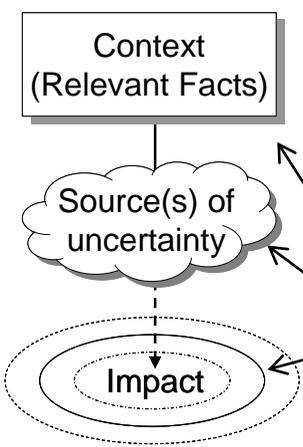


- Purposes**
1. Quantify the effect of risk mitigation actions on individual risks, and potentially,
 2. Quantify the collective value added to a project as a consequence of its risk mitigation plans.

- The idea**
1. **Pre-mitigation estimates.** After understanding a risk and developing a risk description, you make estimates for the risk's probability and impact in the context of the project's current plan and objectives.
 2. You then identify proactive mitigation actions that reduce the risk probability and/or impact by addressing sources of risk or planning a fallback.



3. **Post-mitigation estimates.** Finally, you re-estimate the risk on the basis that all the identified mitigation actions that have been authorised will be implemented as planned.
- Authorised proactive actions that:
1. Change the project plan,
 2. Address sources of uncertainty, or
 3. Identify fallbacks to reduce impact
- Note:** actions not yet authorised do not contribute to post mitigation estimates

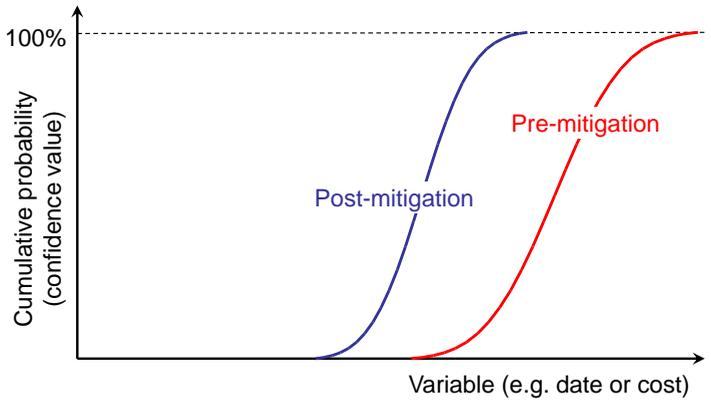
Definitions

Although the use of pre- and post-mitigation estimates has become increasingly common practice, there is scant definition of what the terms mean. Serious mistakes can be made as different people within an organisation assume that they mean different things. The following definitions are recommended.

Pre-mitigation: current risk exposure assuming that the risk is accepted with no specific actions in response.

Post-mitigation: current risk exposure assuming that specific authorised actions will be implemented.

- Benefits of the approach**
1. Quantifying the value added by risk mitigation actions to individual risks – the cost, time and resource utilisation implications of actions can be weighed against the benefits of reduced risk exposure, thus helping to choose an appropriate mitigation plan for each risk.
 2. Quantifying the collective value added to a project as a consequence of its risk mitigation plans.



Quantitative risk models can be run with both pre and post mitigation estimates, thus quantifying the overall value expected to be added by implementing planned risk mitigation.

Some organisations base their risk budgets on post-mitigation cost risk models with the aim of increasing efficiency and competitiveness.

Note: if post-mitigation estimates are used to for forecasting, the cost and time implications of authorised mitigation actions must also be included in the forecast.

- Problems with the approach**
- Before including the pre-and post-mitigation estimating approach in the risk management process, its potential benefits should be weighed against problems it may cause.
1. Maintaining two sets of risk estimates increases the administrative burden and makes mistakes more likely. (It is common to see differences between the estimates that are not justified by actions!)
 2. Post-mitigation estimates are often too optimistic. Estimators tend to assume that actions will be fully successful. Pressure to justify proposed actions may also cause unrealistic reductions in estimates.
 3. Dependent upon the project context, pre- and post mitigation estimates may be a poor substitute for alternative risk decision making techniques that support mutually exclusive choices.

Alternative approach

An alternative approach is to maintain single-scenario risk estimates in the context of both the project's plan and the authorised risk mitigation actions (thus treating the actions as being part of the project plan). In effect these are post-mitigation estimates, but made in conditions less prone to optimistic bias.