RISK MANAGEMENT

This tool kit has been designed to help you identify and manage risks on your project and understand the process and reason for undertaking risk management.

It will help you to identify a risk, what should happen next and how the risk should be properly managed to mitigate the outcome.

What is a Risk?

A risk is a problem or uncertainty which may have an effect on future project progress. A risk may not always have an adverse impact, but can be a positive opportunity as well. Potential risks should be identified, managed and monitored throughout the project.

" If no one ever took risks, Michelangelo would have painted the Sistine floor."...............Neil Simon

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Risk Management

Why we Manage Risk

The purpose of risk management is to ensure levels of risk and uncertainty are properly managed so that the project is successfully completed.

Managing risk involves making advance preparation for possible future events rather than responding to them as and when they happen.

Risk management should **not** be done as a one off activity at the beginning of the project.

Risk management is an ongoing activity and should be reviewed at regular arranged intervals.

Key Steps

Below are some key steps that should be undertaken when managing risk:

1. Identify the risk – when identifying the risk it is important to consider the cause, risk and impact. This will give a more rounded view to the risk.
2. Evaluate the risk – this will determine the impact and probability and subsequently scoring the risk profile.
3. Select the countermeasure – the countermeasure chosen should be the action that will be taken to control the risk.
4. Plan and resource the risk – planning and resourcing should be done by identifying who is best placed to be the risk action owner and the next steps required in controlling the risk.
5. Manage and monitor the risk – this should be done by regularly reviewing the Risk Register through meetings ensuring the stability of the risk is always considered. Any increase to the risk profile should be reported/escalated to the Project Board for consideration/immediate action.

Categories of Risk

Categorising risk gives greater ability to monitor and control risks dependant on their category. Below are the categories that could be used for a structured approach towards risk management along with examples of the types of areas that could be covered in each category.

- Commercial Risk – Contractual issues, failure of suppliers to timescales/quality etc, collapse of contractors etc.
- Financial Risk – Inflation, failure to meet targets, financial developments affecting plans etc.

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- Legal Risk – New legislation, failure to obtain appropriate approval, unexpected licensing requirements etc.
- Management Risk – Lack of clarity regarding roles and responsibilities, poor leadership, inappropriate decision making etc.
- Resource Risk – Skill set, limited resource availability, training requirements etc.
- Schedule Risk – Delays in supplies, dependencies on other projects, poor estimations of time etc.
- Technical Risk – Inadequate design, infrastructure failure, breaches in information security etc.

Countermeasures of Risk – FASTAR

In order to manage and control risk possible countermeasures should be identified. The FASTAR countermeasures below show the main actions that can be taken. When selecting your countermeasure you should provide a high level explanation of this and provide contingency plan details in the management section of the Risk Register:

- **F**allback – This is where a plan of action would be in place that would be implemented if the risk were to occur or the probability of the risk occurring became higher than deemed acceptable to the project.

- **A**ccept the risk - This is where the Project Board makes a conscious decision to accept the possibility that the risk may occur. This may be because they consider that the risk will not actually occur, or because any possible countermeasures are too expensive or unworkable.

- **S**hare the risk – This is where the risk would be shared between involved parties as pre-agreed at the beginning of the project for example if it was possible that the cost plan was to be exceeded the variance could be shared.

- **T**ransfer the risk - This is where the risk is passed to a third party, generally through an insurance policy or penalty clause.

- **A**void the risk - This is where the countermeasures to be put in place are intended to prevent the threat from being realised, or to prevent it from having any impact e.g. by adopting an exit strategy.

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♦ **R**educe the risk – This where the countermeasure taken is not necessarily to avoid the risk but, more likely, to set in place a series of actions to reduce the risk to an acceptable level.

> The Risk Register is generally owned by the Project Manager.
>
> However, for risk to be properly managed and controlled anyone who identifies any possible risks should flag them asap so they can be accurately recorded.

Why use a Risk Register

The Risk Register should be used by the project to record new risks as they are identified. The register includes headings which detail the key information in order to capture and successfully manage the risk. The register also provides a means of listing all the identified risks and the results of their analysis and evaluation, and so facilitates the consideration of all of a project's risks and their impact, likelihood or proximity at Project Board meetings.

