ORGANISATION OF CERTIFIED RISK MANAGERS

Certificate in Risk Management

Unit 2

Implementing a Risk Management Framework

OCRM

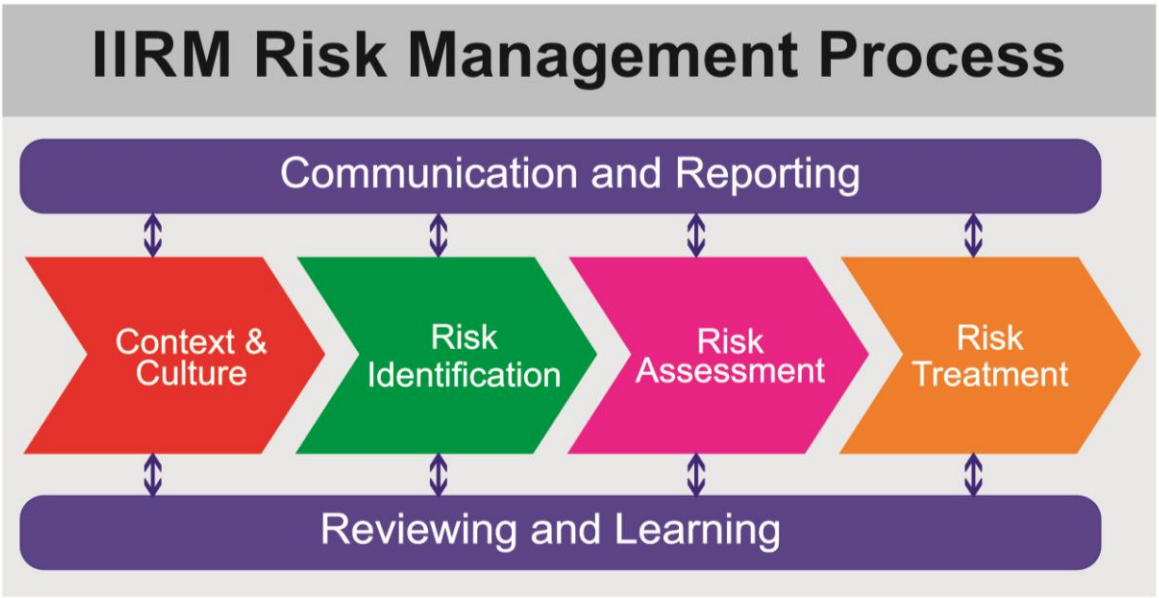
Contents

2.1

Overview of the Risk Management Process

This section provides an overview of how a risk management process consistent with that outlined in the guide might be implemented across an organisation. It also provides guidance on the process and content of risk and risk management reporting and outlines a practical approach to developing a proactive risk management culture.

The key steps in implementing a risk management process are illustrated in the following figure:



As depicted in the figure above, communication and reporting, and reviewing and learning are on-going activities that occur at each stage in the risk management process. Accordingly, these activities are discussed both as separate risk management process steps and as sub-activities of each of the other risk management process steps (i.e. Risk Context and Culture, Risk Identification, Risk Assessment and Risk Treatment).

The subsequent sections will describe each of the steps in the risk management process in detail.

The sections aim to answer the following questions:

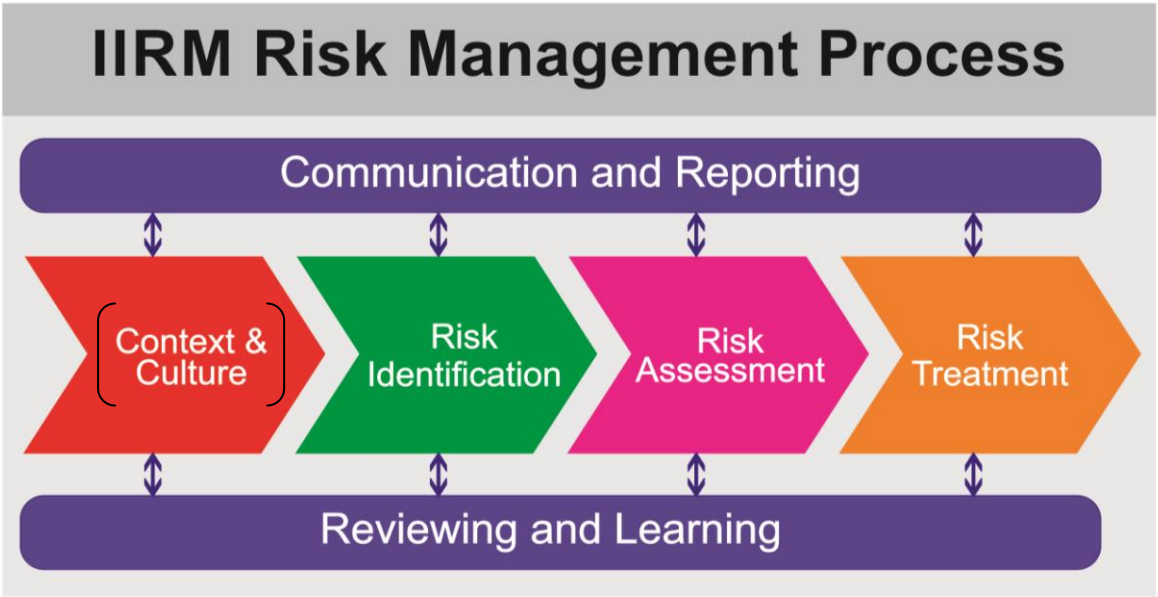
1. what is the purpose of each step in the process?
2. why is it important?
3. how do you implement it?
4. how do you communicate / report /review and learn?
5. what tools and techniques are used to implement it?

The following table summarises the key risk management processes, the input, output tools and techniques.

	Context & Culture	Risk Indetification	Risk Assesment	Risk Treatment
INPUT	• External Context – external environment information • Internal Context – organisational information	• Stake holder consultation • Organisational records	• Risk rating criteria – likelihood rating – consequence rating • Risk tolerance	• Treatment Options • Risk Ownership
OUTPUT	• Risk Criteria • Risk Tolerance • Risk Management Policy • Risk Management Framework	• Risks that matter • Risk Register	• Likelihood of risks • Consequence of risks • Current controls around risks • Overall risk rating • Risk profile • Risk priorities • Inter-relationship among the risks	• Treatment plan: – to reduce likelihood – to reduce consequence – to maximise upside risks • Resources and timeframe
TOOLS AND TECHNIQUES	• Stakeholder consultation plan • Communication plan	• Brainstorming • "What-if" and scenario analysis • Process mapping & flowcharting • Systems analysis • Operational modelling • Expert opinion	• Qualitative analysis • Semi-quantitative analysis • Quantitative analysis • Heat map • Numerical ranking of risks • Decision trees	• Risk transfer, i.e. insurance, outsourcing • Risk mitigation • Risk avoidance • Cost-benefit analysis

2.2

Context and Culture



What is Context?

Establishing the context is concerned with understanding the background of the organisation and its risks, scoping the risk management activities being undertaken and developing a structure for the risk management tasks to follow.
Many of the internal and external parameters that constitute an organisation's context are similar to those considered when developing the risk management framework. However, when applied to the risk management process, they need to be considered in greater detail, in particular how they relate to each step of the risk management process.

How to establish the context

This process requires the following key steps:

- understand your external context
- understand your internal context
- develop your risk management context

Understand external context

The external context defines the external environment in which the organisation operates. It also defines the relationship between the organisation and its external environment.

Understanding the external context is important to ensure that stakeholders and their objectives are considered when developing risk management criteria and that externally generated threats and opportunities are captured during the “risk identification” step.

Key elements of external context:

- Political, Economic, Social, Technological, Environmental and Legal , be they international, national or regional
- Key drivers and trends having an impact on the objectives of the organisation
- Perceptions and values of external stakeholders. It is particularly important to take into account the perceptions and values of external stakeholders and to establish policies to communicate with these parties.

Understand internal context

An understanding of the organisation is required before commencing any risk management activity, at any level. Understanding the internal context is important because:

- risk management takes place in the context of the goals and objectives of the organisation.
- the major risk for most organisations is that they fail to achieve their strategic, business or project objectives or are perceived to have failed by stakeholders.
- organisational objectives, policies, and processes help define the organisation’s risk management policy, specific objectives and criteria of a project.

For risk management systems and processes to reflect each organisation’s specific needs, the following steps should be taken prior to conducting formal risk identification exercises.

- Identifying key stakeholders who would need to be involved in risk management communication
- Defining risk categories to reflect the types of risk faced by the organisation
- Defining and approving risk criteria (risk rating scales) to be used when assessing and prioritising risks.

Key elements of internal context:

- Capabilities (e.g. capital, people, competencies, processes, systems and technologies)
- Information flows and decision-making processes
- Internal stakeholders
- Objectives and strategies in place to achieve them
- Perceptions, values and culture
- Policies and processes
- Standards and reference models adopted by the organisation
- Structures (e.g. governance, roles and accountabilities)

Develop risk management context

After understanding the internal and external contexts, the next step is to develop the risk management context for an organisation. It is recommended that the following be taken into consideration when developing a risk management context:

- objectives and strategies for risk management
- scope, i.e. parts of the organisation in which you apply the risk management processes
- parameters for risk management activities
- resources required
- records to be established.

The outcome of this process is to ensure that the risk management approach adopted is appropriate and proportionate to the situation of the organisation and the risks affecting the achievement of its objectives.

