Risk Response

Risk response is the process of developing strategic options, and determining actions, to enhance opportunities and reduce threats to the project’s objectives. A project team member is assigned to take responsibility for each risk response. This process ensures that each risk requiring a response has an owner monitoring the responses, although the owner may delegate implementation of a response to someone else.

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**Risk Response Strategies**

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| **For Threats For Opportunities** | |
| ***Avoid*.** Risk can be avoided by removing the cause of the risk or executing the project in a different way while still aiming to achieve project objectives. Not all risks can be avoided or eliminated, and for others, this approach may be too expensive or time‐consuming. However, this should be the first strategy considered. | ***Exploit***. The aim is to ensure that the opportunity is realized. This strategy seeks to eliminate the uncertainty associated with a particular upside risk by making the opportunity definitely happen. Exploit is an aggressive response strategy, best reserved for those “golden opportunities” having high probability and impacts. |
| ***Transfer*.** Transferring risk involves finding another party who is willing to take responsibility for its management, and who will bear the liability of the risk should it occur. The aim is to ensure that the risk is owned and managed by the party best able to deal with it effectively. Risk transfer usually involves payment of a premium, and the  cost‐effectiveness of this must be considered when deciding whether to adopt a transfer strategy. | ***Share***. Allocate risk ownership of an opportunity to another party who is best able to maximize its probability of occurrence and increase the potential benefits if it does occur. Transferring threats and sharing opportunities are similar in that a third party is used. Those to whom threats are transferred take on the liability and those to whom opportunities are allocated should be allowed to share in the potential benefits. |
| ***Mitigate*.** Risk mitigation reduces the probability and/or impact of an adverse risk event to an acceptable threshold. Taking early action to reduce the probability and/or impact of a risk is often more effective than trying to repair the  damage after the risk has occurred. Risk mitigation may require resources or time and thus presents a tradeoff between doing nothing versus the cost of mitigating the risk. | ***Enhance***. This response aims to modify the “size” of the positive risk. The opportunity is enhanced by increasing its probability and/or impact, thereby maximizing benefits realized for the project. If the probability can be increased to 100 percent, this is effectively an exploit response. |
| ***Acceptance*.** This strategy is adopted when it is not possible or practical to respond to the risk by the other strategies, or a response is not warranted by the importance of the risk. When the project  manager and the project team decide to accept a risk, they are agreeing to address the risk if and when it occurs. A contingency plan, workaround plan and/or contingency reserve may be developed for that eventuality. | |

**Examples of Risk Responses**

Table 6 repeats the example risk statements from Table 4 and shows a risk response for each.

**TABLE 6 –EXAMPLE RISK RESPONSES**

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| **Risk Statement Risk Response** | | |
| **Design** | Inaccuracies or incomplete information in the survey file could lead to rework of the design. | Mitigate: Work with Surveys to verify that the survey file is accurate and complete. Perform additional surveys as needed. |
| A design change that is outside of the parameters contemplated in the Environmental Document triggers a supplemental EIS[[1]](#footnote-1) which causes a delay due to the public comment period. | Avoid: Monitor design changes against ED to avoid reassessment of ED unless the opportunity outweighs the threat. |
| **Environmental** | Potential lawsuits may challenge the environmental report, delaying the start of construction or threatening loss of funding. | Mitigate: Address concerns of stakeholders and public during environmental process. Schedule additional public outreach. |
| Nesting birds, protected from harassment under the Migratory Bird Treaty Act, may delay construction during the nesting season. | Mitigate: Schedule contract work to avoid the nesting season or remove nesting habitat before starting work. |
| **R/W** | Due to the complex nature of the staging, additional right of way or construction easements may be required to complete the work as contemplated, resulting in additional cost to the project. | Mitigate: Re‐sequence the work to enable ROW Certification. |
| Due to the large number of parcels and businesses, the condemnation process may have to be used to acquire R/W, which could delay start of construction by up to one year, increasing construction costs and extending the time for COS. | Mitigate: Work with Right‐of‐ Way and Project Management to prioritize work and secure additional right‐of‐way resources to reduce impact. |
| **Construction** | Hazardous materials encountered during construction will require an on‐site storage area and potential additional costs to dispose. | Accept: Ensure storage space will be available. |
| Unanticipated buried man‐made objects uncovered during construction require removal and disposal resulting in additional costs. | Accept: Include a Supplemental  Work item to cover this risk. |

**Responding to Risks**

Following identification and analysis of project risks, the PRMT takes action to improve the odds in favor of project success. Ultimately, it is not possible to eliminate all threats or take advantage of all opportunities – but they will be documented to provide awareness that they exist and have been identified. Successful risk response will change the risk profile through the project life cycle, and risk exposure will diminish.

Risk response involves:

 The PRMT determining which risks warrant a response and identifying which strategy is best for each risk.

 Assigning an action to the Risk Owner to identify options for reducing the probability or impacts of each risk. The Risk Owner takes the lead and can involve experts available to the project.

 Evaluating each option for potential reduction in the risk and cost of implementing the option.

 Selecting the best option for the project.

 Requesting additional contingency, if needed.

 Assigning an action to the Risk Owner to execute the selected response action. The Risk Owner is the lead and may assign specific tasks to other resources to have the response implemented and documented.

If the PRMT judges that a risk should be accepted, it may assign an action to the Risk Owner to prepare a contingency plan if deemed necessary.

**A RISK PERSPECTIVE CAN ENHANCE DECISIONS**

When considering risk mitigation methodology, it is important to recognize the impacts of the decision. The impact of responding to a risk may make sense in the short term (e.g. Saves design costs, allows team to meet schedule), but the impact of the risk needs to be taken as a whole.

For example, the impact of just a few unknown conditions can affect the construction schedule to the point where an environmental work window requires the project to be suspended. It is important to recognize how much of an impact there would be in making a decision. While the direct cost of resolving the unknown condition may be less than the cost of a site visit, the overall impact of the change may be a significant delay to the contract if not recognized.

**Entering Risk Responses into the Risk Register**

The risk response action for each risk is entered into the “Response Actions” column of the risk register. Risk responses are options and actions that enhance opportunities or reduce threats. The PMRT, PRM, PM or project team decide upon the response action to risks listed in the risk register. The response action is then assigned to one person, the person responsible for executing and monitoring the risk response that is chosen. Planned risk responses must be appropriate to the significance of the risk, cost effective in meeting the challenge, realistic within the project context and agreed upon by all parties involved, and owned by a single person. Risk responses must also be timely.[[2]](#footnote-2)

1. [↑](#footnote-ref-1)
2. Project Management Institute. *A Guide to the Project Management Body of Knowledge (PMBOK Guide) – Fourth Edition* [↑](#footnote-ref-2)