete.

- But, as PM, how do you know when something is really complete?
- How do you verify completion?

It is vital that PMs understand that work can only be credited when it is fully complete and has produced the specified output (deliverable).

Scope verification is vital. Just because your brightest and most diligent team member says his work package is complete, it does not mean it is. It must be verified. The team member may have inadvertently overlooked some aspect of the deliverable that only the formal acceptance stage at closure will pick up.

The PM can have confidence that the work is complete, only by means of an acceptance of the work package concerned. All deliverables (internal or external) should have such an acceptance.

In EVA we noted that earned value (BCWP) is the critical parameter. It represents the budgeted cost of work actually performed. But when can you count work as work performed (completed)? Completion should be associated with formal acceptance. Depending on the work product, acceptance may be by completion of testing, or by a review (as with design documents) or a walkthrough (architecture). Acceptance can be conducted by peers, team leaders, testing staff, customers, the PM, people outside the project team etc. It depends on the particular deliverable.

Clearly at the end of the project there will be a formal acceptance by the client. Formal acceptance

will provide documentation to certify that the client has accepted the project product.

EVA provides the PM with the insight to see a problem developing whilst there is still time to do something about it.

### Monitoring and Corrective Action

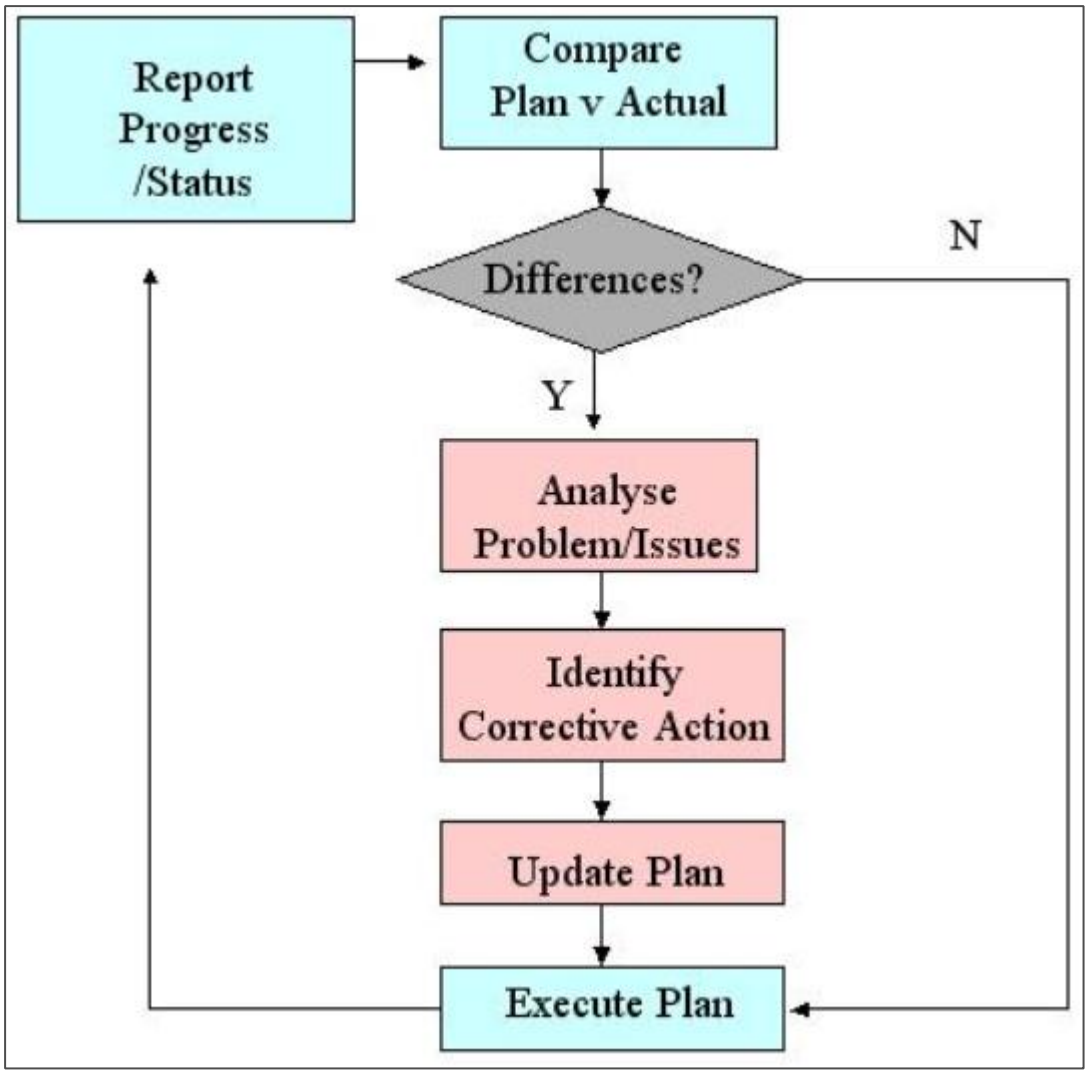



**Figure 4.14 - Reporting, Monitoring and Corrective Action**

The chart above shows the continual process of reporting and monitoring for project control.

Reporting has to be a regular activity on a project and is central to project monitoring. As we said before, reporting is both from the PM to management/project steering committee/project team/client as well as from project team to the PM.

Following analysis (e.g. EVA), if there are significant variances between "actuals" and "planned", corrective action will need to be introduced by the PM. A pre-cursor to corrective action is a thorough analysis of the problem/issues and exploration of available options so that corrective action is both appropriate and likely to be successful. Once corrective action has been identified, the plan is updated and the updated plan then executed by the project team.

## Change Management

The reality with projects is that changes will occur - changes triggered by external or internal events. So the original baselines for the project are almost certain to be changed before a major project is completed. The PM must recognise that some changes will occur. But the PM must also establish a strict, formal change management process to control changes and ensure scope creep does not take over.