Risk management context application:

Risk tolerance

Once the risk management context is understood and established, a key output of the process is risk tolerance. Risk tolerance is defined as …***an organisation's readiness to bear the risk, after treatments in order to achieve its objectives.***

Organisations are prepared to 'tolerate' some risks under certain circumstances in return for specified benefits. Tolerance levels may vary by context and are influenced by:

- the ability and willingness of the board and executive to take and manage risks
- the size and type of organisation
- the maturity and sophistication of risk management processes and control environments
- the financial strength of the organisation and its ability to withstand shocks
- the sector in which the organisation operates.

How to establish risk tolerance?

The typical steps involved in establishing and implementing risk tolerance are as follows:

1. Complete an analysis of the organisation's ability to physically and financially recover from a significant event (e.g. risk such as human influenza pandemic, loss of major plant or facility, inability to supply or manufacture product, loss of major business partner, credit crunch, etc).
2. The above analysis will highlight the need for and importance of contingency plans, financial, physical and human resources, and controls. From the analysis, determine the tolerance the organisation can bear or accept.
3. Management determines the level of tolerance that should then be endorsed by the board.

The risk tolerance levels set by the organisation will be reflected in the risk rating scales used to assess organisational risks.

How do you define risk tolerance levels?

Risk tolerance levels can be defined by dividing risks into a number of bands as appropriate for the organisation (four in this example):

- An upper band where adverse risks are intolerable, whatever benefits the activity may bring, and risk reduction measures are essential whatever their cost
- Middle bands where costs and benefits are taken into account and opportunities are balanced against potential adverse consequences
- A lower band where positive or negative risks are negligible, or the costs associated with implementing treatment actions outweigh the costs of the impact of the risk, should it occur.

These levels of risk tolerance will help determine the type and extent of actions required to treat risks and the level of management/board attention required to manage and monitor the risks. Risk tolerance levels can be practically defined through the colour coding of a risk likelihood/consequence matrix. This is illustrated in the following sample risk matrix (or heat map):

	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	11	16	20	23	25
Likely	7	12 2	17	21 2	24
Possible	4	8	13 1	18 1	22 2
Unlikely	2	5 1	9	14	19 5
Rare	1	3	6	10	15 1

Risk management context application:

Risk criteria

Having established its risk tolerance, the organisation can now develop its risk criteria. The risk criteria take into consideration the risk management context. They are the basis on which risks are analysed and evaluated.

Risk criteria express the organisation's values, objectives and resources. Some criteria may be imposed by, or derived from, legal and regulatory requirements. Risk criteria should be consistent with the organisation's risk management policy.

Context and Culture

When defining risk criteria, factors to be considered should include the following:

- How likelihood will be defined
- How the level of risk is to be determined
- Nature and types of consequences that may occur and how they will be measured
- The level at which risk becomes acceptable
- The timeframe of the likelihood and/or consequence
- What level of risk may require treatment
- Whether combinations of multiple risks should be taken into account.

The following diagrams illustrate what risk criteria may look like and the key elements included.

Risk Criteria: Consequences / Impacts				
Rating / Description	**Financial**	**Legal**	**Service Delivery**	**Safety**
5 / Catastrophic	Loss over $5m	Extreme failure to comply with regulations and legislations	Outage of non-critical service for 1-2 weeks. Outage of critical service for less than one day	Single fatality or significant irreversible disability to more than two persons
4 / Major	Loss between $1m and $5m	Major failure to comply with regulations and legislations	Outage of non-critical service for 3-7 days	Significant irreversible disability to fewer than two persons or significant reversible disability to more than two persons
3 / Moderate	Loss between $200k & $1m	Serious failure to comply with regulations and legislations	Outage of non-critical service for 3-7 days	Significant reversible disability to fewer than two persons
2 / Minor	Loss between $100k & 200k	Minor legal issues. Non-complianceand/or breaches	Outage of non-critical service for 1-3 days	Minor medical attention required
1 / Insignificant	Loss less than $100k	Minor legal issues that would be easily resolved	Outage of non-critical service for less than 1 day.	First aid treatment only

Risk Criteria: Likelihood	
Rating / Description	**Frequency**
5 / Almost Certain	Expected to occur once a year or more frequently
4 / Likely	Expected to occur once every two years
3 / Possible	Expected to occur once every five years
2 / Unlikely	Expected to occur once every ten years
1 / Rare	Expected to occur once every 30 years

Control effectiveness criteria:

When analysing a risk, it is important to understand the effectiveness of current controls that are in place. Controls are systems, processes, policies etc. that are implemented to reduce risk levels, either by reducing the consequence of a risk if it does occur and/or to reduce the likelihood of the risk occurring.

Rating	Description
Good	Control is well designed for the risk and nothing more needs to be done except reviewing and monitoring. Control is effective and reliable all the time.
Satisfactory	Control is designed perfectly and is in place and effective. Some more work needs to be done to improve effectiveness. Management has doubts about the operational effectiveness and reliability.
Poor	The design of the control may be largely correct but it is not very effective. Or, control does not seem to be correctly designed and does not operate effectively
Very Poor	Control does not operate at all effectively
Uncontrolled	Virtually no credible control. Management has no confidence that any degree of control is being achieved due to poor design and/or very limited operational effectiveness

Periodic independent assurance is also needed to provide an objective view – based on the testing of controls – of the adequacy and effectiveness of the controls. Independent verification of control effectiveness can be sought from external and internal auditors.

What is risk management culture?

Culture is defined as “the way we work around here”. It is the collective way of doing things, through accepted behaviours and processes.

A risk management culture specifically refers to the way risk management is applied in the way people work within an organisation. It is about the accepted ways of being and doing with regard to risk and risk management. Risk culture involves how people recognise and respond to risk and how risk is considered when making decisions.

Why is risk management culture important?

Culture is intrinsic to risk management. The accepted behaviour or norms around ‘maximising potential opportunities while managing adverse effects’ determines how embedded risk management is in your organisation. Hence, having an effective risk management process or framework in place means having an appropriate culture that works for your organisation. If risk management is not working, a change in culture may be necessary.

The appropriate risk management culture will vary depending on the unique context of the organisation. To determine this, a starting point is to understand the key drivers of culture.

Drivers of culture

There are various drivers within an organisation that shape its culture. These drivers influence how well risk management is embedded throughout the organisation.

Cultural Drivers	Risk Management Culture
Mission, Vision, Values, Purpose	• Risks are managed on a day-to-day basis as part of applying the values of the organisation. • The mission, vision and purpose promote a risk culture
Systems and processes	• The management systems and processes enable effective and efficient risk management. • The process for managing risk is integrated with day-to-day processes
Structure	• There is a risk organisational structure to enhance accountability and delegation • The structure enables risk-based decision-making without bureaucracy, making jobs easier and delivering better outcomes
Leadership	• Leadership skills and attributes around risk management are fostered and rewarded and implemented across the business • Leaders do not tolerate poor behaviours or practices around risk management
Job Design and Role Definition	• Jobs are designed to reflect risk management and risk policies • Job definitions include performance expectations around risk management • Accountabilities with regard to risk and risk management are clearly articulated
Desired vs. Actual Behaviours	• There is a clearly articulated consensus around desired behaviours across the business • Leaders model these and people are responsive to these desired behaviours

Embedding desired risk management culture

Embedding your desired risk management culture is a journey of change. Managing change means shifting the organisation from where it is (current state) to where it wants to be (future state).

Determine desired risk culture → **Assess gaps in current culture** → **Implement interventions to close the gap**

- Visions, Mission, Values and Purpose
- Structure
- Leadership

- Job Design and Role Definition
- Desired vs. Actual Behaviours
- Systems and Processes

- Culture Change Leadership
- Communication & Engagement
- Learning and Development
- Organisational Alignment
- Performance Management

Essentially, this involves three key steps:

- Clearly define where your organisation wants to be in terms of risk management culture.
- Define the level of involvement in risk management that you would like the whole organisation to have.
- Identify and articulate the desired behaviours around risk management. This includes tolerance for risk, how people respond to risks and risk events, and the general awareness of risk and risk management.

The desired culture will continue to evolve, as it will depend on the level of maturity that is acceptable to your organisation within a given period. Tools that might help you define the desired culture are benchmarking, surveys, workshops with senior management and independent risk framework assessments. Often, the definition process will be a top-down approach, followed by consultation down the line to engage buy-in (i.e. staff briefings, roundtable discussions, forums).

