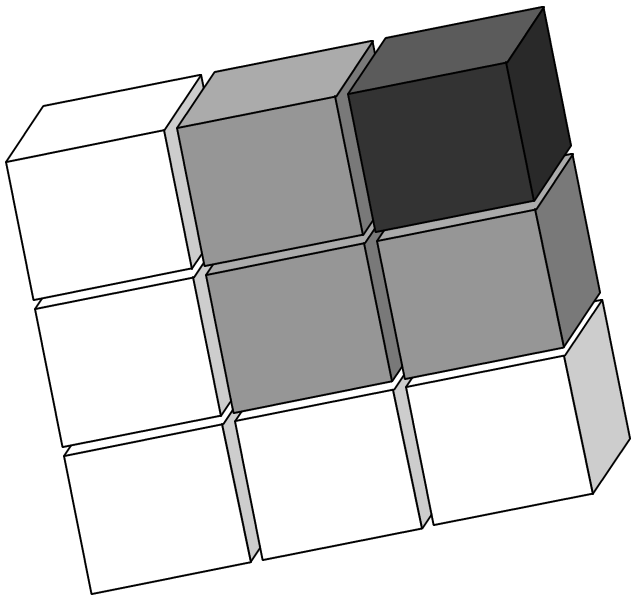
Managing Project Risk



An Aide Memoire:

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Introduction

This document covers the methodology and the logic underpinning the practical management of risk in projects. It is designed as an aide memoire for those people planning the risk management system.

It uses workshops of experienced and senior managers in the organisation and possibly external advisors, in order to identify the risks associated with a particular project and to make efficient use of scarce resource.

The document has an annex showing how a workshop is planned and conducted.

Why Risk Management?

It is useful to remind yourself of some of the reasons why risk management is useful and necessary:

- it helps with the early identification of potential problems;
- it increase chances of the project's success;
- it will enable more efficient use of resources, and;
- it should promote understanding by involving stakeholders in the project

What you need to do is:

- identify what can go wrong – the risks;
- determine what risks are important to deal with, and;
- take action to deal with those risks.

Risk Management framework

Managing risk is a process the acronym SARTS helps memorise the important parts of the process.

SARTS

S	Identify **specific** risks to the project
A	**Analyse** the risks in order to understand it
R	**Rank** them in priority order
T	**Take** appropriate action/plan contingencies
S	**Survey** and monitor the effects of the action

Management arrangements

The management arrangements for projects will vary with the scale and type of project. A possible approach is to use a risk management group who are responsible for overseeing the management of risk and reporting to the group overseeing the management arrangements for the project (project managers or project board etc).

The composition of the group could include someone with expertise in the type of risks common in the project area, a senior manager with sufficient authority to get things done and open doors and someone working closely with the project. On small projects, the risk management group may consist of just the project manager.

Typically the risk management group sets up a risk monitoring system and either directly or through other people, monitors the threats and takes, or requests, appropriate actions. It may produce a formal risk management report early on in the project, which will be updated as the project progresses, and risks arise or subside. A report need be no more than an expansion of the contingency plan illustrated late on in this document.

Specific tasks for the risk management group include:

- scheduling workshops at particular points in the project when the risk profile changes
- analysing the results of the workshops to identify those risks that require close attention
- planning appropriate actions or contingencies
- establishing a monitoring systems to judge (a) the changing threat posed by risks (b) the effectiveness of action taken to reduce the threat
- putting in place triggers in the monitoring system which will initiate contingency actions
- informing those people responsible for taking actions or monitoring risk of their responsibilities and the task they must undertake (ie what must they monitor, what is the performance indicator, trigger level etc)

The workshops are designed to help with the identification of the **specific** risks and *to help* in the **analysis** and **ranking** of the risks. It will also be of some use in bringing together experienced heads who may offer some insight into **taking** appropriate action and the best methods of **surveying** the effects of actions.

SARTS

Identifying Specific risks

Delivering a project is said to be dependent on the interaction of three factors, time, cost and standards.

time cost

standards

In most cases, this relationship has the following practical implications:

- if you want it faster you normally will have to accept a higher cost and/or change standards;
- if you want it cheaper it will normally take longer and/or standards will change, and;
- if you change the standards of the deliverables, you may need to revise the costs and/or the time estimates for the project.