## Causes of Project Changes

Meredith and Mantel identify three basic causes of changes in projects:

**Planning errors**

Changes resulting from planning errors in (i) the initial assessment of how to achieve a task, or (ii) more fundamental errors in choice of goals for the project. Technology is often the cause of both types of planning error

**Increase in project knowledge**

By this is meant that changes occur because the client/project team learns more about the nature of the project deliverables as the project progresses.

**Mandates**

This term refers to new laws and regulations, which have an impact on the project. Compliance to new laws/regulations often means a change in scope

## my learning space activity

Can you identify examples of changes, perhaps from your working experience, arising from:

- Planning errors?
- Increase in project knowledge?
- Mandates?

## feedback

**Planning errors**

A typical planning assumption might be that a particular technology can be used to achieve a task. However, the technology proves not to be viable, necessitating a new approach resulting in scope change, schedule change and cost change.

**Increase in project knowledge**

One example could be a team working on a project to develop a new software system discovers new innovative uses for the software system during the development phase. Discussions between the project team and marketing identify this innovative application as a huge market opportunity. A decision is then made to change the scope of the project.

**Mandates**

Again a relevant example here would be the Data Protection Act mandates additional safeguards to protect privacy and this impacts the scope of a project relating to business intelligence.

PMs will agree that the most frequent cause of change is the tendency of the customer to try to improve the "product" of the project occurring within the change category "increase in project knowledge".

Such requests for change arise as the project progresses and as the customer becomes more aware of e.g. performance requirements, the potential for using alternative/new technologies, the benefits of new features or a new business requirement.

Whatever the type of change, the PM must control these changes and follow a rigorous process to ensure that they are indeed in the best interests of the majority of stakeholders. Whenever there is a change in scope there is almost certainly a need to change schedule and cost baselines - usually an increase in the time-scales of the project and an increase in costs! When this is translated into later project delivery and increased cost, customers are often less aggressive in pushing for change!

## Change Management in Practice

Every project must establish a formal change management process and every project team member must be familiar with the process.