Assess your organisation's current risk culture

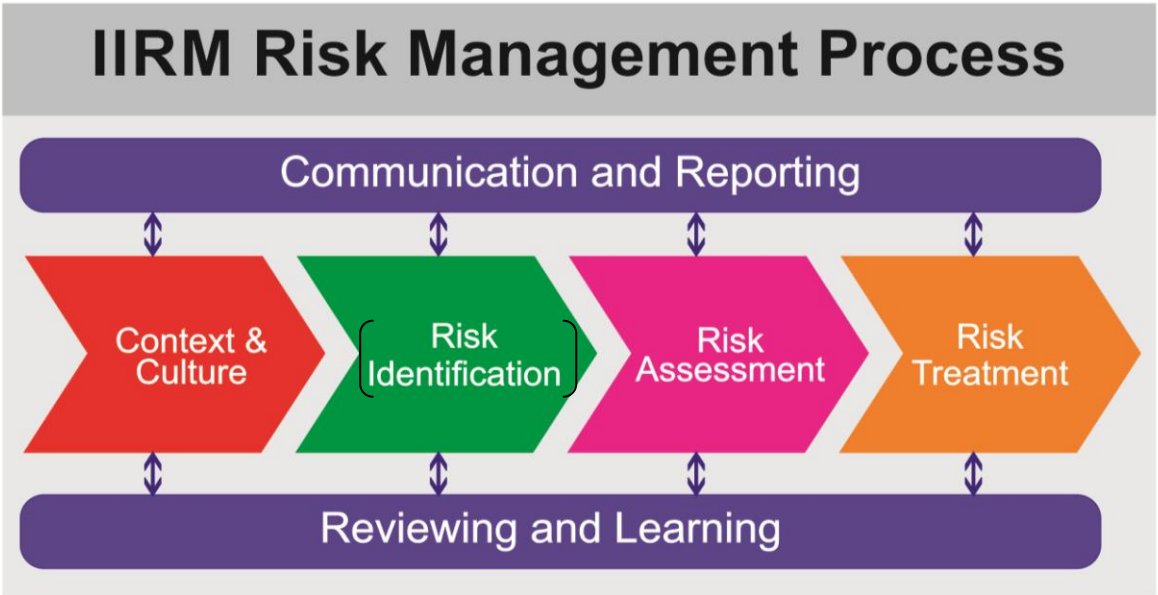
The current risk culture is an outcome of collective behaviour driven by existing norms around risk management. Determining your organisation's current culture and identifying the key drivers will be useful for identifying the appropriate interventions to achieve the desired risk culture.

The most commonly used tools for assessing current culture are interviews, focus group discussions and surveys. When conducting the assessment, it will be useful to gain input from a sample of participants or respondents across the different parts of the organisation, and across different levels.

- Determine what cultural and behavioural interventions are useful to help close the gap.
- Determine the cultural and behavioural intervention will help you close the gap between where you currently are and where you want to be in your risk culture. The assessment provides a useful starting point in prioritising and developing your options for culture change.

2.3

Risk Identification



What is Risk Identification?

Risk identification is a process of determining what, where, when, why, and how something could happen.

Why do it?

The objective of risk identification is to generate a comprehensive list of risks based on those events and circumstances that might enhance, prevent, degrade or delay the achievement of the objectives. This list of risks is then used to guide the assessment, treatment and review of key risks.

Comprehensive identification and recording is critical because a risk that is not identified at this stage may be excluded from further analysis. The risk identification process should include all risks, whether or not they are under the control of the organisation.

In identifying risks, it is also important to consider the risks associated with not pursuing an opportunity, e.g. loss of market share.

How to identify risks

This section will cover the key steps necessary to effectively identify risks from across the organisation.

These steps are as follows:

1. understand what to consider when identifying risks
2. gather information from different sources to identify risks
3. apply risk identification tools and techniques
4. use risk categories for comprehensiveness
5. document the risks
6. document the risk identification process
7. assess the effectiveness of the risk identification process.

1. Understand what to consider

To develop a comprehensive list of risks, a systematic process should be used that starts with the statement of context. To demonstrate that risks have been identified effectively, it is useful to step through the process, project or activity in a structured way using the key elements defined while establishing the context. This can help provide confidence that the process of risk identification is complete and major issues have not been missed.

What might happen that could:

- Increase or decrease the effective achievement of objectives?
- Make the achievement of the objectives more or less efficient (e.g. financial, people, time)?
- Cause stakeholders to take action that may influence the achievement of objectives?
- Produce additional benefits?

Other Considerations:

- What would be the effect on objectives?
- When, where, why, how are these risks (both positive and negative) likely to occur?
- Who might be involved or impacted?
- What controls currently exist to treat this risk (maximise positive risks or minimise negative risks)?
- What might prevent the control from having the desired effect on the risk?

2. Gather information to identify risks

Good-quality information is important for identifying risks. The starting point for risk identification may be historical information about this or similar organisations, followed by discussions with a wide range of stakeholders about historical, current and evolving issues.

3. Apply risk identification tools and techniques

Organisations apply a set of risk identification tools and techniques that are suited to their objectives and capabilities, and to the risks they face. Relevant and up-to-date information is important in identifying risks. This should include suitable background information where possible. People with appropriate knowledge should be involved in identifying risks.

Approaches used to identify risks might include the use of checklists, judgements based on experience and records, flow charts, brainstorming, systems analysis and scenario analysis. The approach used will depend on the nature of the activities under review, types of risks, the organisational context, and the purpose of the risk management exercise.

- Team-based brainstorming, for example, where facilitated workshops are a preferred approach as they encourage commitment, consider different perspectives and incorporate differing experiences.
- Structured techniques such as flowcharting, system design review, systems analysis, Hazard and Operability (HAZOP) studies and operational modelling should be used where the potential consequences are catastrophic and the use of such intensive techniques is cost-effective.
- For less clearly defined situations, such as the identification of strategic risks, processes with a more general structure, such as 'what-if' and scenario analysis might be used.
- Where the resources available for risk identification and analysis are constrained, the structure and approach may have to be adapted to achieve efficient outcomes within budget limitations. For example, where less time is available, a smaller number of key elements might be considered at a higher level, or a checklist may be used.

4. Use relevant risk categories for comprehensiveness

The risk profiles of public sector organisations may differ from those of commercial organisations, given the difference in organisational objectives and stakeholder groups.

5. Document the identified risks

The risks identified during the risk identification are typically documented in a risk register that, at this stage in the risk assessment process, includes:

- risk description
- how and why the risk can happen (i.e. causes and consequences)
- the existing internal controls that that may reduce the likelihood or consequences of the risks.

It is critically important at this stage to understand the cause-effect relationships between a risk, its causes, and the potential consequences should the risk occur. If the "wrong" risk is identified at this stage (e.g. causes or consequences, rather than the actual risk itself), this will reduce the value of the rest of the risk management process.

One of the weakest elements of an organisation's risk framework may be the capturing and defining of risks. It is essential when describing a risk to consider the following three elements:

- description/event – an occurrence or a particular set of circumstances
- causes - the factors that may contribute to a risk occurring or increase the likelihood of a risk occurring
- consequences – the outcome(s) or impact(s) of an event.

It is the combination of these elements that makes up a risk, and this level of detail will enable an organisation to more completely understand the risk.

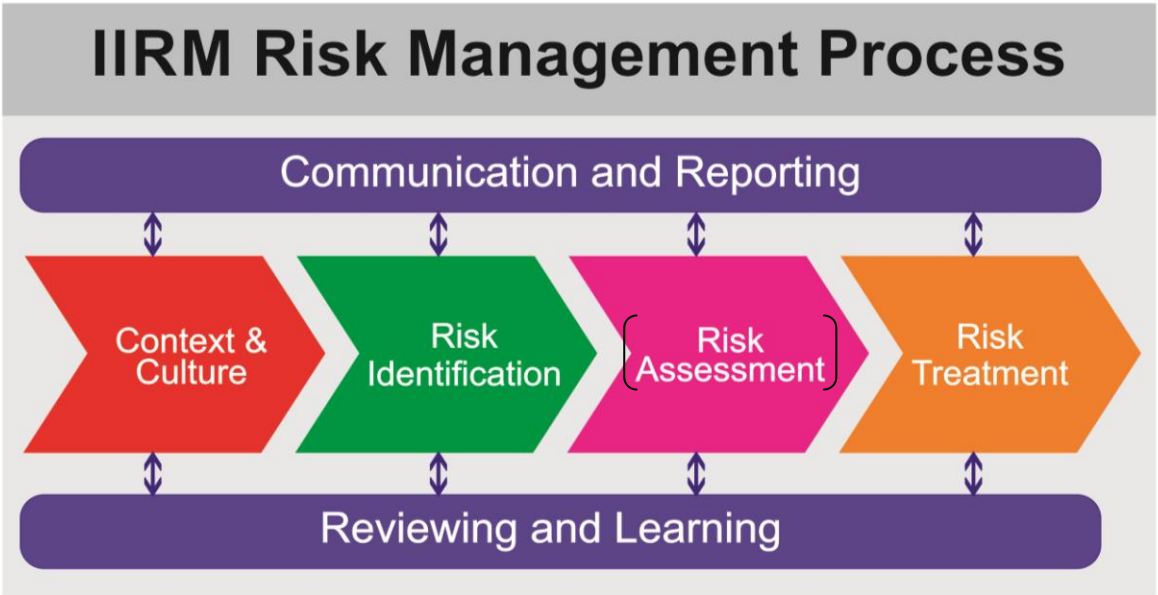
6. Document your risk identification process

In addition to documenting the risks identified, it is also necessary to document the risk identification to help guide future risk identification exercises and to ensure that good practices are maintained by drawing on lessons learned from previous exercises. Documentation of this step should include:

- the approach or method used for identifying risks
- the scope covered by the identification
- the participants in the risk identification and the information sources consulted.

2.4

Risk Assessment



What is Risk Assessment?

Risk assessment can be described in two parts:

- Risk analysis
- Risk evaluation

Risk Analysis

The risk analysis step aims to develop an understanding of the risk. It provides an input to decisions on whether risks need to be treated and the most appropriate and cost-effective risk treatment strategies.

Why do it?

