

Risk Management



Risk Management

Risk Definition:

'The effect of uncertainty on objectives.

An effect is a deviation from what is expected. It can be positive, negative, or both, and it can address, create, or result in opportunities and threats.'

ISO 31000:2018

Risk Management Definition:

'A coordinated set of activities to direct and control an organization with regard to risk.'

ISO 31000:2018

Risk Management



Doing The Dishes

https://www.youtube.com/watch?v=kK5-6pOI0cQ&list=PL_IR34OWTTqLHrOCdvcZ13dKF4FJoiUjq&index=3

Risk Management – PMBOK approach



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Risk Management planning

Objective: Define and design the way to operationalize Risk Management and how it should be integrated into the Project Management process.

Outputs:

- Categorization of risk types: technological, financial, procurement, human resources, etc.
- Frequency and procedure for re-evaluating the Risk Register: review of risk status and addition of new ones.
- Definitions of IMPACT and PROBABILITY:
- Impacts could be financial, reputational, and project Quality (cost and schedule).
 - How to measure? Simply indicate Low, Medium, and High? Or on a scale of 1 to 10?
- Communication plan and model:
 - Who should be involved for each type of risk?
 - Format: steering meetings? Team daily meetings?

Risk Management – PMBOK approach

Risk
Management
planning

Example:

	Responsabilidades	Modelo de Governo
Steering	<ul style="list-style-type: none"> • <u>Sponsoring</u> do Projeto • Decisões estratégicas no projeto • Aprovação de alterações de âmbito, budget e plano • Acompanhamento da execução do business case 	<p>Reuniões de Steering:</p> <ul style="list-style-type: none"> • Frequência: mensal (ou superior se assim se justificar) • Participantes: Steering e <u>Decision Team</u> • Objetivo: Status do Projeto e aprovação de decisões estratégicas
<u>Decision Team</u>	<ul style="list-style-type: none"> • Decisões Operacionais do projeto (incluindo processos To-Be) • Status de execução de âmbito, budget e plano • Promoção e definição da estratégia de gestão da mudança e envolvimento das restantes áreas • Gestão da relação com parceiro de software [DSI] • Desbloqueio de <u>issues</u> e gestão de risco 	<p>Reuniões de <u>Decision Team</u>:</p> <ul style="list-style-type: none"> • Frequência: semanal • Participantes: <u>Decision Team</u> e elementos da Core Team se assim se justificar • Objetivo: Status do Projeto e aprovação de decisões operacionais
Core Team	<ul style="list-style-type: none"> • Implementação do projeto • Implementação da gestão da mudança • Desenho de processos <u>as-is</u> e <u>to-be</u> e arquitetura <u>as-is</u> e <u>to-be</u> • Especificação funcional e técnica • Configuração do sistema e desenvolvimento de integrações • Elaboração de manuais • Medição dos KPIs de projeto 	<p>Reuniões de Gestão de Projeto:</p> <ul style="list-style-type: none"> • Frequência: semanal • Participantes: Core Team • Objetivo: gestão de projeto operacional, alinhamento de atividades e identificação de <u>issues</u> a levar a equipa de <u>Decision</u>
Key Users / SME	<ul style="list-style-type: none"> • Envolvimento no desenho de processos e especificações nas suas áreas de atuação (SME - subject matter experts) • Formação e desmultiplicação da formação para os restantes utilizadores (Key users) 	<p>Envolvimento nas reuniões de projeto sempre que aplicável</p> <p>Envolvimento nas reuniões de Comunicação do projeto</p>
Advisory Team	<ul style="list-style-type: none"> • Suporte em matérias específicas da sua área de atuação 	<p>Envolvimento nas reuniões de projeto sempre que aplicável</p> <p>Envolvimento nas reuniões de Comunicação do projeto</p>

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Identification of risks

Objective: Produce the Risk Register, a list of relevant potential risks at the time of analysis.

