GMR GOA INTERNATIONAL AIRPORT LIMITED

ENTERPRISE RISK MANAGEMENT POLICY

Approved by the Board on July 25, 2018

Document review and approval

Revision History

Version	Author	Date	Revision	Reason

This document has been reviewed by

	Reviewer	Date Reviewed
1		
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This document has been approved by

	Name	Signature	Date Reviewed
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N.B: ***The contents of the Enterprise Risk Management Policy is exactly in line with the Risk Management Policy of GMR Infrastructure Limited, the parent company which is adopted across GMR Group of Companies. The contents of the said policy which are in accordance with the Companies Act, 2013 and the Concession Agreement dated November 08, 2016 shall be applicable mutatis mutandis to GMR Goa International Airport Limited (GGIAL) and other provisions, if any, which are in accordance with the SEBI (LODR) Guidelines and other listing provisions will not be applicable to GGIAL.***

1. Introduction

Risk, as defined by ISO 31000:2009 (Risk Management - Principles and Guidelines), "is the effect of uncertainty on objectives". Enterprise Risk Management (ERM) is an integrated approach to proactively managing risks which affect the achievement of GMR Group's (herein referred to as "GMR" or the "Group") vision, mission and objectives. ERM is aimed at protecting and enhancing stakeholder value by establishing a suitable balance between harnessing opportunities and containing risks.

In the current dynamically changing business environment, GMR Group, with its widely diversified business ventures is exposed to a plethora of risks from strategic, regulatory, alliance, operational and financial perspectives. The Group Holding Board (GHB) is committed to fostering an environment within the Group that enables proactive identification, management, monitoring and reporting of various risks that the Group may need to deal with. The Group-wide ERM initiative by GHB would form the basis for ongoing management of risks at GMR.

Through this document, the GHB:

- Mandates its commitment to ERM
- Seeks to embed ERM into the Group's culture by instilling ERM in its processes, people and technology
- Intends to align ERM fundamentals with organizational objectives
- Intends to align ERM performance indicators to organizational performance indicators
- Through the establishment of an ERM framework, the GHB aims to realize the following benefits:
- Enhance proactive risk management
- Facilitate risk based decision making
- Improve governance and accountability
- Enhance credibility with wide range of stakeholders (e.g. Investors, Employees, Government, Regulators, Society, etc.)
- Above all, protect and enhance stakeholder value

This document outlines the GMR Group ERM policy framework. It describes the Group's risk management processes and sets out the requirements for Management in generating risk management action. The document has two parts - a "policy" section and a "guidelines" section.

The policy sets out the rules of the Group's risk management framework. These are the mandatory requirements established by the GHB for management of risk in the Group. The policy is also intended to fulfil the requirement set out by Clause 49 of the Listing Agreement, applicable to listed entities within the Group.

The guidelines provide supporting information to assist Management in the execution of risk management processes. The corporate governance drivers behind risk management today, require new ways of reporting and monitoring the Group's risk exposures. The guidelines have therefore been provided to assist Management in dealing with these new requirements. The guidelines are aligned to ISO 31000:2009 (Risk Management - Principles and Guidelines).

2. Enterprise Risk Management Policy

2.1. Group Chairman's message

Our company faces several challenges that threaten the achievement of desired business objectives. Hence, effective management of risks is imperative to a Group with our risk profile, nature of business and growth aspirations. The achievement of strategic objectives depends on us being able to take calculated risks in a manner that does not jeopardize the direct interests of the Group and its stakeholders. It is imperative that risks are assessed for each significant decision namely capital infusion, capital expenditure, project viability, feasibility, expansion, acquisition, etc.

The GHB has committed the Company to a process of enterprise risk management that will be aligned to the corporate governance requirements. An enterprise wide approach to risk management will be adopted by the Company and key risks will be managed within a unitary framework that is aligned to the Company's corporate governance structure. It is expected that all Sectors, Business Units and Corporate Services will embrace this Risk Management Policy and Guidelines and make use of this in their decision making process.