Risk analysis is a fundamental component of the risk management process. It helps to guide the evaluation of risk by defining the key parameters of the risk and how these may impact the achievement of organisational objectives. One of the key outcomes of the risk analysis process is the determination of the levels of risk exposure for the organisation.

In addition, the data and related information collected during the risk analysis process can be used to assist in guiding risk treatment decisions.

How to analyse risks

Risk analysis involves the following key steps:

1) identify and evaluate existing control effectiveness
2) determine risk likelihood (probability or frequency of risk occurrence)
3) determine risk consequence (outcome or impact of an event)
4) determine risk level.

The following section on how to analyse risks is structured as follows:

i) identify and evaluate existing controls
ii) determine risk consequence and the likelihood
iii) determine the overall risk level
iv) document your risk analysis process.

i) Identify and evaluate existing controls

When assessing a risk, it is important to identify what controls are in place to mitigate the risk. Many controls are built into existing business operations and systems.

Examples of controls:

- Controlled physical access (e.g. security codes, access cards, security personnel)
- Employee code of conduct
- Media and public relations strategies/protocols
- Specified training (e.g. software, hazardous substances)
- Automated software controls (e.g. temperature control)
- Policies and procedures
- Standardised business processes
- Insurance
- Quality control management
- Budget management
- Outsourcing functions to specialists
- Formalised contracts and Service Level Agreements
- Audits (internal and external).

Controls should be considered on the basis of:

- design effectiveness – is the control “fit for purpose” in theory, i.e. is the control designed appropriately for the function for which it is intended?
- operational effectiveness – does the control work as practically intended?

To understand the level of residual risk remaining after controls have been taken into account, it is essential as part of the risk analysis process to be able to estimate the effectiveness of existing controls.

In the first instance, management should be able to make a subjective assessment of the effectiveness of the controls using a rating scale. Periodic independent assurance is also needed to provide an objective view - based on testing - of the adequacy and effectiveness of the controls e.g. internal and external audits.

It is useful to involve staff with an understanding of the controls when rating them. Internal audit, business analysts and operational/ financial management can all provide input into control identification and assessment.

A well-designed and implemented control can often mitigate or reduce more than one risk or type of risk.

ii) Determine risk consequence and likelihood

The magnitude of the consequences of an event, should it occur, and the likelihood of the event and its associated consequences should be assessed in the context of the effectiveness of the existing strategies and controls.

Consequences and likelihood may be estimated using statistical analysis and calculations. Where no reliable or relevant past data are available, subjective estimates may be made which reflect an individual's or group's degree of belief that a particular event or outcome will occur.

The most relevant sources of information and techniques should be used when analysing consequences and likelihood.

Sources of information:

- Past records
- Practice and relevant experience
- Relevant published literature
- Market research
- The results of public consultation
- Experiments and prototypes
- Economic, engineering or other models
- Specialist and expert judgements.

Techniques:

- Structured interviews with experts in the area of interest
- Use of multidisciplinary groups of experts
- Individual evaluations using questionnaires
- Use of models and simulations.

Types of Analysis

- Risk analysis may be undertaken in varying degrees of detail depending upon the risk, the purpose of the analysis, and the information, data and resources available. The analysis may be qualitative, semi-quantitative or quantitative or a combination of these, depending on the circumstances.

- The order of complexity and costs of these analyses, in ascending order, are qualitative, semi-quantitative and quantitative. In practice, qualitative analysis is often used first to obtain a general indication of the level of risk and to reveal the major risk issues. Later it may be necessary to undertake more specific or quantitative analysis of the major risk issues.

- The form of analysis should be consistent with the risk evaluation criteria developed as part of establishing the risk management context.

Qualitative Analysis

- Use of words to describe the magnitude of potential consequences and the likelihood that those consequences will occur
- Scales can be adjusted to suit the circumstances, and different descriptions may be used for different risks
- Typically used in presenting overall risk profile, i.e. heat map.

Current Risk Heat Map

	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	11	16	20	23	25
Likely	7	12	17	21 1	24
Possible	4	8	13	18	22
Unlikely	2	5	9	14 1	19
Rare	1	3	6	10	15

Semi-quantitative Analysis

- Use of nominal ranking scales, i.e. values are assigned to likelihood and consequence scales
- Numbers should only be combined using a formula that recognises the limitations of the kinds of scales used
- Scales are context-specific
- Typically used in prioritising risks based on numerical ranking.

Quantitative Analysis

- Use of numerical values for both consequences and likelihood
- Quality of analysis depends on accuracy and completeness of numerical values used

- Consequences may be determined by modelling the outcomes of an event or set of events, or by extrapolation from experimental studies or past data
- Typically used in deriving financial risk reserves.

LIKELIHOOD:	50% (Within 1 Year) - Possible
CONSEQUENCE:	$120,000 - Significant
OVERALL EXPOSURE:	50% x $120,000 = $60,000

Before you determine the overall risk rating, you will need to determine the level of likelihood and consequence for each risk. Each organisation will need to establish its own likelihood and consequence tables.
It is also necessary to establish your likelihood table.

iii) Determine the overall risk rating

Once you have rated the likelihood and consequence, combine the two to determine the overall risk rating.
Based on the risk analysis, risks are classified by level to determine the appropriate level of response to those risks. Specific responses are defined in the "Treat Risks" phase.

Risk Score	Risk Rating	Likely Response
1-6	Low	• No immediate response required. • Risk ownership may not be allocated. • Could be excluded from risk monitoring activities. • An infrequent re-evaluation of risk.
7-10	Medium	• Regular monitoring and re-evaluation of potential risk and any factors that may increase consequence or likelihood occurrence. • Allocate accountability for responding to risk to individual responsible for overseeing risk treatment/s as resources/ circumstances permit.
11-19	High	• Develop risk response strategies as part of risk management and operational processes. • On-going monitoring of risk and progress of risk response or treatment plans. • Allocate accountability for responding to risk to individual responsible for overseeing risk treatment/s.
20-25	Extreme	• The immediate escalation of risk to senior management/ executive for prioritised response and treatment plan development. • Incorporate management of risk into established strategic governance and operational processes. • Allocate accountability for responding to risk to individual responsible for overseeing risk treatment/s.

iv) Document the risk analysis process

Documentation of the risk analysis process provides a record of how risks were analysed in previous periods, thereby informing future risk analysis exercises. A key outcome of documenting the risk analysis process is the enabling of accurate tracking of risks over time using historical reference data.

Documentation should include:

- key assumptions and limitations
- sources of information used
- explanation of the analysis method, and the definitions of the terms used to specify the likelihood and consequences of each risk
- existing controls and their effectiveness
- description and severity of consequences
- the likelihood of these specific occurrences
- resulting level of risk.

Detailed documentation may not be required for very low risks; however, a record should be kept of the rationale for initial screening of very low risks.

Risk Evaluation

Risk evaluation involves comparing a risk's overall exposure against the organisation's risk tolerance.

This allows the determination of whether further controls are required to bring the risk to a level acceptable to the organisation. The output of the risk evaluation phase is a prioritised list of risks.

Why do it?

The purpose of risk evaluation is to make decisions, based on the outcomes of risk analysis, about which risks need treatment and to prioritise treatments.
The output of a risk evaluation generally consists of a prioritised list of risks that require further action.

How to evaluate risks?

The following key steps are involved in evaluating risks:

i. Rank the risks based on the outcome of the risk analysis process
ii. Consider the overall risk profile
iii. Develop a list of priority risks.

i) Rank the risks

Risks can be ranked either qualitatively or quantitatively. Applying qualitative analysis, you can rank the risks using a heat map. The heat map is a colour-coded matrix with each colour indicating the

level of risk. This heat map represents the tolerance level of your organisation. This will have been developed in the earlier phase of "Establish Context", as it is a part of the organisation's risk management context.

Based on the control effectiveness rating, the likelihood of the risk occurring and potential consequences identified in the earlier phase, plot the risks against the matrix. The completed matrix is your risk profile.
Applying semi-quantitative analysis, the organisation can also rank the risks based on their numerical value. The numerical value is a combination of the values assigned by the organisation to control effectiveness, likelihood and consequence.

The most common approach to visually recording risk is to use a 5 x 5 heat map as illustrated below. A risk heat map is sometimes referred to as a risk matrix.

Current Risk Heat Map

	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	11	16	20	23	25
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Rare	1	3	6	10	15

The matrices you select will reflect your organisation's risk rating scales.
For example: If your risk consequence and likelihood used 5-point scales, such as those shown above, a 5 x 5 heat map would be appropriate.

ii) Consider the overall risk profile

Once the initial risk profile has been developed, the organisation may need to consider how each risk ranks in relation to the other risks. This step allows the organisation to conduct a "sanity check" of the risks that have been placed on the heat map to ensure that risks are rated correctly when compared to one another (e.g. "Risk manager may be off sick with flu" is not rated the same as "Project objectives may not be met").

Possible outcomes of this step include:

- The organisation may reassess the rating of some of the risks if it is felt that the overall spread of the risks relative to one another is not a true reflection of reality
- The organisation may recognise that some risks are similar to the other risks or are contributing factors to other risks. Hence, they may be incorporated into the risk description of other risks within the risk register
- The organisation may consider the interdependencies between the risks and consider the consequences for the organisation if more than one risk were to occur at the same time. This may result in changes to the overall risk ratings.