Change Management includes the following:

- Change Management Process
- Change Control Body (CCB)
- Change Request (CR) Form
- Change Control Log

Before we introduce the Change Management process let us define the other aspects of change management.

### Change Request (CR)

The Change Request Form is the formal document that outlines the new requirement and associated details. It is also the formal document that captures the investigation, impacts, evaluation and implementation decision.

### Change Control Board (CCB)

The Change Control Board (CCB) is the project authority that receives, reviews and makes decisions on a Change Request (CR). The decision may be Accept, Reject or Defer. The CCB may delegate certain CR decisions to the PM. For example, the PM may have delegated authority to approve items that fall into the corrective maintenance category, or technical changes concerning implementation that do not affect project baselines. Although these CRs may be authorised by the PM, they require the same stringent attention as any other CR.

### Change Control Log

The Change Control Log lists the Accept, Reject, Defer decision for each CR. It can just be a simple spreadsheet. All of the above information should be available for the entire project team to view and should ideally be posted on an Electronic Project Office.

## The Change Management Process

The Change Management process is the formal process by which changes are recorded, assessed and accepted/rejected. It is also referred to as the Change Control Process. The entry point for the process is a Change Request. Every change - internal or external must be recorded on a Change Request form.

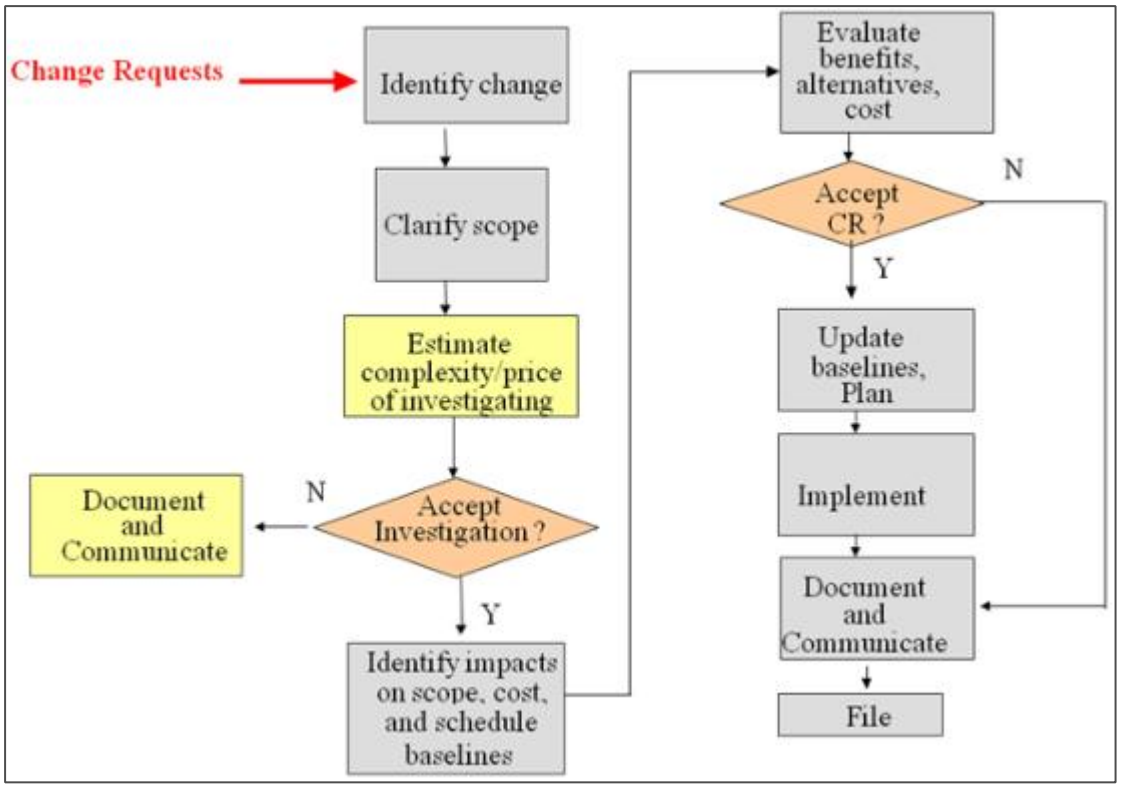



**Figure 4.15 - Change Management Process**

Next we go through the steps in the process.