It will be the responsibility of the GHB, Board of Directors and Chief Executive Officers to ensure that risks are effectively managed within acceptable appetite limits. The ERM team will facilitate and oversee the risk management process in GMR. The risk management processes, over the period of time will become embedded into our business systems and processes, such that our responses to risks remain current and dynamic.

Every employee has a part to play in this important endeavour and I look forward to your cooperation in this significant ongoing initiative.

Signed : Group Chairman
Date : …………………..

2.2. Regulatory Context:

Section 134 (3) of the Companies Act, 2013 requires the Boards' Report to include a statement indicating development and implementation of a risk management policy for the company including identification therein of elements of risk, if any, which in the opinion of the Board may threaten the existence of the company.

Section 177 (4) of the Companies Act, 2013, Every Audit Committee shall act in accordance with the terms of reference specified in writing by the Board which shall, inter alia, include evaluation of internal financial controls and risk management systems.

As per the Code of Conduct for Independent Directors enumerated under Schedule IV, the Independent Directors shall satisfy themselves on the integrity of financial information and that financial controls and the systems of risk management are robust and defensible.

All Listed Companies are bound by the Listing Agreement entered into with the Stock Exchanges. The ERM Policy is also intended to address the requirements of Clause 49 of the Listing Agreement.

As per the revised Clause 49 (VI) of the Listing agreement:

A. The company shall lay down procedures to inform Board members about the risk assessment and minimization procedures;

B. The Board shall be responsible for framing, implementing and monitoring the risk management plan for the company.

While the document is also intended to fulfil the stated intent of Companies Act, 2013 and Clause 49 of the Listing Agreement with regard to risk management, the Group seeks to implement Enterprise Risk Management to protect and enhance stakeholder value.

2.3. Enterprise Risk Management Philosophy

The Risk Management philosophy of the Group is built based on its vision, values and frugality. The Group upholds its vision "To build an entrepreneurial organization that makes a difference to society through creation of value."

The Group has developed a dynamic growth strategy and is in the process of implementing robust institution building processes in pursuit of its vision. ERM aims at balancing the two by ensuring that key decisions with regard to strategy and institution building are commensurate with the Group's risk appetite.

The Group's ERM philosophy is "To integrate the process for managing risk across GMR Group and throughout its business and lifecycle to enable protection and enhancement of stakeholder value."

The Group endorses the following principles as adapted from ISO 31000:2009 (Risk Management - Principles and Guidelines). Enterprise Risk Management:

- Protects and enhances value
- Is an integral part of all organizational processes and is applicable across the Group
- Is an input to decision making
- Is systematic, structured and timely
- Is transparent, inclusive and consultative
- Is dynamic, iterative and responsive to changes
- Facilitates continual improvement

2.4. Applicability of ERM

This ERM framework is applicable throughout the GMR Group. The applicability of ERM is detailed as under:

Group – Managing risks that affect the objectives of the Group. To this extent, ERM at a Group level will involve:

- Identifying, assessing, measuring, consolidating and managing risks emanating from various Sectors as well as Corporate Service functions which impact Group objectives**.**
- Identifying, assessing, measuring, consolidating and managing risks which exclusively affect the Group objectives (independent of the Business Lines/ Sectors)**.**

Sectors – Identifying, assessing, measuring, consolidating and managing risks that affect the objectives of each independent Business Line/ Sector (as applicable). The ERM framework is applicable across the following Sectors:

- Airports
- Energy
- Highways & Urban Infrastructure (UI)
- International Business
- Other Business Lines/ Sectors – RAXA, Aviation, GMR Sports and GMR Varalakshmi foundation
- Other Business/ Sector the Group may decide to enter

Business Units (BUs) – The ERM framework and its components will also be applicable to the BUs under each Sector. In case of infrastructure businesses this shall also encompass:

- Bids/ Opportunities – Bid/ Opportunity level risk assessments are intended to evaluate the level of risk for the Bid/ Opportunity under consideration taken individually and all outstanding Bids/ Opportunities taken together.
- Projects – Project risk assessments shall be performed at the onset of each project and periodically during the lifecycle of the project. Due consideration will also be given to the risk assessment performed at the bid stage.
- Operating assets – Asset risk assessments shall be performed for the existing operating assets. The operating assets will be monitored to ensure the assessments are reflective of current business scenarios and the risks faced are within the acceptable risk appetite of the Sector.