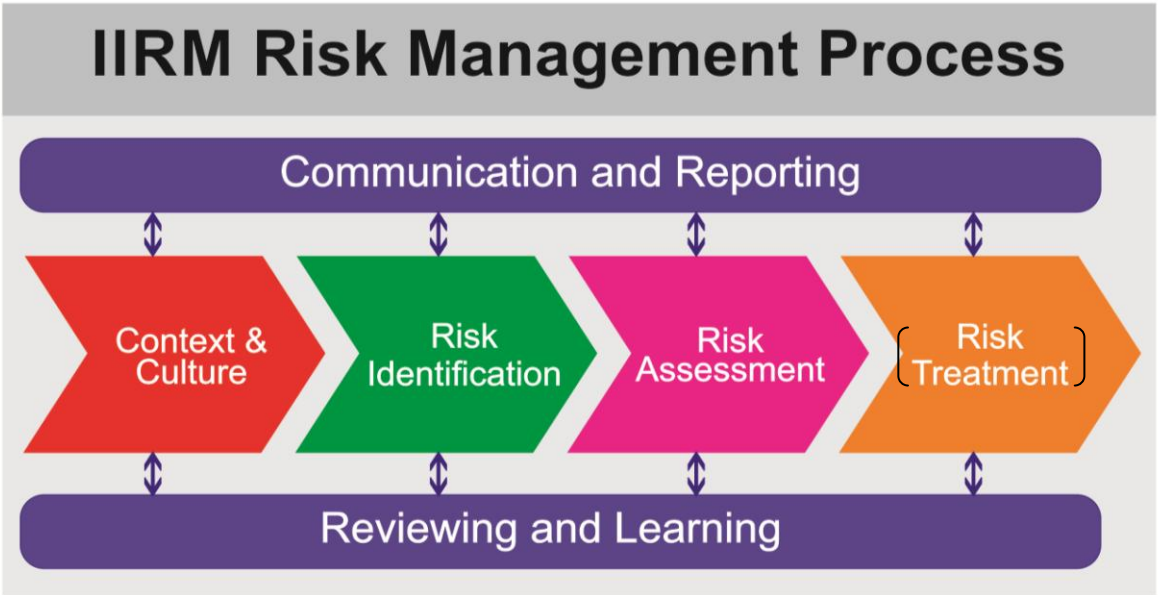
iii) Develop a priority list of risks

The primary objective of the evaluation is to prioritise risks. This helps to inform the allocation of resources to manage risks, both non-financial and financial.

The priority list can be categorised by a number of different criteria dependent on what is most relevant for the organisation, e.g. risk rating, functional area or by type of impact (i.e. strategic or operational). This will further refine the focus for risk treatment.

2.5

Risk Treatment



Risk Treatment

Risk treatment involves identifying the range of options for treating risks, assessing these options, and preparing and implementing treatment plans.

Risk treatment may involve a cyclical process of assessing a risk treatment, deciding that current risk levels are not tolerable, generating new risk treatment/s, and assessing the effect of that treatment until a level of risk is reached that the organisation can tolerate based on the agreed risk criteria.

Why treat risks?

A key outcome of the risk evaluation process is a list of those risks requiring further treatment, as determined by the overall level of the risk against the organisation's risk tolerance levels. However, not all risks will require treatment as some may be accepted by the organisation and may only require occasional monitoring throughout the period.

The risks that fall outside of the organisation's risk tolerance levels are those which may have a significant potential impact on the ability of the organisation to achieve its set objectives. The purpose of treating risks is to minimise or eliminate the potential threat the risk may pose to the achievement of the set objectives.

How to treat risks

Treating risks involves the following key steps, each of which is covered in detail in this section:

1. identify risk treatment options
2. select risk treatment options
3. assign risk ownership
4. prepare risk treatment plans.

1. Identify risk treatment options

Risk treatment design should be based on a comprehensive understanding of how risks arise. This means understanding not only the immediate causes of an event but also the underlying factors that influence whether the proposed treatment will be effective.

2. Select risk treatment options

Risk treatment options are not necessarily mutually exclusive or appropriate in all circumstances.

Risk Treatment Options	
Tolerate	The exposure may be tolerable without any further action being taken. Even if it is not tolerable, the ability to do anything about certain risks may be limited, or the cost of taking any action may be disproportionate to the potential benefit gained. In these cases, the response may be to tolerate the existing level of risk. This option, of course, may be supplemented by contingency planning to handle the impacts should the risk be realised.
Treat	By far the greater number of risks will be addressed in this way. The purpose of treatment is to take action (control) to constrain the risk to an acceptable level while continuing, within the organisation, with the activity giving rise to the risk. Such controls can be further sub-divided according to their particular purpose.
Transfer	For some risks, the best response may be to transfer them. This might be done by conventional insurance, or it might be done by paying a third party to take the risk in another way. This option is particularly useful for mitigating financial risks or risks to assets. The transfer of risks may be viable either because it is the best way of reducing the organisation's exposure or because another organisation (which may be another government organisation) is more capable of effectively managing the risk. It is important to note that some risks are not (fully) transferable – in particular it is generally not possible to transfer reputational risk even if the delivery of a service is contracted out. The relationship with the third party to which the risk is transferred needs to be carefully managed to ensure successful transfer of the risk.
Terminate	Some risks will only be treatable, or containable to acceptable levels, by terminating the activity. It should be noted that the option of termination of activities may be severely limited in government when compared to the private sector; a number of activities are conducted in the government sector because the associated risks are so great that there is no other way in which the output or outcome, which is required for the public benefit, can be achieved. This option can be particularly important in project management if it becomes clear that the projected cost /benefits relationship is in jeopardy.

Take the Opportunity	This option is not an alternative to those above; rather, it is an option which should be considered whenever tolerating, transferring or treating a risk. There are two aspects to this. The first is whether or not, at the same time that threats are being mitigated, an opportunity arises to exploit a positive impact. For example, if a large sum of capital funding is to be put at risk in a major project, are the relevant controls considered good enough to justify increasing the sum of money at stake to gain even greater advantages? The second is whether or not circumstances arise which, whilst not generating threats, offer positive opportunities. For example, a drop in the cost of goods or services frees up resources which can be redeployed.

It is recommended that consideration be given to the cost of the treatment as compared to the likely risk reduction that will result. For example, if the only available treatment option would cost in excess of $10M to implement and the cost impact of the risk is only $5M, it may not be advisable.

To understand the costs and benefits associated with each risk treatment option, it is necessary to conduct a cost-benefit analysis.

Basic cost-benefits analysis:

- Define or break down the risk into its elements by drawing up a flowchart or list of inputs, outputs, activities and events.
- Calculate, research or estimate the cost and benefit associated with each element (include if possible direct, indirect, financial and social costs and benefits).
- Compare the sum of the costs with the sum of the benefits.

Cost-Benefit Analysis Example:

An HR manager has a risk of “Ineffective records management leading to loss of employee data”. As a treatment strategy, she is deciding whether to implement a new personnel management and payroll system. The HR department has only a few computers and staff are not highly computer literate. She is aware that computerised information will allow more accurate analysis of data and give a higher quality of reliability and service to internal customers.

Her financial cost-benefits analysis is shown below:

Costs:

Description	Quantity	$ Price	$ Total
PCs with supporting software	10	2450	24,500
Server	1	3500	3,500
Printers	3	1200	3,600
Cabling & Installation	1	4600	4,600
Payroll Software	1	15000	15,000
Computer introduction training	8 People	400	3,200
Keyboard skills	8 People	400	3,200
Payroll system training	4 People	700	2,800
Lost time	40 man days	200	8,000
Total cost			**68,400**

Benefits

Description	$ / Year
Doubling of payroll capacity: estimate:	40,000
Improved efficiency and reliability of client service: estimate:	50,000
Improved accuracy of customer information: estimate:	10,000
Reduction of payroll and processing effort:	30,000
Total benefits	**130,000**

3. Assign risk ownership

The CEO and/or the Executive Management Committee typically allocate responsibility for risk to an operational or functional area line manager.

Assigning Risk Ownership: Example	
Risk Type	**Risk Owner**
Strategic	CEO
Human Resources	HR Manager
Finance / Budgeting	Finance Manager / Chief Financial Officer
Health and Safety	Facilities manager or HR Manager
Business Continuity	Risk Officer or Facilities Manager
Reputational	CEO / Communication Manager
IT and Systems	IT Manager

Risk owners nominated by executive management should assume responsibility for developing effective risk treatment plans. The risk owner should be a senior staff member or manager with sufficient technical knowledge about the risk and/or risk area for which treatment is required.

The risk owner will often delegate responsibility (but not accountability) to his/her direct reports or consultants for detailed plan development and implementation.

4. Prepare treatment plans

Once treatment options for individual risks have been selected, all treatment options should be consolidated into risk action plans and/or strategies. As one risk treatment may impact on multiple risks, treatment actions for different risks need to be combined and compared in order to identify and resolve conflicts between plans and to reduce duplication of effort.