**Identify Change**

PM assigns a unique number to the Change Request that has been submitted.

**Clarify Scope**

Clarify the exact nature of the change being requested). (This can be carried out by the PM submitter of the requirement - the description should be clear and unambiguous, and to the satisfaction of the Project Manager).

**Estimate complexity/cost of investigation (optional)**

Where appropriate (e.g. a complex requirement which cannot be sized in effort/cost without significant investigatory work), this should be done by the PM.

**Approve Investigation (optional)**

Where step 3 applies and the cost of investigation is significant, this checkpoint is necessary. The CCB must give explicit approval for the investigation and approve the associated cost (effort).

**Identify impacts on scope, schedule and cost baselines**

This is at the heart of the Change Management process and the PM is responsible for providing this information to the CCB. Without this information, the CCB cannot and should not make a decision on the CR.

**Evaluate benefits, alternatives & costs**

After the step above, the CCB should, with the understanding of the impacts on the project baselines, evaluate the benefits of the Change Request. Alternatives, where appropriate (e.g. subcontracting), and their costs should also be considered.

**Approve Change Request**

This is the checkpoint for the decision on the Change Request. The decision will be Approve/Reject/Defer.

**Update Baselines, Plan**

The PM updates the scope/schedule/cost baselines and updates the Project Plan.

**Implement**

The PM initiates implementation of the approved change

**Document and Communicate**

The PM updates project documentation and communicates decision to submitter/originator of change request

**File**

The PM files Change Request and updates Change Log

The PM may be empowered to authorise themselves changes that do not affect cost and schedule baselines. Other changes must be authorised by the CCB - a group of authorised representatives designated in writing. The CCB will have a chairperson and will include the PM as a member of the board.

On some projects (e.g. high-tech projects), investigating changes in itself is a significant activity. On such projects, a budget should be reserved for investigating changes.

## think about it

Is the bureaucracy of change management really necessary for all projects and even for small changes?

## feedback

Without control, a continuing accumulation of small changes can have a major and negative impact on the project. Once you allow one change slip through the net, you have set a precedent for circumventing the process on other changes.

An informal process of handling change requests puts the project at risk. Misunderstanding often arises out of informality and the PM finds that the project is committed to increased scope but has to absorb the additional cost and find some way of delivering within the original schedules. This is a sure recipe for disaster.

Always follow the change management process.

## top tips

Change Management then is the PM's ally. It is an important process in project management.

Always follow the change management process...however small the change.

## my learning space activity

In your experience...

- In what ways can a project team inadvertently deviate from baselines jeopardise the project?
- What is the consequence of the above?
- As PM what steps can you take to avoid deviations from baseline?

## feedback

**Ways in which team members violate baselines and jeopardise the project**

- Undertaking work that is outside of scope. Including what they think is a 'nice to have' feature. Team members must adhere to the approved scope baseline - as defined in the work package spec (on WBS).
- Undertaking work that is not assigned to them, but to another team member.
- Agreeing something (e.g. additional functionality, change in specification) with the customer directly, without going via the PM.
- Carrying out work without really understanding the requirements/specification and not getting clarification.
- When there is 'bad news' (e.g. technical problem, delay) not informing the PM early enough.

**Consequences of deviating from baselines**

Without adhering to the baselines, scope becomes infinite and the project is doomed to failure. When there is scope creep (for the reasons identified above), this impacts the schedule and that in turn impacts cost. Similarly, if there is 'bad news' this needs to be brought to the attention of the PM quickly, so that the PM can take corrective action (e.g. assign more team members to the task) quickly. As we noted earlier, the three baselines are inter-related, and referred to as the triple constraints of project management. Violating one baseline impacts the others.