Inputs (areas typically associated with risk):

- Economic context (inflation, interest rates, material and equipment shortages, currency fluctuations, etc.)
- Stakeholders. Stakeholder analysis can identify potential conflicts of interest.
- Past experience. Knowledge of the customer, team, partners can help identify risks.
- Contractual/commercial clauses. For example, bonus/penalty mechanisms.
- Suppliers. Adherence to delivery deadlines (equipment, works, etc.)
- Human Resources. Vacations, absences, etc.
- Estimates.
- Resource conflicts in multi-project environments.

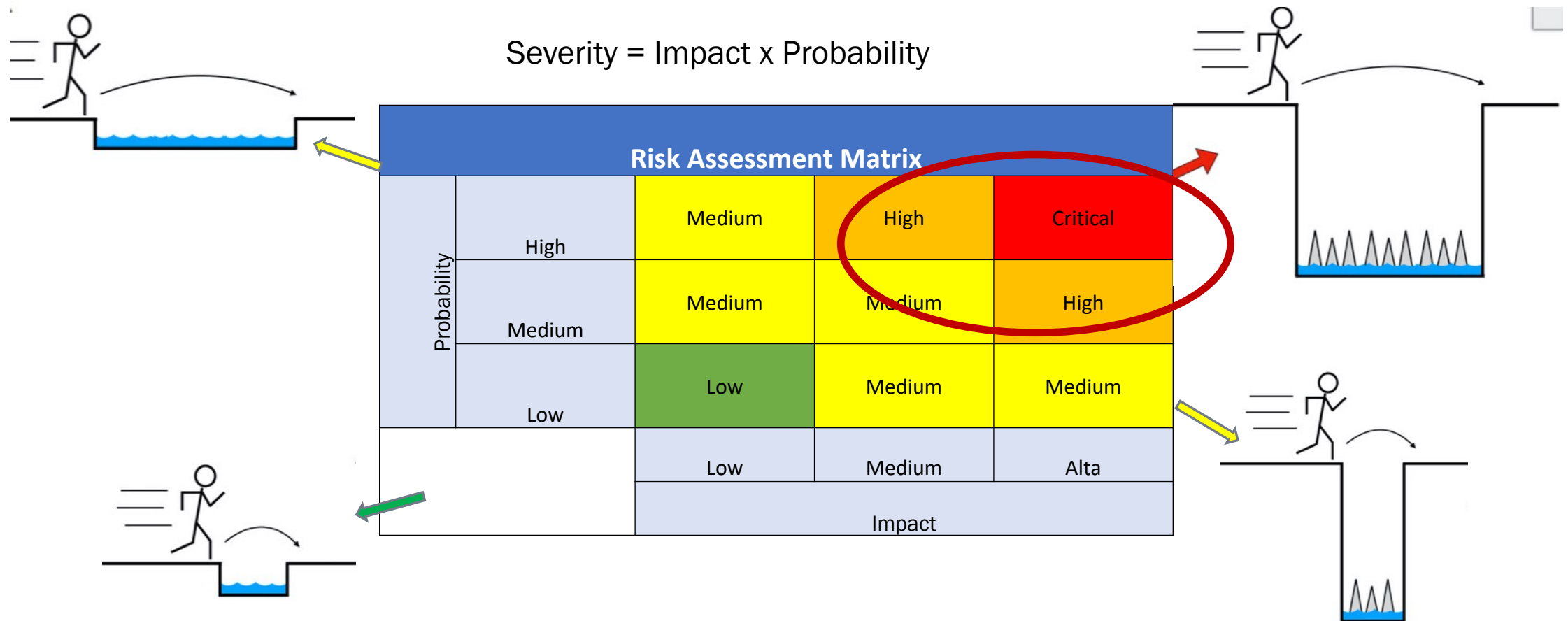
Outputs:

- Risk Register

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Qualitative Risk Analysis

Objective: Prioritize the risks. Each risk should be assessed and categorized based on its IMPACT and PROBABILITY, as defined in the planning phase.



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Qualitative Risk Analysis

Output: A list ranked by the Severity = Impact x Probability criterion, which should determine the priority for addressing the risks.

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Quantitative Risk Analysis

Objective: Objectively estimate the impact of risks on the project in terms of time and/or costs.

