

SMARTWORKS

▸ Managing Risks in your project - A practitioner's approach

Just like as death and taxes are the only certainties in our lives, the only certainty in a life of a project is the occurrence of risks. In this chapter we will try to show how we could guard against these risks in a project by anticipation, right assessment strategy for handling them as and when they occur.

☒ What are risks ?

Risks are typically unforeseen events, which can cause adverse impact to any project. Risks can happen to any of the parameters of a project namely its schedule, scope, resources and quality. Risks are the ones, which give credence to the laws you hear and generally make the life of a project manager interesting.

☒ Are they a certainty?

Yes. They are. If things can go wrong, they will. When they go wrong they seem to go wrong absolutely! All experienced project managers would vouch for the certainty of risks in projects.

☒ Is there a way to plan for managing risks?

Yes. Planning for a risk includes the following activities:

- ☒ Anticipate and identify all potential risks, which can happen
- ☒ Associate a probability with each of the identified risks
- ☒ Make an impact assessment if the identified risks were to happen
- ☒ Have a mitigation / contingency plan for each of the identified risks
- ☒ Watch out for the early signs
- ☒ Understand the effectiveness of the contingency plan and refine accordingly
- ☒ Update risk database as unanticipated risks happen

☒ How does one anticipate and identify risks in a project ?

Risk anticipation comes with experience. But even a novice project manager can anticipate risks in a project. Some of the risks that normally occur in a project are:

- People may leave the project mid way (attrition)*
- Complexity of a task is underestimated*
- Customer may cancel the order*
- An Earthquake may happen which can have a telling effect*

And the list goes on. One of the things a project manager needs to do is to associate the risks with a specific parameter. For instance employee attrition is a resource risk. But it is likely to have an impact on schedule and even the scope of the project is not handled. Release of a competitor's product ahead of schedule is a schedule risk for your project, which again impacts the scope of your project and might necessitate a manager to add more resources.

In planning for risks, experience is the best teacher. One of the things a project manager can do is to find out similar risks from the past and import their risk database to his/her project. This way (S) he could leverage from the experience of other project managers. Smartworks - Project Planner has the following option, which allows you to do this with ease. To do this, a project manager needs to export the risk database of a similar project as shown below

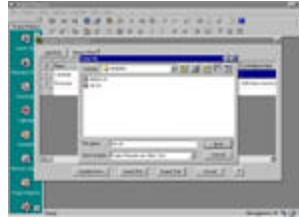


Fig1.1: Exporting risk database of a project

The risk database of a project is saved usually with a .rsk extension Now you log in to your current (new) project an database as shown below.

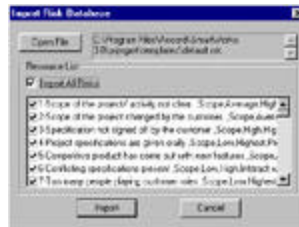


Fig1.2: Importing the Exported risk database of a project

In case if you are not able to find a similar project you need not despair. Smartworks Project Planner comes w database which can be used in your project.

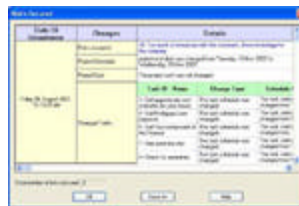


Fig1.3: Default risk database

☞ How does one arrive at a probability of occurrence for the risks we have identified?

While there can be thousands of risks which can happen to a project not all risks are likely to happen. Some risk probability than others. For instance earthquake is a risk which when happens may have a deadly impact on a project to happen compared to attrition in a project. (May be if the location is prone to earth quakes then this might not be tr

In general the following risks are likely to have a high probability of happening in any project which spans for a year or

- Employee takes unplanned vacation (falls sick). - Resource risk*
- Customer adds new requirements after they are frozen. - Scope risk*
- Marketing wants you to release the product ahead of schedule - Schedule risk*

Following are some of the risks which may have a low probability of occurrence

- New invention/technology renders the product obsolete*
- Political instability in a supplier's country affects supply of raw materials*

All the project members meet with an accident during a company vacation

And there are hundreds of risks which have a medium probability of occurrence. It should be borne in mind that probability of occurrence is not static and it can change depending on situations. For instance a medium probability risk " Supplier raw materials" becomes a high probability risk when an associated risk "Political instability in a supplier's country affects raw materials" really happens. This also illustrates how the risks themselves are related to each other.