Right at the beginning of the project it should be emphasised that team members must work with the PM in defending the baselines. Team members should never undertake changes or deviate from the baselines without the authorisation of the PM.

**What steps can a PM take to minimise such problems?**

- Highlight the importance of the Change Management Process regularly to all project stakeholders.
- Walk through the Change Management Process at the project kick-off meeting, and, from time to time, at other project meetings.
- Emphasise the fact that changes will occur, but that changes have to be managed through the formal process of change management. Make team members aware that changes can be instigated from within the team (e.g. putting right an oversight, identifying a better way of doing something, a realisation that a task is going be more involved than envisaged).
- Get team members accustomed to submitting change requests. "Force" a Change Request submission early on in project execution, to get team members familiar with the process.
- Emphasise that "bad news" can usually be managed, if it is made known early. Therefore team members should not delay in informing you of problems (or potential problems).
- Develop a supportive environment whereby team members feel able to inform you of "bad

- news" without the fear of being penalised.

## my learning space activity

Review Activity

Your project team is developing an IT system for a large, high profile customer. You have a good relationship with the customer.

Project estimates and costings were developed on the assumption that a 3rd-party software package would be used for some of the IT system. However, your technical experts have now come to the conclusion that the 3rd party package will not meet one of the requirements in the baseline. In your view the requirement is not critical. However, if the customer is insistent that the functionality is met, then the third party package may have to be replaced with something else, possibly developed from scratch. This will clearly require a significant change in scope.

What steps should you take as PM?

## feedback

These are some of the steps that are recommended...

- Involve the project team in brainstorming all alternatives.
- Once viable alternatives have been identified, ask the relevant members of your team to estimate the additional effort required.
- Inform the Project Steering Committee as this issue has potential for significant cost/schedule overrun and customer dissatisfaction.
- Call for a meeting with the customer and involve some of the technical experts from your project team.
- Ensure that you and your team are well prepared for the discussions with the customer.
- Present the problem, but reduce the 'pain' by proposing alternative solutions. Sensitively discuss the feasibility of dropping the 'problem' requirement. Another solution may be to get the customer, as the customer is large and high-profile, to apply pressure on the third party vendor to add the missing functionality.
- Once a way forward has been reached with the customer, you will need to prepare a change request for approval by the CCB.

The way forward may require a change to schedule and cost baselines.

If the project is a fixed price contract and the customer refuses to pay for the additional cost, the project may incur losses.

If agreement cannot be reached with the customer on the way forward, then the project steering committee may decide to close the project (and may incur penalties)

This sort of problem is very common especially on technical projects. Usually an acceptable way

forward can be found with the customer, if a good relationship is maintained with the customer. As PM you should strive to maintain a partnership relationship with the customer at all times.

**Responding to Risks**

Just as changes are inevitable, risks are likely to occur during the course of the project. Hopefully most of the risks are ones that you planned for (in the project planning phase), but there may be new risks that surface during project execution.

We illustrate how to respond to risks through an activity.

## my learning space activity

The following risks have arisen during project execution.

1. Critical dependency has arisen on a high-risk technology
2. A key supplier has become financially unstable
3. An inadequate Requirements Specification has been received from the Customer

Propose ways of responding to each of the above risks.

## feedback

Some of the above risks may have been planned for and there will then be a documented mitigation strategy that should be executed. However, it should be noted that even the most comprehensive risk analysis during project planning will not detect all risks. Some risks may surface during project execution.

Here are some ways of responding to the risks above.

Critical dependency on a high-risk technology

- consider if there are alternative lower-risk technologies
- if this really is the only available technology, testing should be undertaken to evaluate the technology as soon as possible. The customer should be made fully aware of the high-risk nature of the technology, and be involved in decisions relating to its use

Dependence on financially unstable supplier



-

- find alternate supplier
- if your organisation is large enough, it may consider acquiring the company if there is a critical dependence on it.

Inadequate requirements spec from customer: one way to manage and improve these is to organise requirements workshops with the customer and follow a rigorous methodology to derive the requirements spec.