The most commonly used method is Monte Carlo Simulation, which involves an algorithm that runs various simulations of the project model, such as various possibilities for the duration or cost of activities, and returns a histogram with the various options for project completion time or costs and their respective probabilities.

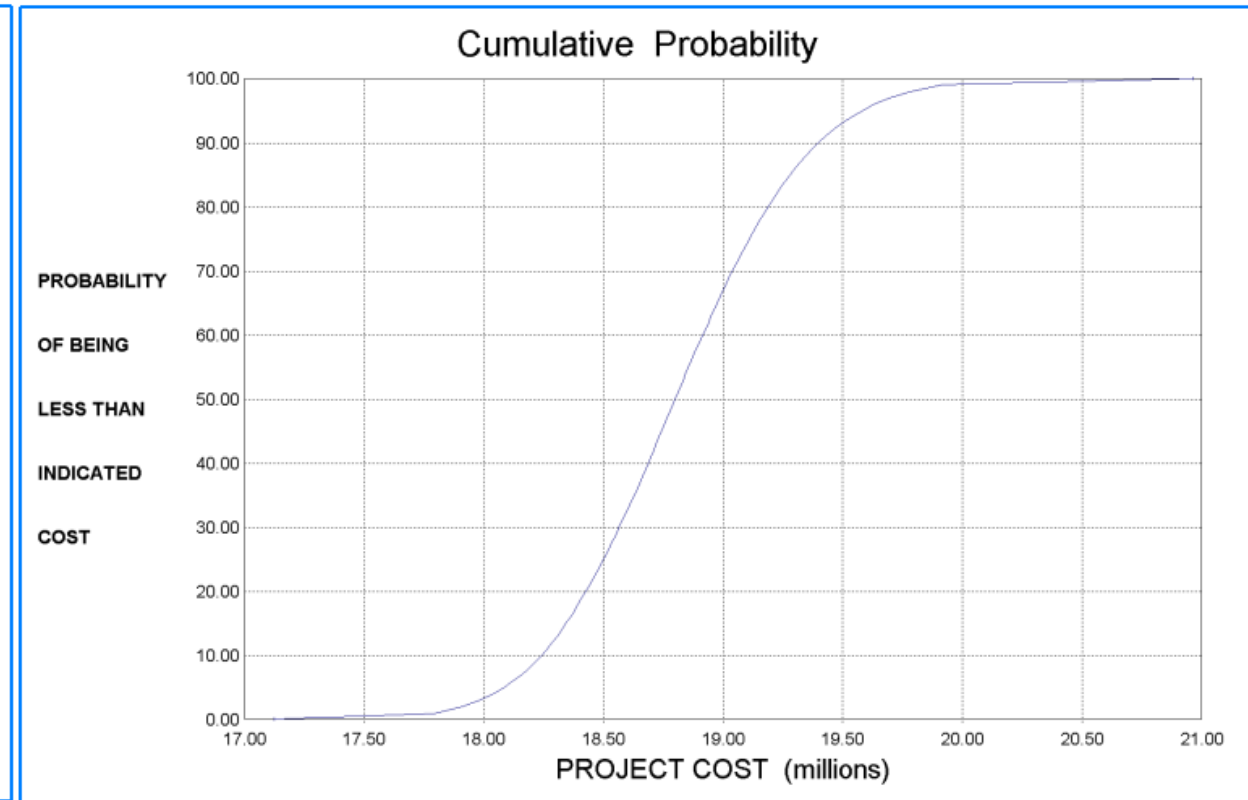
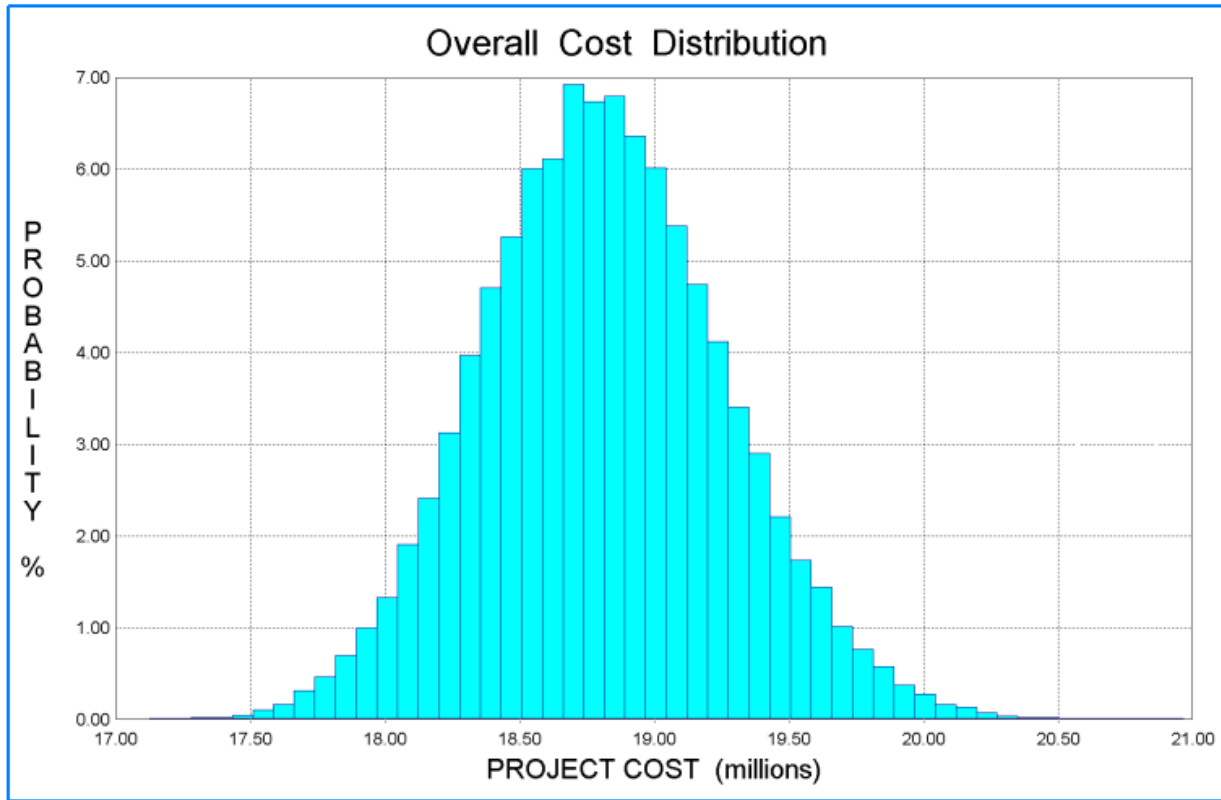
Applicable to large and complex projects where there is a high degree of uncertainty, for example, in activity estimates (or costs).