Theoretically, the relationships are precise and reciprocal, ie faster delivery *will* cost more or result in a drop in standards. However, in practice there will be a point at which faster delivery starts to have a cost or standard implication. Until that point is reached, there will be no change to the other factors.

Risks are in effect, factors that tend to change the relationship of these three factors. If, for example, the time estimated to write the specification is too short and the underestimate goes unnoticed, the effect may be to increase costs, change standards or delay the project.

If the underestimate is noticed, something can be done about it, or to put it another way, the risk of time estimates being wrong can be managed.

Analysing and Ranking risk

The way you view a possible event will depends on your attitude towards risk, in particular it depends on the project team and sponsor's tolerance level for risk. If they have a low tolerance, then just about every possible risk will require detailed contingency plans and follow-ups. What you have to do is to decide what is acceptable to your organisation, the project team and sponsor.

The triangle of cost, time and standards can be used to set out a suggested classification of risks by impact and likelihood.

Suggested Classification by Impact

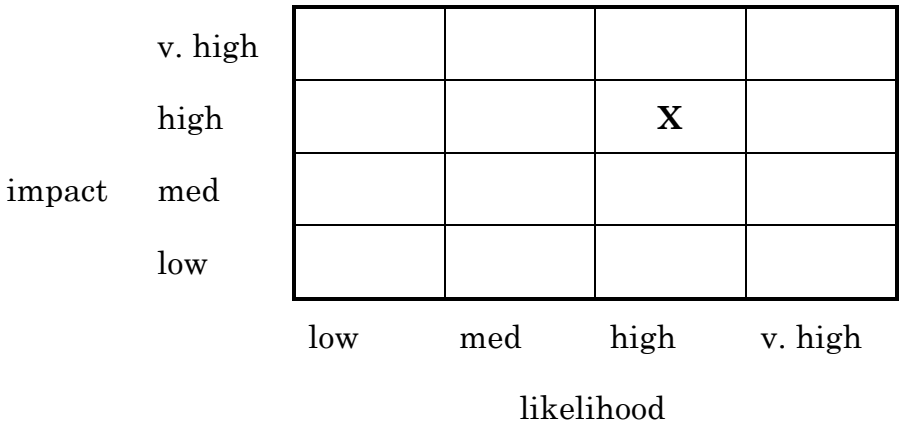
Very Severe (V. high)	an incident so severe in its effects the project will not be able to continue	eg new legislation banning externalisation
Severe (high)	an incident that will have a profound effect on the project's ability to deliver to standard/a time delay of >3 months /a cost overrun of > 10%	eg significant change in structure of organisation
Significant (med)	an incidence that will require some change in standards/ delay the project >1 week but < 3 months, minor cost implications	eg loss of all data on project from server
Insignificant (low)	an incidence resulting in no/negligible change in standards/time loss/cost increases to the project	eg project team meetings over-run

Suggested Classification by Likelihood

Very Likely (V. high)	an incident that in all probability will occur several times during the project
Likely (high)	an incident that may occur once during the project
Improbable (med)	is unlikely to occur during the project
Very Unlikely (low)	an incident that is extremely unlikely to occur during the project

An example risk is the failure to complete the negotiations in time to appoint a partner to deliver the service. Using the classification you can ask, will the delay be > 3 months or make the cost overrun by > 10%, if the answer is yes to either questions then the risk will be severe (high). You can now ask how likely is it that the incident will occur and you may say it is likely to occur during the project. This means that the risk is likely (high) according to the classification. You can now plot this risk on a risk matrix to help you to appreciate its significance and to help you rank your response to the risk. In the matrix below the risk is marked with an X.