You should now read 'The 10 Golden Rules of Project Risk Management at the Project Smart website, accessible at http://www.projectsmart.co.uk/ 10-golden-rules-of-project-ris k-management.html

**Role of Computer Packages in Project Management**

No course on project planning and project execution will be complete without a discussion on the role of computer packages.

Project Planning and Tracking software can contribute significantly throughout the project cycle. Scheduling packages are almost always used for the production of Gantt charts and the tracking of project progress. However, PMs should guard against the misguided notion that the project management tool will do the work of managing the project for them. Project management practices have to be understood first and the relevant computer tools can then be used to deploy these practices with sound judgement.

There are a number of project management packages on the market - the best known being Microsoft Project and ABT Project Workbench. There are also a number of sites (e.g. www.project-management-software.org) that offer project management software.

As already highlighted, there is also definite benefit in deploying an electronic project office. The electronic project office is especially useful for large or distributed projects and is the repository for all project documentation ranging from the baselines to Change Requests, to Change Log, to Project Standards and to the Project Risks Register.

## my learning space activity

Your team have just completed phase 1 of a time-critical project. You very nearly missed the deadline and went over budget by £20K.

Your lead Software Engineer and 2 members of the test team worked considerable overtime to hit the deadline. The database engineer fell ill and came off the project 4 weeks before the deadline. No other team member could step into her shoes, so you had to hire 2 contractors (and blew your budget!). There is considerable resentment that the contractors were paid a lot but showed little commitment.

Now you have phase 2 of the project to contend with....

As PM what can you do to restore morale and motivate the team? Discuss and identify specific actions you can take.

feedback

1. Recognise the individuals who worked hard to deliver the project. As the inference is that it was individuals rather than the whole team that worked above the call of duty, it might be appropriate to reward those individuals. If appropriate, give those individuals more responsibility on phase 2 of the project.

2. Have some sort of team celebration for the achievement of the significant milestone (they achieved the schedule, even though went over-budget).

3. Ensure that there is no area of expertise where no one else can step in, in an emergency. The problems arising from the database engineer going off sick could have been avoided if there were 1 or 2 other members of the team able to step in.

4. Finally ask yourself, was there sufficient risk planning; were the schedules too demanding? What are the lessons learnt from phase 1, and what steps can one take to plan/execute phase 2 better? Involve the team in discussing the lessons learnt and in proposing better ways of doing things for phase 2 - this activity in itself will motivate the team.

**Closing the project**

A project is not finished until the customer has formally accepted the project. Acceptance criteria would have been agreed with the customer at the beginning of the project, and the PM and the team must now demonstrate that the "product" of the project meets these acceptance criteria and obtain customer signoff.

**Why Close a Project?**

You may wonder why project closure is necessary. Once the work of the project is completed is it not finished? The answer is 'yes'...but the work of the project, also includes a closeout phase. The closeout phase should be planned just like any other project phase in the project cycle, and it should be resourced and scheduled.

Closeout is necessary to ensure that:

- The client/project sponsor formally accepts the project
- Project records are completed
- Completion criteria are met and final documentation issued
- Essential project documentation is retained
- A lessons learned document is prepared

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As PM you personally must ensure that:

- The Client and Project Sponsor formally accept the project deliverables
- Administrative procedures are completed

- Team members are assigned to other projects/work
- Lessons learnt are captured

**Formal acceptance**

The first important aspect of project closure is obtaining project signoff from the client/sponsor. The client/sponsor has to formally accept that the project has completed the work it set out to perform by meeting the acceptance criteria and making the agreed deliverables.

**Re-assignment of Team Members**

During project closure, team members are assigned to other projects or work activities. You as PM should play a pro-active role in finding team members suitable roles. Your input will be sought on their individual performance, as well as their ability to function well in a project team.

**Administrative Activities**

There are administrative activities to be concluded. As PM you need to ensure that all records are completed and that essential project documentation is retained.

**Lessons Learnt**

It is essential that the lessons learnt on the project are captured. Project experiences and challenges can serve as useful input to other similar projects or improve project practices within your organisation.