A project manager needs to arrive at the risks and associate a probability of occurrence to each of the risks. The arrived at needs to be revisited periodically and updated.

Project manager needs to be bothered with the risks, which have a higher probability of occurrence. Once high probability risks are arrived at then the project manager needs to study the impact of each of these risks if they were to happen. Based on the probability and the impact of the risks the project manager needs to come up with the mitigation / contingency plans for each of them.

Smartworks Project Planner currently lets the user classify the probability of risks into 3 categories namely high , medium and low. This can be done by the project manager by performing the following operations.



Fig1.4: Dialog box which shows how probability of a risk can be edited by manager

How can we assess the impact of each of the identified risks in our project ?

Each of the risk has an impact (usually adverse) in a project. Some of the risks have a much higher impact on the project than the other ones. Some of the risks which has a high impact in a project are

Attrition of a critical person mid way in a project

The schedule of a project gets compressed by 25% due to market pressure Budget exceeded for the project

The above risks , when they occur have a telling impact on project's health. While in some cases they may result in cancellation of the project , it might atleast affect the scope and the quality of the final deliverables to the customer.

There are other risks in a project which may have a lower impact . Some of them could be

Employee reports sick for a day

Customer makes a minor modification to scope

Marketing wants the product to be released 1 week ahead of planned schedule.

Not all the risks, which may have high impact, are necessary to be worried at. For example when a tornado strikes it to be high but if you are not in tornado prone areas that risk is as good as not there. So what is really important is the probability of a risk and the impact of it rather than the impact of the risks alone.

Smartworks Project Planner currently lets the user classify the impact of risks into 3 categories namely high , medium be done by the project manager by performing the following operations.

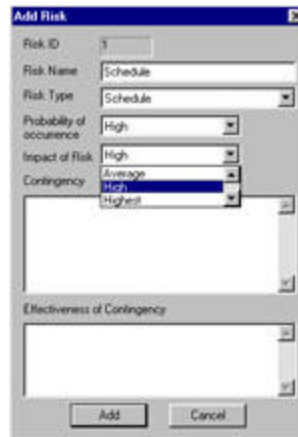


Fig1.5: Importing the Exported risk database of a project

☞ How can one make an effective contingency or mitigation plan for identified risks?

Project manager needs to have a plan to handle risks whenever they happen. These plan needs to be planned in advance the risks happen as the manager will not have any time to react to the situation. For instance a project manager needs people in the team to handle attrition in a project. If this plan was not there in the first place and if he has to recruit a new attrition as and when it happens the project would be in disarray soon.

Let us see some examples of contingency plan:

a) Risk name: There is a possibility of more non RSVPed invitees turning in for the party

Contingency plan : *Ensure that there are 10% more seats available and the caterer can handle 10% overflow of guests.*

b) Risk name : There is only one person identified for evaluation due to resource constraints.

Contingency plan : *Make developers aware of this fact and let them take the responsibility for unit testing including plans. Identify one of the developer who finishes his/her task early in the team to join the evaluation team during phase*

As you can see a risk has to be anticipated in advance in order to effectively handle it. These contingency plans do not prevent from happening but soften the blow when it comes.