Outputs: From the quantitative analysis using Monte Carlo Simulation, it is possible to plan strategic reserves for the project, i.e., 'buffers,' whether in terms of time or money to accommodate the risk of overruns.

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Quantitative Risk Analysis

Example:



Fonte: <https://www.katmarsoftware.com/articles/project-cost-contingency.htm>

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Response planning

Objective: Define the appropriate response to each identified and prioritized risk.

Responses to risks typically follow these strategies:

Response	
Avoid	Although not always possible, one can consider canceling/abandoning project tasks/components that amplify the risk. When applied, this impacts the project's scope.
Accept	Consciously not developing any kind of action plan. The organization accepts that if the risk occurs, the project will be impacted. For example, risks of low severity (low probability/low impact).
Transfer	Transferring the risk to a third party. Typically involves cost increases. For example: <ul style="list-style-type: none">• Purchasing insurance. Helps partially cover financial losses.• Subcontracting some tasks to a more qualified entity.• Reviewing the contracting model, Time and Material (T&M) to Lump Sum Turnkey (LSTK) or vice versa.
Mitigation	Implication of the decision to address the risk, either by reducing the probability of occurrence or by reducing the impact if the risk materializes.

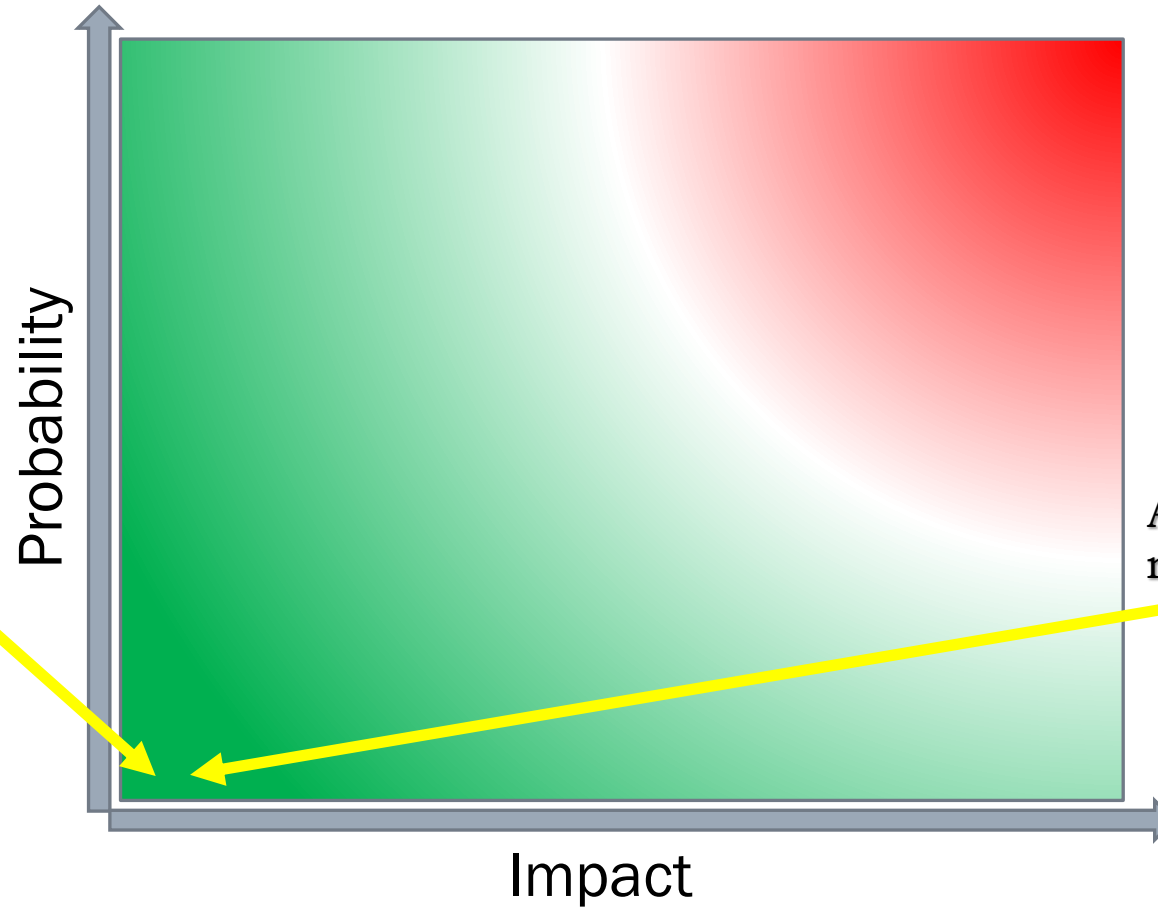
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Response
planning

Mitigation

Mitigation Plans

Actions aimed at reducing the probability of occurrence.



Contingency Plan

Actions aimed at reducing the negative impact when the risk materializes.

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Response
execution

Objective: Reflect the results of risk analysis in the project plan:

- Plan and execute mitigation and contingency plans when a risk event occurs.
- Review the project scope:
 - Expanded by mitigation and contingency plans.
 - Reduced by risks that have been avoided.

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Monitoring

Objective: Ensure that the Risk Register is periodically reviewed and updated, following the routines defined in the initial phase of Risk Management Planning:

- Review the status of each risk: if it is still applicable, if the risk materialized, etc.
- Review the Severity = Probability x Impact.
- Identification of new risks.
- Communication to relevant stakeholders of the revised risk management plan.

Exercise