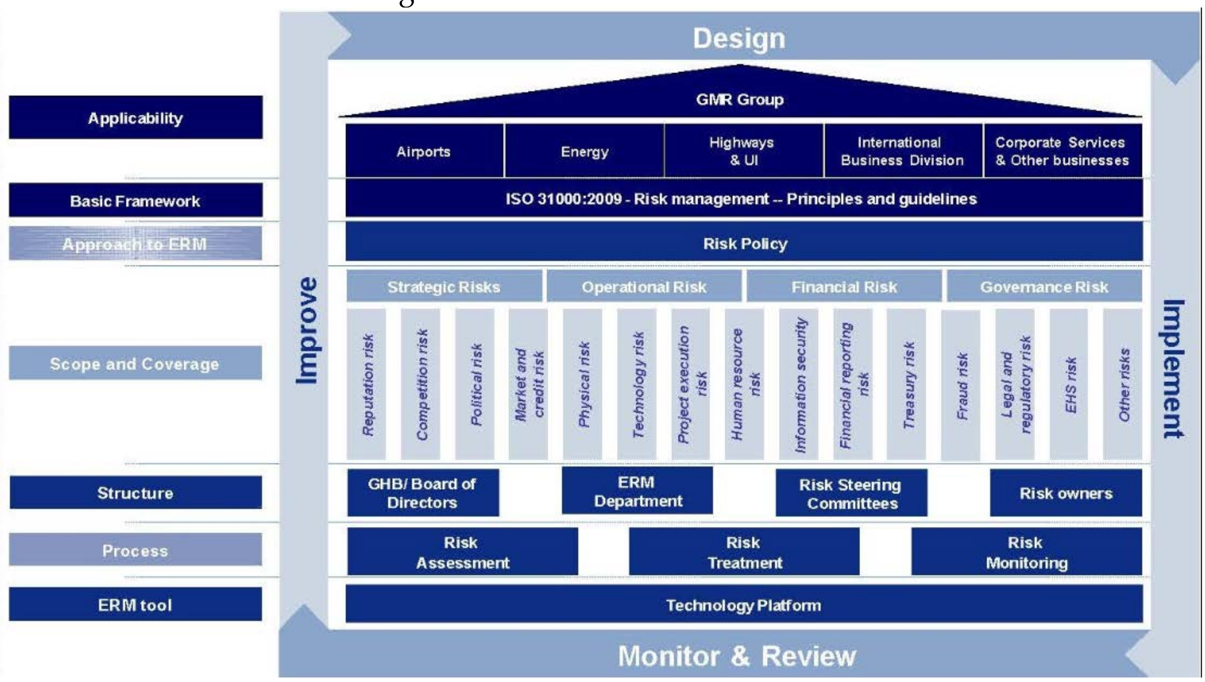
Corporate Services – Risks emanating from the Corporate Service functions (such as finance, legal, procurement, human resources, etc.) will be assessed periodically so as to ensure effective achievement of its functional objectives.

2.5. Enterprise Risk Management framework

The Enterprise Risk Management framework (ERM framework) refers to a set of components that provide the foundation for designing, implementing, monitoring, reviewing and continually improving risk management throughout the Group. The ERM framework for the Group has been developed keeping in mind the needs of internal and external stakeholders. The Group's ERM framework is based on the 'Risk Management - Principles and Guidelines' developed by the International Organization for Standardization (ISO 31000:2009 - Risk Management Principles and Guidelines).

In addition, several good practices recommended by the Committee of Sponsoring Organizations (COSO) for ERM have also been incorporated to further the Group's endeavour to build world class ERM framework and processes.