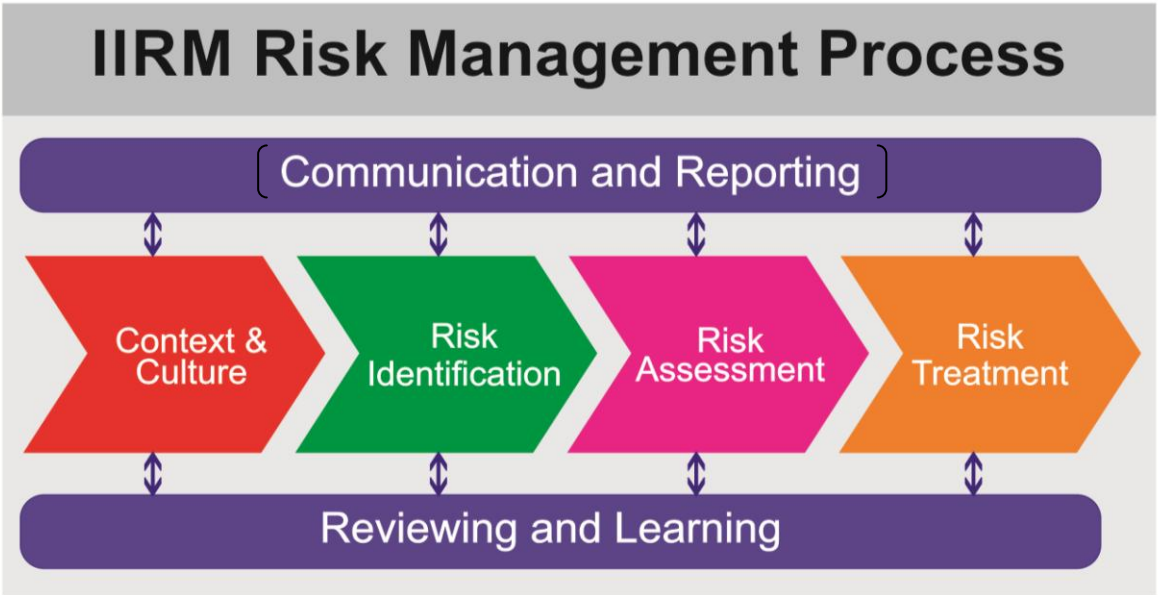
Treatment plans should:

- identify responsibilities, schedules, the expected outcome of treatments, budgets, performance measures and the review process to be set in place.
- include mechanisms for assessing and monitoring treatment effectiveness, within the context of individual responsibilities and organisational objectives, and processes for monitoring treatment plan progress against critical implementation milestones. All this information should arise from the treatment design process.
- document how, practically, the chosen options will be implemented.

The successful implementation of the risk treatment plan requires an effective management system that specifies the methods chosen, assigns responsibilities and individual accountabilities for actions, and monitors them against specified criteria. Communication is a very important part of treatment plan implementation.

2.6

Communication and Reporting



Risk communication

Risk communication is generally defined as an interactive process of exchange of information and opinion, involving multiple messages about the nature of risk and risk management. This applies to internal communication in the organisation and to communication with external stakeholders.

Informed communication between an organisation and its stakeholders on an issue prior to making a decision or determining a direction on a particular issue is fundamental to effective risk management.

Informed communication is a process, not an outcome; it impacts decision-making through influence and learning rather than power, and it is about inputs to decision-making, not necessarily joint decision-making.

Why do it?

Communication with internal and external stakeholders is essential for effective risk management and should take place at each step of the risk management process as far as necessary.

Effective internal and external communication is important to ensure that those responsible for implementing risk management, and those with a vested interest, understand the basis on which decisions are made and why particular actions are required.

Stakeholders are likely to make judgements about risk based on their perceptions. These can vary due to differences in values, needs, assumptions, concepts and concerns as they relate to the risks or the issues under discussion. Since the views of stakeholders can have a significant impact on the decisions made, it is important that their perceptions of risk be identified, recorded and integrated into the decision-making process.

The key steps to communication are:

- establish communication and consultation objectives
- analyse stakeholders or recipients of the message
- develop key messages and purpose
- identify communication owners and senders
- identify appropriate channels
- determine timing of communication
- deliver key messages.

Objectives of communication may include:

- Building awareness and understanding about a particular issue
- Learning from stakeholders
- Influencing the target audience
- Obtaining a better understanding of the context, the risk criteria, the risk, or the effect of risk treatments
- Achieving an attitudinal or behavioural shift in relation to a particular matter
- Any combination of the above.

Developing a communication plan is essential to ensure that key messages are delivered effectively to the right people at the right time using the most appropriate channels at every step of the risk management process.

A stakeholder consultation plan helps to ensure that “all bases are covered” when it comes to understanding perceptions around risk and risk management, identifying and assessing risks, and developing treatment options. The plan is also useful for ensuring that the consultation is as inclusive as is appropriate.

When implemented effectively, a stakeholder consultation plan should:

- appropriately define an organisation’s context
- ensure that the interests of stakeholders are understood and considered.

Ensure risks are adequately identified

- bring different areas of expertise together in analysing risks
- ensure that different views are appropriately considered in evaluating risks
- ensure appropriate change management techniques during the risk management process
- promote “ownership” of risk by managers

- engage stakeholders to allow them to appreciate the benefits of particular controls and the need to endorse and support a risk treatment plan.

Risk and risk management reporting

Risk reporting is the regular provision of appropriate risk-related information to stakeholders and decision-makers within an organisation to support understanding of risk management issues and to assist stakeholders in performing their duties within the organisation.

The need for risk reporting

Successful risk management requires frequent and open communication with a broad group of internal and external stakeholders. This makes risk reporting and the definition of a risk communications and reporting plan a key component of an organisational risk management (or ERM) program.

Effective risk reporting also contributes to good corporate governance by providing reliable and current information to boards, senior managers and other stakeholders regarding the risks faced by the organisation as well as the treatment plans in place to manage these risks. The Board of a public entity is also required to inform the Minister and department head of known major risks.

The availability of this information can be used to support management decision-making during strategic planning and operational management processes.

Foundations of good reporting

The following principles should be remembered when developing a risk-reporting solution:

- The quality of risk reporting is dependent on a fully functioning risk management system. Incomplete or unreliable risk identification, assessment, prioritisation and treatment outputs will be reflected in poor reporting outputs.
- There is no single risk report that meets the needs of all stakeholders. Reports should be developed and customised to reflect the needs and preferences of the target audience and its purpose. Seek input from stakeholders before implementing a risk-reporting solution, as this should be part of existing reports and reporting frameworks.
- Although all organisations need to report on risk to various stakeholder groups, organisations with more mature and sophisticated risk management frameworks will typically produce a number of customised risk reports to meet the needs of different stakeholder groups throughout the year.
- Avoid providing too much or too little information in risk reports. Senior Management and the Board will typically prefer a summary of risks and risk trends, focusing on high risk and strategic issues across the organisation, while those involved in managing specific risks will require detailed information covering their areas of responsibility.

The audience for risk reporting

Risk reports should be delivered to a broad spectrum of organisational stakeholders. Typical recipients of regular formal risk reports should include:

- CEO and Board of Directors
- Business unit heads of all major business functions
- Compliance committees (notably Internal Audit and Risk Management)
- Staff directly responsible for designing and implementing risk management treatments
- Employees who need to assist in the identification of risk and the implementation of risk plans
- Government ministries and agencies
- The public (through access to Annual Reports and press releases).

A single person, typically the risk manager, should be responsible for coordinating and drafting risk reports to ensure consistency in standards and format.

Risk reporting can be automated using risk management software such as the Vigilant ERM's Vigilant Risk Manager. However, it is still important to ensure that reporting formats meet stakeholder requirements.

The risk process should ensure that risks are linked to strategic objectives. This helps to report on risk within a strategic organisational context.

Frequency of risk reporting

At a minimum, an organisation should update and report on its risk profile on an annual basis. While an annual reporting and update cycle may meet statutory requirements, effective risk management typically requires more frequent reporting on risk.

The frequency of risk reporting should reflect the cycle of the organisation's regular internal reporting. Where the Executive receives monthly or quarterly progress reports on Financial, Operational, Health and Safety or IT matters, they may wish to receive similar risk reports.

Types and content of risk reports

The information within risk reports is drawn from the risk register of the organisation. By filtering the information within the risk register, it is possible to draft a number of reports tailored to suit the needs of the various recipients.

Communication and Reporting

The following table illustrates the different types of reporting:

Report Type	Comment
Annual Report Attestation	• Boards/CEOs and Secretaries who are accountable for the risks of their organisations are required to attest in the annual report that organisations have risk management processes in place and that: • These processes are effective in controlling risks to a satisfactory level • A responsible body or audit committee verifies that view.
Top Risks/Strategic Risks	• These reports contain a prioritised list of the top 10 to 20 risks based on consequence and likelihood scores. Typically they include details about the risk, information on key controls and their effectiveness and additional treatments needed, with timeframes.
Risk Trends	When risks are regularly reassessed, it is possible to: • Define target risk levels for key risks • Identify which risks are getting worse or where treatments are reducing risk exposures • Identify risk areas that need additional attention • Demonstrate the success of treatment plans.
New and/or Emerging Risks	• By sorting risks according to when they were identified, it is possible to report easily on new risks that may still need to be fully considered and understood. From an emerging-risk perspective, types or categories of risks that may begin to emerge over the next 2-3 years or longer should be identified and captured. Details at this stage may only include information regarding what research is being undertaken on the risk, and who is responsible.
Risk with Ineffective Controls	• By identifying significant / extreme risks with ineffective controls, the Board and Executive can identify potential points of business failure that need urgent interventions or resource support.
Risk Categories / Risk Types	• By grouping all risks that have not been allocated to a responsible person for follow-up and response, management can identify key risks that are not being effectively monitored and managed.
Risk Owner / Person Responsible	• By filtering the report by the risk owner, it allows those responsible to view risk treatments that they need to oversee or develop.
Risk Treatments Due or Overdue	• By sorting risks according to due dates for treatment plans / responses, Risk Managers, Project Managers and others can identify critical timeframes for responding to key risks as well as identify and manage potential delays and/or non-performance in responding to risk.