### Project Closure Checklist

A check-list is useful in ensuring all the activities in project closeout are performed.

Use a check-list of questions to verify if all closure activities have been completed.

- Can the project end and should it end?
- Have all contractual obligations have been met?
- Has client/sponsor acceptance been obtained (formal acceptance)?
- Have project accounts been closed?
- Have all final reports (to customer and management) been issued?
- Has project documentation been issued?
- Has essential project documentation been retained?
- Has a lessons learnt document been prepared?

### Formal Acceptance

Formal acceptance is the key milestone in project closure. If the client/sponsor is not satisfied that the acceptance criteria have been fulfilled the project cannot be closed. Obtaining formal acceptance should be planned for right at the beginning of the project.

Here are important points to be noted in relation to formal acceptance:

- Formal acceptance criteria are usually specified in the project contract
- The PM is responsible for conducting the formal acceptance procedure
- Acceptance by the client/sponsor may be conditional
- Documentation that the client has accepted the product of the project must be prepared and distributed
- The client must be formally notified that the contract has completed following acceptance

## top tips

Formal notification that the contract has been completed is in writing, and usually comes from the contracts department of the performing organisation.

### Final Project Review

A Final Project Review should be conducted by the PM before team members disperse to new projects.

The objectives of this final review are to:

- Ensure that all contractual obligations (to supplier and client/ sponsor) have been met
- Prepare a report based on the review

## my learning space activity

Think back to the last project you managed...

- What went well on the project?
- What went badly?
- Noting what you have learnt, capture the lessons learnt.

# Knowledge Checks

## Fill in the blanks

Requests for changes arise as the project progresses, and can arise as a result of ?????.

increased knowledge or mandates. Usually, it is as a result of the customer becoming more aware of performance requirements, the potential of using alternative/new technologies, the benefits of new features or a ?????.

Whatever the type of change, the Project Manager must control these changes with a rigorous and formal ????? process to ensure that these changes are indeed in the best interests of the majority of ?????.

The later changes are made to the project the more difficult and ????? they are to complete.

Without ????? and change management, scope becomes ?????....and the project will fail.

**You have answered 0 answers out of 7 correctly.**

## Fill in the blanks

Change Management includes the Change Management Process, Change Control Body, Change Request Form ?????The Change Control Board (abbreviated as CCB) is the project authority that receives ????? and makes decisions on a ?????. The decision may be an Accept, Reject or ?????. The Change Control Board may delegate certain Change Request decisions to the ?????; usually ones that have no impact on ????? and little impact on schedule.

The Change Request Form is not just a mechanism for capturing changes; it is a formal project document and provides the ????? capturing the decisions made by the CCB on any particular Change Request.

**You have answered 0 answers out of 7 correctly.**

# Knowledge Checks - Solutions

## Fill in the blanks

Requests for changes arise as the project progresses, and can arise as a result of planning errors.

increased knowledge or mandates. Usually, it is as a result of the customer becoming more aware of performance requirements, the potential of using alternative/new technologies, the benefits of new features or a new business requirement.

Whatever the type of change, the Project Manager must control these changes with a rigorous and formal change management process to ensure that these changes are indeed in the best interests of the majority of stakeholders.

The later changes are made to the project the more difficult and baselines they are to complete.

Without infinite and change management, scope becomes ....and the project will fail.

**You have answered 7 answers out of 7 correctly.**

## Fill in the blanks

Change Management includes the Change Management Process, Change Control Body, Change Request Form Change Control LogThe Change Control Board (abbreviated as CCB) is the project authority that receives reviews and makes decisions on a Change Request. The decision may be an Accept, Reject or Defer. The Change Control Board may delegate certain Change Request decisions to the Project Manager; usually ones that have no impact on cost and little impact on schedule.

The Change Request Form is not just a mechanism for capturing changes; it is a formal project document and provides the audit trail capturing the decisions made by the CCB on any particular Change Request.

**You have answered 7 answers out of 7 correctly.**