Figure 1.1: ERM Framework



2.6. Risk Management Organization structure

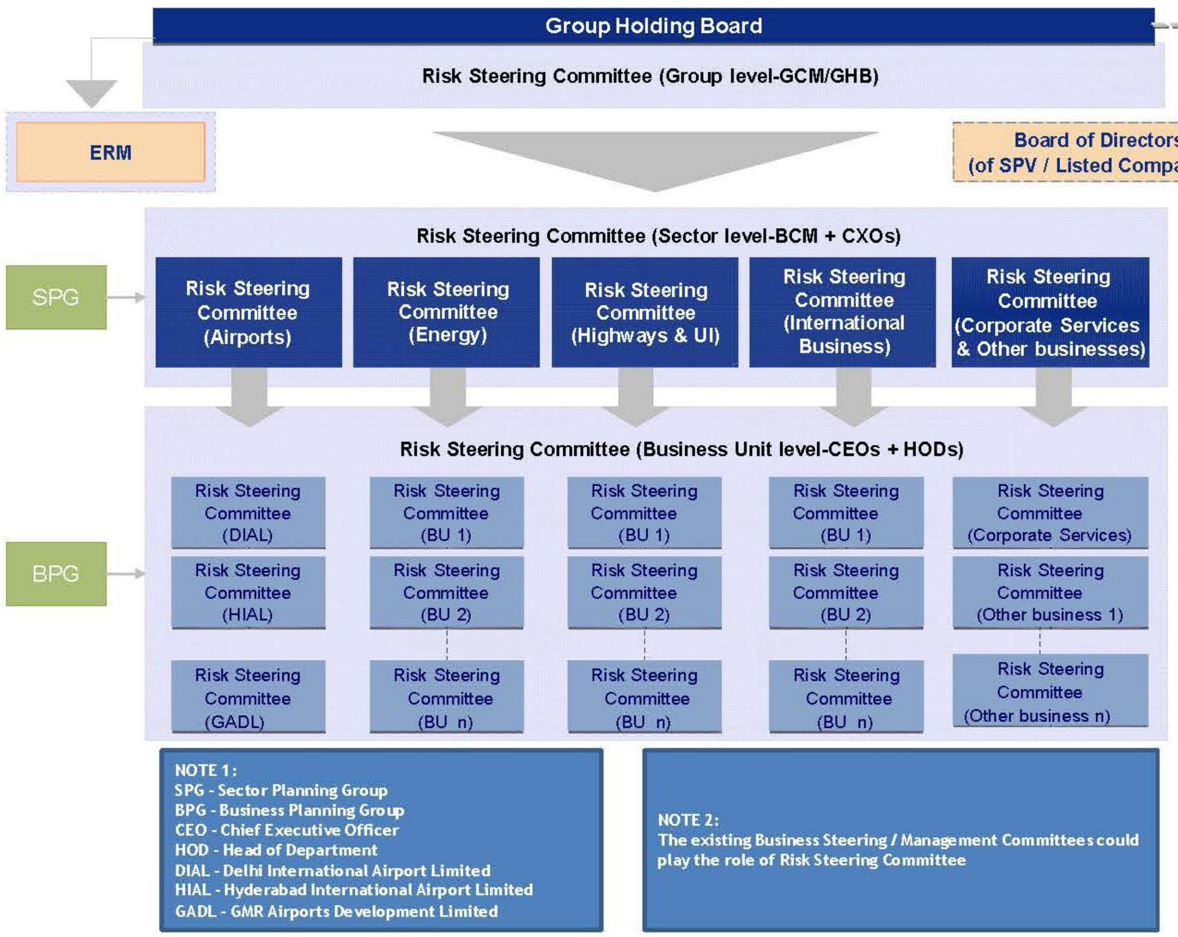
The Group's Risk Management Organization (RMO) structure identifies key internal stakeholders responsible for creating, implementing and sustaining the ERM initiative in the Group. The RMO structure leverages existing organizational structure in the Group.

The RMO aligns individuals, teams and departments with the intent of establishing responsibility and accountability with regard to:

- Integrating ERM into the Group's culture
- Facilitating and monitoring effective implementation of the ERM framework
- Ensuring that the ERM framework and its components are current

The overall structure and roles for the ERM function is summarized below

Figure 1.2: Risk Management Organization structure



Roles of key stakeholders

The roles of key stakeholders defined in the ERM function are summarized below. Detailed responsibilities are documented in Annexure 1.