The Risk Register

The Risk Register has the below categories included, please see below brief description on what should be included. For an online template please select Risk Register through the below link;
https://www.intranet.bham.ac.uk/projects/handbook/templates.shtml

Risk identifier	Potential Risk Event	Risk Owner	Unmitigated Impact	Unmitigated Probability	Unmitigated Risk Score	Management (mitigation/contingency) and monitoring arrangements	Mitigation in place? (Yes/No)	Current Impact	Current Probability	Current Risk Score	Latest update and description of changes (include date)

♦ Risk Identifier: This will be the unique ID. One should be attributed to each risk.

♦ Potential Risk Event: This should be a detailed description of the risk including the cause of the risk, the risk itself and the impact the risk could have, e.g. *"Due to (cause)…there is a risk that (statement)…therefore (impact)…"*

♦ Risk Owner: This should be the person that is responsible for managing the risk.

♦ Unmitigated Impact: This is the impact associated with the risk as soon as it has been identified. This would be based on the scale detailed in the scoring section.

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- ♦ Unmitigated Probability: This is the probability of the risk being realised, this would be scored on the probability of the risk being realised when it is first identified and without any countermeasures being in place, again this would be based on the scale in the scoring section.

- ♦ Unmitigated Risk Score: This is an automated field which will calculate the score based on impact*probability as soon as the risk is identified and before any countermeasures have been taken into account. The RAG (Red Amber Green) status will be automatically generated, using the profile.

Always review your most important risks first. Filter on red risks and if time runs out the most important ones will be covered.

If the meeting which you use to review risk often runs out of time before you get to risks – move them to the beginning of the agenda!

- ♦ Management (mitigation/contingency) and monitoring arrangements: This section would detail the countermeasure that had been chosen and the actions that have been in put place. This section should also include the contingency plan that has been put in place in case the action fails. You should also add how and who will monitor the risk, i.e. to be reviewed at each team meeting by PM and Executive

- ♦ Mitigation in Place: This will be a box where you should state yes or no to indicate whether or not the chosen countermeasures have been put in place.

- ♦ Current Impact: This is the impact associated with the risk following on from the countermeasure that has been identified. This would be based on the scale detailed in the scoring section.

- ♦ Current Probability: This is the probability of the risk being realised, this would be scored on the probability of the risk being realised following any countermeasures being in place, again this would be based on the scale in the scoring section.

- ♦ Current Risk Score: This is an automated field which will calculate the score based on current impact*probability following on from the revised scoring, which has taken into account countermeasures. The RAG status will be automatically generated, using the profile.

- ♦ Latest Update and Description of Changes: This should be an update to provide the project team and board with information on how the risk is progressing and whether the risk profile has changed, the risk is closed etc or whether the risk has been realised. This should always be prefixed with a name and a date.

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Reviewing Risk

Once a risk is logged it is imperative that it is monitored regularly, countermeasures are identified and actioned and status updates are provided. This should be done as part of a meeting or if participants are at various locations via conference call.

The Risk Register should provide the basis for the meeting (agenda item) and each risk should be reviewed for updates ensuring that any actions that were due to take place have taken place. If there is slippage in actions this should be the forum to put corrective actions into place. These meeting would also deal with transferring any realised risks to issues.

Once a risk has occurred this should be closed down in the Risk Register and transferred to the Issue Register.

Both registers should form the basis of discussion in the risk section of your regular meetings.

Scoring of Risk

The Risk Register will provide an indication of each risk and what score has been calculated. The most important factors when evaluating risk are impact and probability.

♦ **Impact** - This is the evaluated effect or result of a particular outcome actually happening. Impact should ideally be considered under the elements of Time, Quality, Benefit and People/Resources. The impact should be scored as follows:

1: minor; 2: moderate; 3: serious; 4: very serious; 5: catastrophic.

♦ **Probability –**This is the probability of the risk actually being realised. The probability should be scored as follows:

1: unlikely; 2: possible; 3: likely; 4: very likely; 5: almost certain.

Entering the above figures relating to the risk will then allow the risk score to be calculated and a RAG status to be applied.

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The below shows how a risk score is calculated and the limitations relating to the colour that will be applied;

RAG (Risk Score = Impact x Probability)	
Up to 4	Risk controlled
5 to 12	Some exposure to Risk
13 to 25	Risk is above acceptable levels

Scoring of risk is vital as it is the quickest way for you to spot the most important risks!
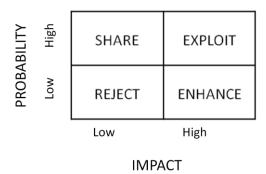
Risk Assessment Matrix

The Risk Assessment Matrix will be used to highlight your risk score based on the below profile.