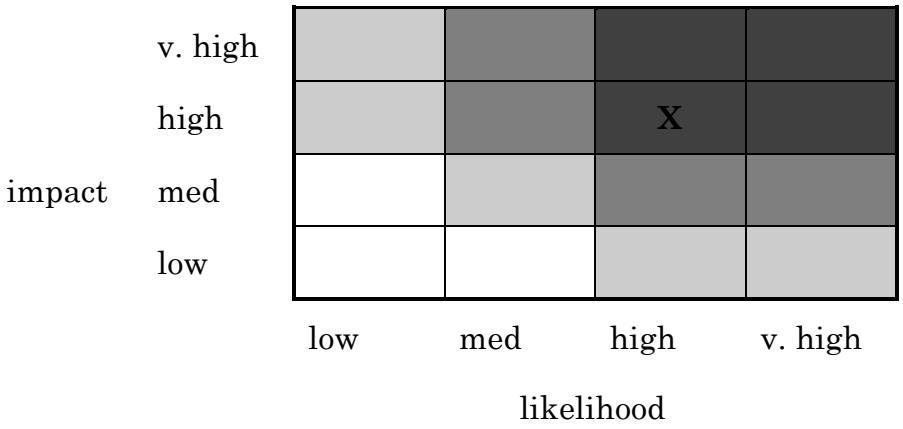
Risk matrix



Taking appropriate action/ planning contingencies

Having identified the risks, analysed them and ranked them by plotting on a matrix you now need to decide what to do about it. Once again, this will depend on you attitude to risk. If you have a low risk tolerance you will expect more action to reduce the potential risk than if you have a high tolerance. A useful tool is to shade the risk matrix in a way that indicates the rank order of the risk and the appropriate action.

Risk matrix



The most deeply shaded areas attract the most attention and action. Note the example risk X now attracts immediate action.

Suggested actions

area	explanation	action
	unacceptable risks that will have the most impact and likelihood on the projects ability to deliver	full investigation by project manager action plan worked up, costed by project managers and approved by project team project manager to constantly monitor and take appropriate action
	undesirable risks that will have a large effect on the projects ability to deliver	full investigation by project manager action plan worked up, costed by project managers and approved by project team project manager to constantly monitor and take appropriate action
	acceptable risks that require review to ensure they will not have too much affect on the project and which it is desirable to resolve	project manager to review with a view to resolving if it is necessary or feasible to resolve project team to review decision
	risks that have a negligible effect on the project and are acceptable without review	project manager to note risk and periodically monitor to ensure they stay negligible project team to review decision

Actions open to address risks

The specific actions available will depend on the nature of the risks, for instance it is relatively straightforward to reduce the impact of the departure of a key manager from the project, but less easy to influence the likelihood of a major change in government legislation affecting the organisation. The table below shows the kind of actions that are possible.

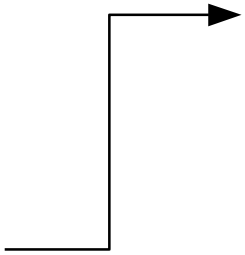
Strategies

strategy	application	example
accept risk	where the cost of addressing exceeds potential damage	project meeting overruns could be addressed by greater discipline but at expense of goodwill
transfer or share	where another party is willing and better able to handle	another parallel project agrees to share cost of key project staff
reduce probability	invest time and effort till potential likelihood is of risk acceptable	tie key staff into project with completion bonuses to reduce probability of leaving
reduce impact	invest time and effort till potential impact is acceptable	run several sets of user workshops in order to avoid problems of no-shows

Iterative risk management and contingencies

Having decided the appropriate action, you should re-analyse the risks after the proposed action to ensure that the effect reduced the risk to an acceptable level. This is sometimes called addressing the residual risk.

First Iteration
Specific risks
Analyse
Rank
Take action
Survey and monitor



Second Iteration
Residual risks
Analyse
Rank
take action/ contingencies
Survey and monitor

If a risk remains a priority to deal with after taking action, a contingency plan should be set in place, for instance, completion bonuses can reduce the risk of key personnel leaving the project but they cannot guarantee that the risk goes away, so a contingency should be planned. Contingency plans may be made if on the first iteration, if no action can be taken to address the risk, for instance, if the government chooses to enact significant legislation, there is little that the project team can do. In these circumstances, a contingency plan may be established.

Possible format for contingency plans

risk	**contingency plan**	**monitor/indicator/ trigger**	**responsible**
examples			
new legislation	*review time assumptions*	*significant legislation at white paper stage*	*project manager*
key person departs project	*sponsor to nominate temporary replacement* *HR to recruit permanent replacement and keep job specs and advert up to date*	*key personnel (specify whom) terminated or put in their papers*	*project sponsor*

Surveying and monitoring

The risks and residuals risks are plotted on the risk matrix and appropriate actions taken and contingencies planned. You should track your progress handling the risks, to ensure that:

- actions which should reduce the likelihood of occurrence are effective;
- actions which should reduce the impact and loss associated with the risk are effective, and;
- when risks for which there is no possible mitigation action have reached a trigger point for the contingency plan, that contingency plan is performed.