Stakeholder	Composition	Role
Risk Steering Committee (Group Level)	GHB, chaired by the Group Chairman (GCM)	• Sponsor for the ERM initiative within the Group • Assume responsibility for establishing expectations with respect to ERM throughout the business lifecycle of the Group. • Promote an environment that is conducive to effective ERM. • Own the overall risk portfolio at the enterprise level. • Approve the overall risk appetite of the Group. • Authority to approve proposed risk treatment plans. • May appoint/ create a designated sub-committee for this task
Board of Directors	Board of Directors constituted for each listed entity and Special Purpose Vehicle (SPV)	• Reinforces expectations on fostering an environment that is conducive to effective ERM • Provide risk oversight for respective entities • May choose to discharge their oversight responsibilities through the establishment of sub-committees as may be deemed necessary
ERM Department	Head ERM and supported by a central team of ERM professionals	• Partner with the business in driving the ERM initiative, under the direction of the GHB. • Establish and implement processes for risk management across the business and lifecycle of the Group. • Promote risk management culture • Provide the GHB with updates on key risks across the Group • Facilitate risk prioritization and monitoring • Assist in Bid/ Opportunity risk assessment • Consolidate and aggregate risks at the Group level
Risk Steering Committee – Sector	Sector Business Chairman (BCM), Sector CEOs and Key Functional Heads	• Collectively own and manage risks for the Sector • Authority to approve proposed risk treatment plans • Designate risk owners or risk committees to manage specific risks
Risk Steering Committee – Business Units	CEOs and Functional Heads, Head of Operating Asset/ Project and their direct Reportees.	• Collectively own and manage risks for the Business Unit. • Authority to approve proposed risk treatment plans. • Designate risk owners or risk committees to manage specific risks
Risk Steering Committee – Corporate Services	Corporate Chairman (CCM) and Heads of Department of Corporate Services	• Collectively own and manage risks for Corporate Services. • Authority to approve proposed risk treatment plans. • Designate risk owners or risk committees to manage specific risks
Sector Planning Group/ Business Planning Group (SPG/ BPG)	Designated person(s) in the SPG/ BPG who have been allocated the responsibility for ERM	• Facilitate and support the Risk Steering Committee and ERM department in identifying, assessing and monitoring risks thereby supporting respective Management in risk informed decision making. • Assist in identifying and implementing risk treatment strategies
Risk owner	Project Manager/ Head, Functional Head, CEOs, Sector Heads , Steering Committees or GHB	• Has the accountability and responsibility to manage a risk

2.7. Risk Appetite

Risk appetite is the amount of risk that the Group is willing to pursue or retain in pursuit of its objectives. In other words, the Group will take risks which do not result in the breach of its appetite.

The risk appetite statements are articulated under three key parameters

- **Financial parameters** which provide the threshold in terms of
  - Impact on annual budgeted revenue
  - Impact on annual budgeted profit
  - Impact on project Internal Rate of Return (variation from cost of capital)
  - Impact on project NPV (variation from projected cash flows)
  - Impact on budgeted costs/ cost to completion in case of projects in construction stage.

- **Reputation parameters** with respect to specific stakeholders
  - Investors, analysts, lenders and rating agencies
  - Key customers
  - Key vendors/ alliance partners
  - Employees
  - Media/general public

- **Other qualitative parameters** have been articulated that set out the appetite with regard to
  - Environment, Health and Safety
  - Business disruption/ project delays
  - Legal issues
  - Position with the regulator