It should be noted that for all the risk report types outlined above, organisations may choose to report predominantly on an “exception” basis. This means to either:

- only report on the changes from the last report rather than producing risk reports that contain data that are largely unchanged from the last reporting cycle; or,
- only report on risks at the Executive/ Senior Manager level that fulfil predefined characteristics (e.g. significant risks with poor control effectiveness).

This approach prevents a situation where the same risk may justifiably appear on the report time after time as it is rated high, but no further action can be taken to mitigate the risk at that time (i.e. the risk has been accepted as high). In this instance, report recipients may fail to pay attention to the risk report as they become used to seeing the same risk information and, therefore, begin to regard the risk-reporting process as non-value-adding. It is important, however, to exercise complete oversight of all risks on at least an annual basis to ensure that there have been no changes to the overall risk profile and that the executives/senior managers are fulfilling their oversight duties.

Format of risk reports

The way in which risk information is presented can make a huge difference to the value it adds.
It is often useful to represent risk information graphically to make it easily understood and to show a large volume of information in a compact manner.

The following section provides examples of three types of risk reports:

1. Strategic risk reports
2. Operational risk reports
3. Key risk indicator reports.

1. Strategic risk report formats

Heat maps are commonly used to report on the top risks faced by the organisation and are well received by most boards. They are useful as they graphically illustrate the relative severity of risks in relation to one another.

Current Risk Heat Map

	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	11	16	20	23	25
Likely	7	12	17	21 1	24
Possible	4	8	13	18	22
Unlikely	2	5	9	14 1	19
Rare	1	3	6	10	15

The green area represents the least severe risks, and as the risk moves upward and right towards the red shaded area the level of risk exposure increases.

Heat maps are less useful (difficult to read) when there is a need to illustrate a large number of risks, or where risk scores are very similar for all risks.

The ability to effectively link an organisation's key risks to its strategic objectives or business goals is an indicator of a maturing risk management framework. An example is illustrated in the value chain report below.

2. Operational risk report format

Table formats, of which there are many variations, are useful for reporting on a large number of risks or when a greater amount of detail about each risk is required. This approach is best suited to operational risk reporting where, for example, the risk owner or risk manager will want to review more detailed risk and control information such as:

- control effectiveness levels
- rating scores
- treatment plans
- treatment due dates.

These reports are used by risk committees, program managers and risk owners to monitor and manage the update, implementation and review of risk management activities/ plans. This level of detail can be provided as supporting information to summary executive reports, or provided where the board or executive wish to review a specific risk or cluster of risks.

A key advantage of table or spreadsheet reports is that they can easily be filtered or sorted to meet the reporting requirements of a specific target audience. It is also easy to add to or modify content following risk update processes.

3. Key Risk Indicators (KRIs)

Key risk indicators – which are used to measure risk levels – should be developed once an organisation is satisfied that the basic elements of its risk management framework are well established and operating effectively.

In addition to reports containing qualitative data, once an organisation has established an effective system of risk reporting, it may wish to consider the use of quantitative data in the form of KRIs. Indicators are a valuable tool to facilitate the monitoring of risks and controls over time against an organisation's risk appetite. Whilst risk and control data in many organisations are formally updated on a regular basis, key indicators enable an organisation to continuously and predicatively monitor changes to its risk profile or control framework and allow actions to be carried out in a more timely and effective manner.

It is important to note that the use of KRIs is considered to be at the "mature end" of the risk management spectrum; therefore, organisations should not attempt to develop and roll out such indicators until they have established a robust risk management framework that delivers clearly defined and understood risk and control data. In addition, as risk indicators can be costly to implement and maintain, it is recommended that such indicators be used only for significant risks.

For organisations that are keen to focus on more quantitative data but which do not have the necessary resources to identify and monitor the large volumes of data required for risk indicators, it is recommended that priority be given to the identification and monitoring of key control indicators instead (see definitions below), as they are easier to identify and capture and will reflect a weakening in the control environment that is likely to result in an increased level of risk.

Key indicators allow an organisation to:

- understand how the risk profile changes in different circumstances
- appreciate how risk moves and is affected by the business environment
- focus attention on risk drivers that are most volatile
- ensure that controls around the drivers are robust and effective
- gain a forward-looking perspective of the current risk profile
- understand the early warning signals for emerging risks.

For example, the motor insurance industry relies heavily on risk indicators when determining appropriate policy pricing. Factors such as the age of the applicant, neighbourhood and number of kilometres driven each year build a profile of the applicant and, hence, the 'risk' that the insurance firm will have to pay out on a claim. If an insurance company were to attempt to write new business without utilising indicators, underwriters would be forced to use their intuition to judge the likelihood of a new customer claiming in the future. While some may prove to have good insight, many would misjudge the risk and, consequently, business performance would be significantly (negatively) affected.

There are three types of key indicators commonly used: Key Performance Indicators, Key Risk Indicators and Key Control Indicators. There is often confusion surrounding the difference between them. Below is a brief definition of each:

i) Key Performance Indicators (KPIs) are used to monitor the change in overall business performance (e.g. budget) in relation to specific business objectives. KPIs can measure internal or external factors and can be seen as events that may raise warnings of potential risks.

ii) Key Risk Indicators (KRIs) are a specific measure relating to a particular risk that shows a change in the likelihood or consequence of that risk event occurring. KRIs that demonstrate increased exposure to potential risks (e.g. significant increases in business volumes combined with staff numbers) can show what level of stress or strain current control activities may experience.

iii) Key Control Indicators (KCIs) are metrics that can demonstrate a change in a specific control's effectiveness (e.g. a control's design and its actual performance). A deterioration in KCIs reflects a weakening in the control environment and is likely to result in an increase in a risk's likelihood or consequence.

The definition of an effective system of Key Risk Indicators (KRIs) can be broken down into five phases:

1. identify and document the key risk and control indicators
2. source and validate existing KRI data

3. establish tolerance levels and escalation procedures
4. analyse, report and revise the KRIs
5. monitor KRIs.

The use of risk management software for reporting

The use of risk management software is useful in helping manage risk-related information. However, it is not essential to use risk software to achieve a robust and effective risk management framework.

Most specialised risk management software tools, such as Vigilant Risk Manager, include automated risk reporting capabilities. Software tools can simplify and reduce the time required to report on risk management initiatives.

While many generic reports can be drawn from such software, it is still important to ensure that the report format and content meets stakeholder requirements. In many cases, an organisation may commission consultants, software vendors or internal IT specialists to develop customised reports to meet specific reporting requirements.

The VRM Risk Register is designed to allow organisations to:

- Create a single risk register across the organisation
- Record pertinent risk information, including:
    1. Risk descriptions, causes and impacts
    2. Risk assessment outcomes (likelihood, consequence, control effectiveness etc.)
    3. Categorisation of risks (risk categories)

- Link risks to specific business units

    1. Linkage of risks to specific strategic and operational objectives
    2. Current control information
    3. Responsibility for risk
    4. Risk treatment and response
    5. Risk response status and due dates

- Select from a range of pre-defined summary and detailed risk reports in both graphical and text formats. The software can generate heat map reports.

Conclusion

The importance of an effective risk-reporting system should not be underestimated as it ultimately supports improved decision-making ability. The failure to effectively report on risks will also undermine executive and Board support for the organisation's risk management process.

Reports should be viewed as a business tool rather than a compliance requirement.

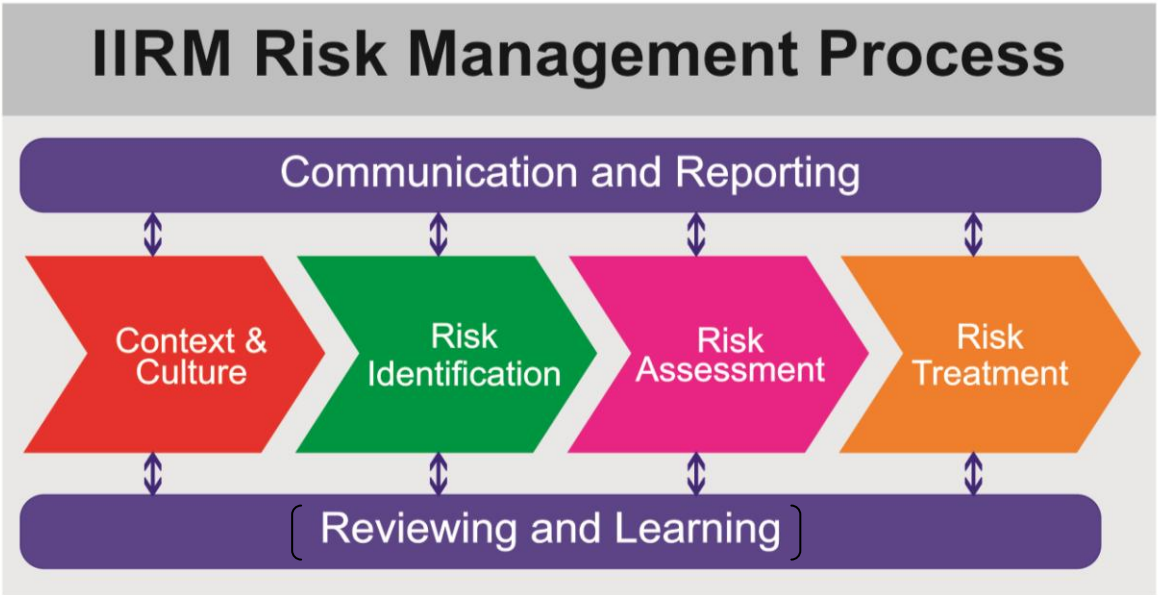
Remember that there is no 'right or wrong' approach to risk reporting, as long as the reports produced:

- meet the needs of your stakeholders
- are available when needed by the business
- contain current, updated quality information
- are easily understandable
- contain the right level of detail
- are supported by detailed underlying risk information, where appropriate
- support action and accountability for risk management across the organisation.