Date Of Occurrence	Changes	Details																								
Tuesday 30, September 2003 - 12:35:11 PM	Risks occurred	No risks were chosen when the changes happened																								
	Project Schedule	The project start or end dates were not changed																								
	Project Cost	The project cost was not changed																								
	Changed Tasks	<table border="1"> <thead> <tr> <th>Task ID</th> <th>Name</th> <th>Change Type</th> <th>Schedule</th> </tr> </thead> <tbody> <tr> <td>57</td> <td>my</td> <td>This new task was added</td> <td>None</td> </tr> <tr> <td>58</td> <td>my</td> <td>This new task was added</td> <td>None</td> </tr> <tr> <td>59</td> <td>warwee</td> <td>This new task was added</td> <td>None</td> </tr> <tr> <td>60</td> <td>war</td> <td>This new task was added</td> <td>None</td> </tr> <tr> <td>61</td> <td>war</td> <td>This new task was added</td> <td>None</td> </tr> </tbody> </table>	Task ID	Name	Change Type	Schedule	57	my	This new task was added	None	58	my	This new task was added	None	59	warwee	This new task was added	None	60	war	This new task was added	None	61	war	This new task was added	None
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57	my	This new task was added	None																							
58	my	This new task was added	None																							
59	warwee	This new task was added	None																							
60	war	This new task was added	None																							
61	war	This new task was added	None																							

Total number of risks occurred 5

OK Save As Help

Fig1.6: Risk database of the dream house project

The major challenges faced by the project manager during this phase are staffing (getting the right people would ensu the project) and predicting potential risks and coming with the appropriate back up strategies for risk mitigation.

How does one watch out for the early signs of risks in a project?

This is one question which stumps even the more experienced project managers. It is essential for the project manage for signals and interpret them accordingly. It is not very diffeent from listening to seismic activites in a region and pr earth quakes in advance. (and it is as effective!).

For instance if an employee takes more frequent leaves and changes the incoming out going time then he/she is a se the manager. It is the responsibility of the project manager to catch this signal and do an analysis and some tin situation.

The faculty of catching and interpreting various signals comes with experience.

How do we know the effectiveness of a contingency plan?

Contingency plans exist to soften the blow. If it does not do that then the contingency plan is not an effective one. Fc consider the following:

You have a supplier A who usually supplies you the raw material required for making your product. As a backup plan le you have Supplier B who could supply you the raw materials in case if supplier a is not able to meet your requireme and contingency plan would some what look like this:

risk : Supplier A is not able to meet our total requirements

contingency plan: Identify an alternate Supplier B who could fulfill your requirements and intimate him to supply the n as soon as you sense this risk.

Let us assume that supplier A is not able to supply your entire demand and hence you are forced to kick in your conti possible that supplier B whom you have identified as a back up supplier fails to meet your requirements in terms of t quality or both. In this case your contingncy plan has proved to be ineffective. In such cases you need to declare thai plan is ineffective (and possibly communicate to the higher ups to prevent such reoccurrence) and come up with ano plan which could prove to better.

☒ In what ways of the project do risks usually occur?

This is a easy question to answer. They occur in all the phases of the projects. However risks occurring during the project is always easier to handle than the ones which occur during the later stages of the project.

☒ What risk are common during project planning phase?

Some of the risks which can happen during the project planning phase are:

a) Activities are not broken down to manageable tasks. If task duration exceeds 3 weeks then it is a candidate for failure. A task, which has a long duration, has the inherent capability of throwing up surprises to the manager at the end of it. Recovering from a task slippage becomes more difficult when the task duration is more than two to three weeks. It is that project managers try to have a task whose duration is within a week. That way they would know about the progress in the status report.

b) Assigning multiple owners for a task. Even though practically no project manager nowadays makes this mistake, it is the project manager by a poor communication ends up with a situation.

c) Not using risk databases of previously executed projects when starting a similar project. Using risk databases is leveraging other's experience in your project. Otherwise the project manager would be in a situation where he will be repeat the mistakes made elsewhere in the company.