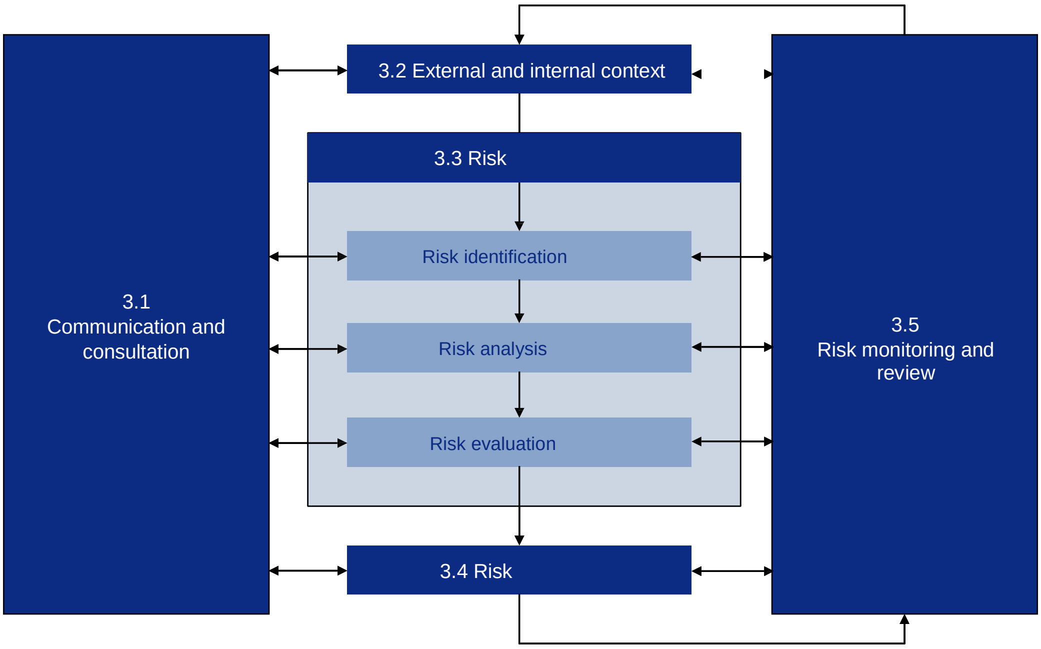
Risk appetite shall form an integral part of the risk management framework to demonstrate common understanding of the same, and to consistently measure risks across the Group.

3. Enterprise Risk Management Guidelines

The ERM guidelines provide supporting information to assist Management in the execution of the ERM processes. ERM process is the systematic application of management policies, procedures and practices to the activity of communicating, consulting and establishing the context for ERM in the Group. The ERM process comprising of risk assessment, risk treatment and risk monitoring applies across the organizational lifecycle.

Against the given background, the key process constituents of ERM are:

Figure 1.3: ERM Process



3.1. Communication and Consultation

Communication and consultation is intended to facilitate regular exchanges of information, taking into account confidential aspects. Communication and consultation with external and internal stakeholders should take place during all stages of the risk management process. Effective external and internal communication and consultation is essential to ensure that personnel responsible for implementing the risk management process and stakeholders understand issues relating to risk, its causes, consequences and the measures being taken to treat it. Plans for communication and consultation should be documented at an early stage in the process.

3.2. External and Internal Context

Risks may arise from factors that are external to the organization. Further, in an attempt to pursue objectives, the organization might make internal changes that could result in exposure to risks. An effective ERM process takes cognizance of both external and internal context in which the Group operates. This entails understanding the external environment and internal objectives of the Group/ Sector/ BU/ Corporate Services as relevant in order to ensure that risks identified are in context of the same.

3.2.1. Consideration of External Context

The following are indicative factors that need to be considered/ understood from an external context perspective:

- New/ changes in policies or regulations that may affect the business decisions at a Sector/ Group level
- Competitive landscape and position taken by competitors
- Supplier group, partners, alliances
- Political scenario at the state and centre in India as well as the scenario in the countries where GMR has business interests (E.g. Turkey)
- Economic condition in the states/ countries of operation
- Social factors that may affect the decisions pertaining to a project
- Technological changes applicable to each business

External context in which the Group operates may be determined using the following techniques

- Porter's five forces - Five forces include threat of entry of new competitors, intensity of competitive rivalry, bargaining power of customers, bargaining power of suppliers and threat of substitute products or services. It is a framework for industry analysis and business strategy development. It draws upon Industrial Organization economics to derive five forces that determine the competitive intensity and therefore attractiveness of a market. Three of Porter's five forces refer to competition from external sources and the remainder are internal threats.