		Probability of risk occurring				
		1 Unlikely	2 Possible	3 Likely	4 Very Likely	5 Almost certain
Impact of risk occurring	1 Minor: Unlikely to have an impact on the project	1	2	3	4	5
	2 Moderate: Could have an impact on the project but can be managed without a major impact in the medium term	2	4	6	8	10
	3 Serious: Would have a major impact on the project	3	6	9	12	15
	4 Very serious: Requires major effort to prevent it threatening the project	4	8	12	16	20
	5 Catastrophic: Would have a major impact on project	5	10	15	20	25

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Opportunity Risk – SEER

Most people would define risk as a threat however; there can be a beneficial side to risks. These would be classed as Opportunities. The responses to these opportunities would differ to the responses used for risks (threats) as you wouldn't aim to avoid or transfer the opportunity. The responses for opportunity would be as detailed below;

♦ **S**hare – Sharing an opportunity would be when the benefits of an opportunity would be shared between involved parties for example if it was possible that the cost was going to be reduced the difference would be split equally between parties.

♦ **E**xploit – Exploiting an opportunity would involve changing the project scope to accommodate the opportunity and thus providing the project with a beneficial outcome.

♦ **E**nhance – Enhancing an opportunity would mean that you had identified an opportunity and seized it to achieve additional gain.

♦ **R**eject – Rejecting opportunities would be a similar response to the accept risk response. Opportunities would be ignored adopting a reactive approach without taking detailed action.

		Low	High
PROBABILITY	High	SHARE	EXPLOIT
	Low	REJECT	ENHANCE

IMPACT

Both opportunities and threats can be handled by this risk management process.The above toolkit refers, in the main, to threat risk management however extending this threat-based process to cover opportunities will mean that there is no need to introduce a new process. Opportunities should still be logged in the Risk Register. However, the countermeasure would be replaced with the chosen SEER category above.

As well as risks being threats and opportunities they can also become issues.

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What is an Issue?

An issue is an event that has happened, was not planned and requires management action. It could be a problem, query, concern, change request or a risk that has occurred.

Transferring a Risk to an Issue

If risks are not managed properly through an organised process as detailed in this toolkit, they can often be realised. When this happens you no longer have a risk you then have an issue. The risk should be closed down on the Risk Register and opened as a new issue in the Issue Register. Alternatively a project could have a new issue this should be logged in the Issue Register as soon as it is identified.

At the beginning of each project, a Risk Register _and_ an Issue Register should be created.

Issues should be logged and managed in the same way as risks, there should be an Issue Register to document the issue, the cause and the impact. Issues should have a specified owner and be reviewed on a regular basis. As with the Risk Register the Issue Register should be created at the beginning of each project, however, you wouldn't expect there to be issues before the project has started!

The Issue Register and Types of Issue

The Issue Register is very similar to the Risk Register, the difference being that issues would be detailed in this register rather than risks. As previously mentioned Risks are treated with FASTAR or SEER depending on the type of risk. For issues you would choose the type of issue the project has and what actions is being taken to resolve the issue. Please see below a brief description on the different types of issue. For an online template please select Issue Register through the below link;
https://www.intranet.bham.ac.uk/projects/handbook/templates.shtml

Issue identifier	Issue Description	Raised By	Date Raised	Date of last update	Type of Issue*	Issue Owner	Actions and/or Resolution	Status (Open/Closed)

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♦ **R**equest for change - This proposes a change or modification to the current specification of a product or deliverable.

♦ **O**ff-specification   This covers errors or omissions in work already carried out that will result in agreed specifications or acceptance criteria not being met

♦ **G**eneral Question - This should be answered satisfactorily in order to proceed

♦ **S**tatement of concern - A general issue which, if unresolved, may affect the success of the project

Risk and Issue Management, as a process, can identify, record and resolve your risks and issues.

If managed in a timely and successful way this can in turn make your project a success!

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Project Office Top Tips

- ♦ **Management of risk is a continual project activity, don't just create the register at the beginning of the project and forget about it.**
- ♦ **Ensure risks are regularly monitored and a process is in place to do this, weekly meetings etc .**
- ♦ **If there is a probability that there may be a potential issue ensure the risk is recorded asap.**
- ♦ **Don't forget risk isn't always a bad thing..........a risk can be an opportunity as well as a threat.**
- ♦ **Remember that any risk that is realised becomes an issue and will need to be transferred and monitored through the Issue Register.**
- ♦ **Finally............good risk management can improve the ability for a project to succeed.**

For more information and advice contact the Project Office: projects@contacts.bham.ac.uk