d) Not setting the project calendar to reflect reality. Project managers often forget company holidays and planned vacations while making the plan for the project. In addition to that some allowance needs to be given for sick leaves. Failing to set the project calendar with all the holidays/leaves/vacation can put enormous strain on the schedule at the project execution.

e) Coming up with the no or poor contingency plan for the risks in a project. A risk database is useful only when it is used. The most important part of the risk database is the contingency plan, which the project manager needs to have for anticipated risk. A poorly thought contingency plan would be ineffective in the event of a risk happening.

f) Not using historical data for estimating tasks duration. When planning for activities a project manager needs to use historical data, which is closer to reality. There are times when an activity may not have a historical data associated with it. It would be prudent for the manager to have Delphi estimates for the tasks.

☒ What risk are common during analysis & design phase of a project?

Some of the risks which can happen during this phase are:

a) Not having the right expertise. This phase depends on experts who have adequate technical knowledge in the project. Having experts can be devastating to the project. Several project managers have issues in involving external experts in the project even if they do not have any local experts. But this would prove costly during the later stage of the project. It is important for the project manager to have the right experts (with proper credentials) to participate actively during the project.

b) Not enough time allocated for reviewing which results in improper review. Review is a critical aspect during any phase. However it assumes more significance during this phase of the project as the blue print of the whole project is generated in this phase. Improper review during this phase spells doom for the project.

c) Not listening to devil's advocate. Project managers sometime end up finalizing a design without a complete managers and most of the team members want to move over to the implementation phase of the project as quickly as the fear of slipping schedule. When they have this mind set they are not open to a critical review of the design where it pointed out. Failure to listen to comments from such devil's advocates can jeopardize the success of the project.

☒ What risk are common during implementation phase of a project?

Some of the risks which can happen during this phase are:

a) **Poor monitoring of progress:** Project managers some times tend to spend most of their time in planning activity very less time in following up whether the implementation is following the plan. A proactive report generated by Sn planner can really help the project manager to know whether the tasks are progressing as per the plan.

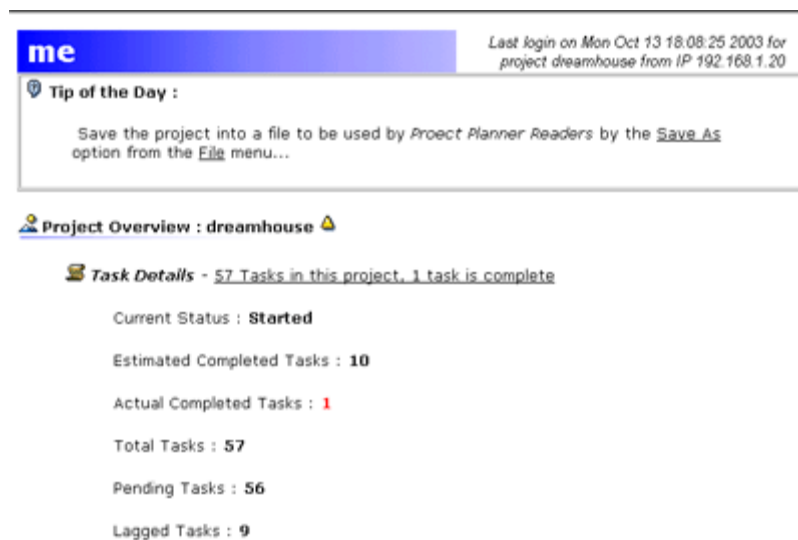


Fig1.7: Sample Project Summary report

During this phase a project manager is likely to get many alerts whenever a task slippage occurs. It is important manager to understand the reason for slippage and take corrective actions. For instance smartworks project planner provides notifications through emails. A sample alert for a task slippage would be some what like this:

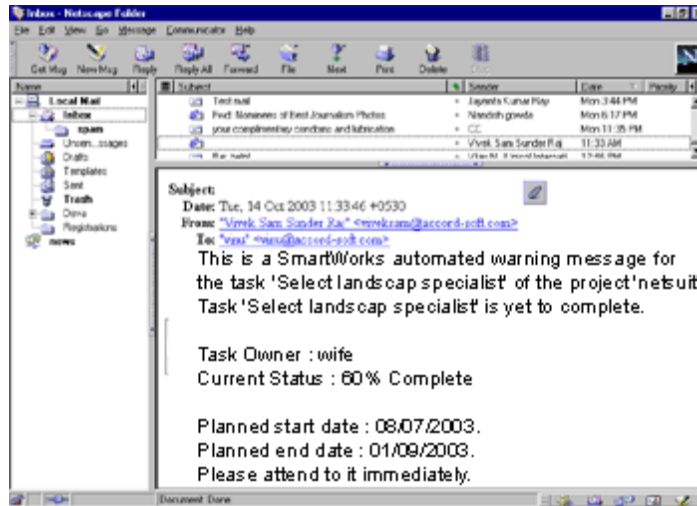


Fig1.8: Sample email alert report

In addition to the reports and alerts you may use smartwork project planner's gantt chart and project graphs to get a the project.

b) **Not handling risks:** Risks have an uncanny habit of appearing at the least expected time. In spite of the best of manager they are bound to happen. Risks need immediate and focused attention. Delay in dealing with risks cause aggravate and has negative consequences for the project.

c) **Poor cost management:** A manager's success is measured by the amount of cost optimization done for a p frequently do all the cost optimization during the planning stages but fail to follow through during the rest of the stag The cost graphs in the Smartworks- Project planner can help a manager to get a heads up in project cost overflow. (The difference between approved cost and the projected cost should be always in the minds of the project managers)

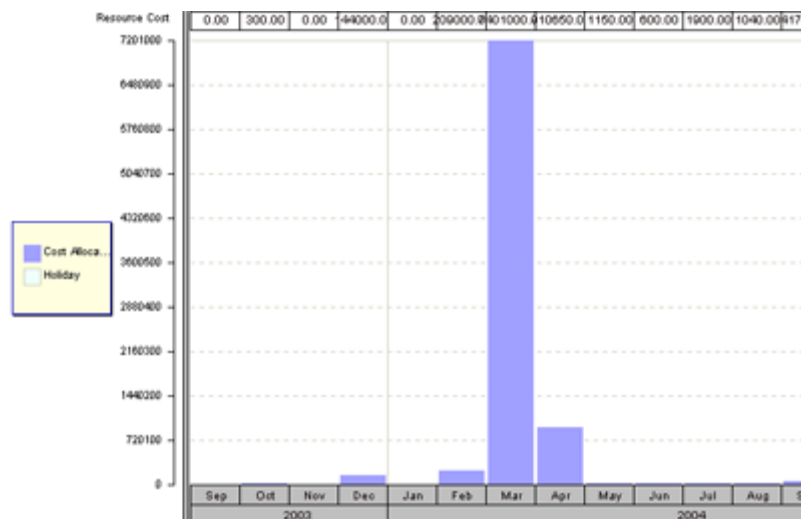


Fig1.9: Sample project Cost Graph

What risk are common during project end phase

Some of the risks which can happen during this phase are:

a) **Not having immediate post mortems:** Some of the project managers want to solve current problems. A post mortem focuses on past problems. Hence they feel that it is not important and often do not hold them in the first place or even they ensure that everybody knows that it is only a ritual. While post mortem indeed talk about past problems in a proper best places to identify unsolved critical problems and potential future problems which is going to have a telling effect on

b) **Not getting customer feedback:** It is vital for project managers to get a feedback from the customer once completed. Typically this should happen when the customer has really started using the deliverables from the project. Feedback provides the managers with a user's perspective which is the most important (s) he would ever get about success. Some of the project managers do not get feedback and lose the immense benefit it can bring to future project

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