- PESTLE analysis - Political, Economic, Social, Technological, Legal and Environmental analysis. It is a part of the external analysis when conducting a strategic analysis or doing market research, and gives an overview of the different macro environmental factors that the Company has to take into consideration. It is a useful strategic tool for understanding market growth or decline, business position, potential and direction for operations.

- SWOT analysis - It is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities and Threats involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favourable and unfavourable to achieve that objective.

3.2.2. Consideration of Internal Context

The following need to be considered/understood from an internal context perspective

- Strategy and objectives of the Group/ Sectors/ BUs/ Corporate Services
- Inherent strengths and weaknesses/vulnerabilities of the Group/Sectors/BUs/ Corporate Services.
- Organization structure and expected roles & responsibilities
- Values & beliefs
- Profile of people (qualification/experience and its relevance to their role)

- Incentive mechanisms and how it is expected to drive behaviours
- Systems and processes
- Supervision and monitoring mechanisms

3.3. Risk Assessment

Risk assessment comprises of:

- Risk identification
- Risk analysis and
- Risk evaluation

Risk assessment is intended to:

- Proactively identify risks considering the external and internal context
- Provide the Group with an improved understanding of risks that can affect achievement of objectives and the possible business impact of manifestation of risks
- Evaluate the design adequacy of existing response systems
- Enable risk prioritization and further treatment

A detailed risk assessment methodology is provided in subsequent sections.

3.3.1. Risk Identification

Risk identification is the mechanism of identifying exposure to uncertainty across the Group, Sectors, BUs and Corporate Services. This involves assessment of the external environment within which the Group operates, as well as the internal context of the Group, Sectors, BUs and Corporate Services

As part of risk identification, a comprehensive list of risks is generated based on events (historical and anticipated) which may prevent, degrade, accelerate or delay the achievement of objectives. It shall also include risks associated with not identifying/ evaluating opportunities pursuant to the organization's strategic, project or business objectives, otherwise being pursued by competing organizations

The risk causes, source, events, situations or circumstances which could have a material impact on the objectives of the Group, Sectors, BUs and Corporate Services shall also be identified during this phase

Risks for each operating asset, project, Sector, Corporate Service and overall Group shall be documented in individual risk registers. The ownership of these risk registers shall lie with individual Sectors, BUs and Functions; however the ERM function shall assist in creating and updating the registers. The format for maintaining risk registers is appended in Annexure 2

Risks once identified shall not be deleted. In case a risk becomes irrelevant, the status of the risk shall be updated to reflect the same.

Risk identification is an ongoing activity. It shall be performed by each employee during the course of his work and particularly at the time of any significant decision, initiation of new Bid/ Opportunity, during project planning and execution and periodically during the life of every operating asset. While the

ERM department shall assist in risk identification, it is the responsibility of each Sector, BU and Function to identify risks.

Risk identification involves identifying potential sources/ root cause of risk events. The purpose of identifying potential root causes is to give direction to risk intervention measures. The fact that one risk might have multiple root causes also needs to be considered. As a part of the risk identification process, it is also important to understand which of the business drivers are impacted by the materialization of a risk or any of its root causes.

Techniques of Risk Identification

The following risk identification techniques can be deployed to enable focused risk identification:

- Checklists
- Preliminary hazard analysis
- Structured interview and brainstorming
- Root cause analysis (single loss analysis)
- Scenario analysis
- Business impact analysis

3.3.2. Risk Analysis

Risk analysis refers to the process followed to comprehend the nature of risk and determine the level of risk. Risk analysis is intended to provide inputs for risk evaluation.

Risk analysis shall be performed for each risk identified. The onus of risk analysis is with the risk identifier, who may choose to consult with the ERM department for this purpose. Based on the results of the analysis, appropriate action shall be taken (risk escalation and risk treatment).