Consideration of these requirements when designing risk-reporting solutions should maximise the benefits obtained from risk management processes.

2.7

Reviewing and Learning



Reviewing and learning

It involves:

- analysing and learning lessons from events, changes and trends
- detecting changes in the external and internal contexts, including changes to the risk itself, which may require revision of risk treatments and priorities
- ensuring that the risk control and treatment measures are effective in both design and operation.

Reviewing and learning is an essential and integral part of managing risk and is one of the most important steps in the risk management process. It is necessary to review risks, the effectiveness and appropriateness of the strategies and management systems set up to implement risk treatments, and the risk management plan and system as a whole.

Why do it?

Regular review throughout the risk management process is necessary to:

- ensure accuracy of risk information - the environment in which the organisation is operating is constantly changing and so therefore are its risks. If risk information is inaccurate, it may cause the organisation to make poor decisions it might otherwise have avoided.
- ensure effectiveness and adequacy of risk management processes
- continuously evolve to desired levels of risk management maturity

- learn and continuously improve, adopting better practices and developments in risk management.

How to review

The key steps to review are:

1. understand the different types and levels of review
2. establish your review cycle
3. measure risk management performance.

1 Understand different levels and types of monitoring and review

Different types of review will be dependent on the type of decisions made around risks and risk management. This also implies varying levels of frequency and aggregation of risk information depending on the purpose of the review:

- At the task level, routine measurement or checking of particular parameters (for example, pollution levels or cash flows) is often required through continuous (or, at least, frequent) review.
- At the functional or operational level, line management reviews risks and their treatments on a regular basis. Risks are reviewed within a predefined scope and prioritised according to agreed criteria.
- At an organisational level, a risk function, manager or committee reviews enterprise-level risks. At this level of review, relevance and alignment with organisational strategies are reviewed. The risk management framework is also reviewed at this level.

Review of risk management framework

- The context of risk management needs to be reviewed at the enterprise level. This may include ensuring the accuracy of the organisation's risk criteria, risk tolerance, risk categories.
- The maturity of the risk management framework in terms of design and implementation could be monitored through tools such as surveys and benchmarking, comparing against the latest risk management better practices.
- The maturity of risk management can be reviewed by comparing the current level of maturity and the desired level of maturity at regular intervals (e.g. annually).

2 Establish your review cycle

The review cycle will vary depending on the context of risk management and an organisation's risk management strategy. Typically,

- On an annual basis, the entire risk profile will be reviewed by the Risk & Compliance Committee (or equivalent); however this may be more frequent if major business changes are occurring.
- Every three years the risk management framework and associated documentation will be reviewed either as part of the internal audit process or by an independent third party.

3 Measuring risk management performance

Performance Indicators (PIs) are quantitative measures of the level of performance of a given item or activity. They need to be measurable and appropriate to individual business units and hold individuals accountable while forming the basis for continuing improvement.

Organisations should use their normal organisational planning processes to generate performance measures for the risk management system and processes. The performance indicators should reflect the range of key organisational objectives defined when the context was established at the start of the process. Performance indicators may monitor outcomes (for example, specific losses or gains) or processes (for example, consistent performance of risk treatment procedures).
Normally, a blend of indicators is used. However, outcome performance indicators usually lag significantly behind the changes that give rise to them; hence, in a dynamic environment operational process indicators are likely to be more useful.

Performance indicators should reflect the relative importance of risk management actions, with the greatest effort and focus applied to:

- the highest risks
- the most critical treatments or other processes
- treatments or processes with the greatest potential for improvements in efficiency.

Risk management performance indicators may be included in risk management reports to senior management and the Board.

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Glossary of Key Terms

The glossary below provides definitions for commonly used risk management terminology.

The ISO 31000:2009 has been used as the primary source of definitions.
Where the Standard does not include a definition of a particular term, other sources have been used.

Communication and consultation
Continual and iterative processes that an organisation conducts to provide, share or obtain information and to engage in dialogue with stakeholders regarding the management of risk

Consequence
Outcome of an event impacting objectives

Control
Measure that modifies risk

Control assessment
Systematic review to ensure that controls are still effective and appropriate

Enterprise-Wide Risk Management (ERM)
An integrated approach to assessing and addressing all risks that threaten the achievement of the organisation's strategic objectives; the purpose of ERM is to understand, prioritise, and develop action plans to maximise benefits and mitigate top risks.

Establishing the context
Defining the external and internal parameters to be taken into account when managing risk and setting scope and risk criteria for the risk management policy

Event
Occurrence or change of a particular set of circumstances

Exposure
Extent to which an organisation and/or stakeholder is subject to an event

External context
External environment in which the organisation seeks to achieve its objectives

Frequency
Number of events or outcomes per defined unit of time

Hazard
A source of potential harm

Internal audit
Independent, objective assurance and consulting activity designed to add value and improve an organisation's operations…accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of: (1) Risk management (2) Control, and (3) Governance processes. (IIA Professional Practices
Framework)

Internal context
Internal environment in which the organisation seeks to achieve its objectives

Key control indicator (KCI)
Measures or metrics that demonstrate a change in a specific control's effectiveness

Key performance indicators (KPIs)
Metrics or measures used to monitor changes in business performance in relation to specific business objectives (e.g. volumes of business, revenue etc.)

Key risk Indicators (KRI)
Measures and metrics that relate to a specific risk and demonstrate a change in the likelihood or consequence of the risk occurring

Level of Risk
Magnitude of a risk or combination of risks, expressed in terms of the combination of consequences and their likelihood

Likelihood
Chance of something happening

Loss
Any negative consequence or adverse effect, financial or otherwise

Monitoring
Continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected

Probability
Measure of the chance of occurrence expressed as a number between 0 and 1, where 0 is impossibility and 1 is absolute certainty

Residual risk
Risk remaining after risk treatment

Review
Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives

Risk
Effect of uncertainty on objectives

Risk acceptance
Informed decision to take a particular risk

Risk aggregation
Combination of a number of risks into one risk to develop a more complete understanding of the overall risk

Risk analysis
Process to comprehend the nature of risk and to determine the level of risk

Risk appetite
Amount and type of risk that an organisation is willing to pursue or retain

Risk assessment
Overall process of risk identification, risk analysis and risk evaluation

Risk attitude
Organisation's approach to assess and eventually pursue, retain, take or turn away from risk

Risk aversion
Attitude to turn away from risk

Risk avoidance
Informed decision not to be involved in, or to withdraw from, an activity in order not to be exposed to a particular risk

Risk criteria
Terms of reference against which the significance of risk is evaluated

Risk description
Structured statement of risk usually containing four elements:
sources, events, causes and consequences

Risk evaluation
Process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable

Risk financing
Form of risk treatment involving contingent arrangements for the provision of funds to meet or modify the financial consequences should they occur

Risk identification
Process of finding, recognising and describing risks

Risk management
Coordinated activities to direct and control an organisation with regard to risk

Risk management audit
Systematic, independent and documented process of obtaining evidence and evaluating it objectively in order to determine the extent to which the risk management framework or any selected part of it is adequate and effective

Risk management framework
Set of components that provide the foundations and organisational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organisation.

Risk management plan
Scheme within the risk management framework specifying the approach, the management components and resources to be applied to the management of risk

Risk management policy
Statement of the overall intentions and direction of an organisation related to risk management

Risk management process
Systematic application of management policies, procedures and practices to the activities of communicating, consulting, establishing the context, and identifying, analysing, evaluating, treating, monitoring and reviewing risk

Risk matrix (or heat map)
Tool for ranking and displaying risks by defining ranges for consequence and likelihood

Risk mitigation
Measures taken to reduce an undesired consequence

Risk owner
Person or entity with the accountability and authority to manage a risk

Risk perception
Stakeholder's view on risk

Risk profile
Description of any set of risks

Risk reduction
Actions taken to lessen the likelihood, negative consequences, or both, associated with a risk

Risk register

Record of Information about identified risks

Risk reporting

Form of communication intended to inform particular internal or external stakeholders by providing information regarding the current state of risk and its management

Risk retention

Acceptance of the potential benefit of gain, or burden of loss, from a particular risk

Risk severity

A measure of the magnitude of a risk, based on a combination of the likelihood and consequence of a risk

Risk sharing

Form of risk treatment involving the agreed distribution of risk with other parties

Risk source

Element which alone or in combination has the intrinsic potential to give rise to risk

Risk tolerance

Organisation's or stakeholder's readiness to bear the risk, after treatment, in order to achieve its objectives

Risk treatment

Process to modify risk

Stakeholder

Person or organisation that can affect, be affected by, or perceive themselves to be affected by a decision or activity