In addition, you should periodically scan or additional risks that need to be addressed, as well as changes in impact or probability to previously identified risks.

Annex Risk Workshop Approach

Background

The risk workshop's aim is to extract the views of expert in project risk in order that appropriate action can be planned and implemented. The limitation of work-shopping with such an expert group is that they tend to be very busy. It is therefore essential that the workshop take as small an amount of time as is possible. We think that we have achieved this by manipulating the process so that the group is only together long enough to be briefed on the process and to carry out a brainstorming and categorisation of risk.

Aim of the workshop

The aim of the workshop is to obtain the views of the group as to the risks they believe will be associated with the project. These views will assist in isolating those risks that require action in order to mitigate their effects on the achievement of the objectives.

The people

The people chosen to participate are qualified by experienced to help identify the risks and identify those that need to be actively managed. We set out a personnel specification for participants and the people invited fit the specification. We think this is good practice in that it gives us a range of viewpoints on the likely risks.

The personnel specification:

- a senior person bringing experience of commissioning and overview of large complex projects
- an experienced project manager contributing their knowledge of managing complex projects
- a stakeholders who has been on the "receiving end" of large projects and can contribute their perspective
- technically qualified people (specifically legal, financial and HR) who have advised on projects and can bring their expertise in these technical fields as they relate to complex projects

Overall method

The risk management process can be split into three parts:

1. identify what can go wrong - the risks;
2. determine what risks are important to deal with, and;
3. take action to deal with those risks.

The workshop itself will, in part, address items 1 and 2 of the risk management process.

Group work

We have already set up a classification framework for the severity of impact and the probability of risks. The classifications will be used in a matrix to help us prioritise the risks in terms of the action necessary. We intend to use this classification and the matrix in the workshop as the basis for two facilitated exercises.

After a brief introduction to the project, participants will be invited to identifying risks that they think may impact upon the project. Participants will be briefed to use slips of paper to set out their ideas upon. They will then place them on a large-scale representation of the matrix on the table before them. They will be invited to place the slips based on their judgement of the likely impact and probability.

Individual consultation

The participants (and, possibly, others with something to contribute) may be consulted after the open workshop on the analysis the project management group has derived from their work, in order to allow them to comment upon:

- the main categories of risk identified
- the prioritisation that has been derived
- the actions that the project manager proposes to take

The combination of the group work and the individual consultation should enable the project management group to make a robust risk management plan.

Preparations

Prior to the workshops:

- identify participants and invite to workshop
- prepare cut-down briefing (based on the who, what, why etc)
- make up matrix on working table as large as possible
- get post-it notes
- arrange coffee for meeting start

After the workshops:

- collect and analyse as fast as possible
- prepare feedback documentation
- arrange follow up meetings with individuals
- prepare risk management report

Appendix 1 to annex A Workshop Flyer

Background: Risk Workshop

The (Example) project is designed to develop a long-term relationship with an external partner for the delivery of IT services throughout the organisation. The workshop is being arranged as part of the planning of the project. The workshop is being arranged in order to collect information on the potential risks that may impact upon the project and what it is designed to deliver.

Your role

You have been invited to participate in the workshop because you have something to contribute. Your expertise may come from your experience as a project leader, a customer of projects or from your technical capacity. Whatever your background we hope you will feel able to fully participate in the workshop and help us ensure that the project delivers.

Before coming to the workshop please review the approach and the classification of risk we will take time at the workshop to consider if the thresholds of acceptable risks require adjustment.

Logistics

The workshop will last one and a half hours beginning at 10.00. Please let the project manager know if you cannot make the whole time.

Feedback

We will give feedback during the workshop and we will write to all participants outlining the outcomes of the workshop.

Approach

The workshop will consist of a number of facilitated exercises designed to extract as much information as possible on the potential risk and the priority for dealing with them.

We will be using a standardised approach to risk management tailored to the project – the SARTS approach.

S Identify **specific** risks to the project

A **Analyse** the risks in order to understand it

R **Rank** them in priority order

T **Take** appropriate action

S **Survey** and monitor the effects of the action