For example: if at the time of Bid/ Opportunity evaluation, the Business Development Manager identifies a risk which has significant impact on the reputation of the Group, the risk maybe escalated to the Project Team/ CEO/ Steering Committee as relevant (Refer Annexure 3 - Risk Escalation process). The risk treatment plan can then be decided, which in turn may affect the viability of the Bid/ Opportunity.

Risk analysis involves consideration of:

- Time to manifest – How quickly is the risk likely to manifest
- Likelihood of risk events
- Impact of risk

a) *Assess time to manifest*

Time to manifest is defined as the time horizon within which the risk is likely to manifest.

Time to manifest shall be considered only for external environment risks that are beyond the control of the Group. Such consideration is important in order to determine whether the risk needs treatment within the ongoing risk assessment cycle or be considered in the future.

In order to assess the time to manifest, the person who identifies the risk shall identify the following aspects:

A: The time horizon within which the impact is likely to occur
B: The time horizon required to actively respond to the risk
C: Elapsed time before the next risk assessment

If (A – B) > C, the risk can be identified for prioritization in the subsequent assessment cycle.

For example:
A: A change in a particular regulation may be anticipated in 5 months from now.

B: In order to establish the time to manifest, the risk identifier shall determine the time required to put in place responses to the changes anticipated in the regulation – assuming 3 months from the date when the regulation is effective.

C: Elapsed time before the next risk assessment is 3 months from now.

Since (A - B) < C, the risk will be considered for prioritization in the current assessment cycle.

b) *Calculate likelihood of risk events*

The term "likelihood" is defined as a chance of something happening. This is defined, measured or determined objectively or subjectively, qualitatively or quantitatively. Likelihood may be described using general terms or even mathematically (such as a probability or a frequency over a given time period).

A realistic evaluation of risk likelihood is essential, because it guides the allocation of resources in the Company. When deciding upon a probability factor from the table (Annexure 4), the following guidelines should be considered:

- Consider how many similar incidents have occurred in the Group.
- Consider, and research if necessary, how many similar incidents have occurred in the specific business Sector
- Consider the effectiveness of our existing preventative controls for the risk

c) *Calculate potential impact of the identified risk scenarios*

The consequences of risk are not only characterized in financial terms, the impact of the risk on various parameters detailed in the risk assessment parameters (Annexure 4) need to be assessed at this stage. Various scales of impact that are relevant according to the prevalent categories of risk such as reputation damage, personal injuries and fatalities, media coverage and operational impact must be considered during assessment of potential impact.

Assess the impact of risk across business areas

Risks do not normally exist in isolation. They usually may have a potential effect on other functions, business processes and risk categories. These cause and effect relationships must be identified and understood. This principle must become a deliberate and formal part of the risk assessment process. The results of the process must be documented. The aggregated effect of these risk groupings and linkages should be analysed. Many cross functional effects of risk may not be immediately apparent without deliberate and systematic analysis, so a formal approach is required.

Consolidate Risks

Each BU/Corporate Service function shall arrive at a number of top risks for their respective entities. These top risks shall then be prioritized at the BUs and then prioritized at a Sector level. Similarly, top risks for all Sectors shall be consolidated and prioritized to arrive at a portfolio of top risks for the Group.

In order to visually depict the prioritization, a "heat map" (graphical representation of impact and likelihood) maybe used based on the risk analysis (i.e. Likelihood * Impact) wherein each risk will be plotted on the "heat map" based on its relative likelihood and impact. The placement of the risks on the "heat map" will indicate the risk zone (High/ Medium/ Low) for each of the respective risks. The heat map shall also form the basis of escalation as and when new risks are identified.

A formal risk report containing the "heat map" for the BU, Sector, Corporate Services and the Group shall be prepared every quarter as appended in Annexure 5

A five by five matrix shall be used for measuring likelihood and impact. The risk shall be evaluated as:

Risk Measurement: Likelihood * Impact

The risk measurement scale in terms of impact and likelihood has been defined in Annexure 4 – Risk assessment parameters.

It is important to note that a single risk may impact a number of impact parameters. In such a scenario, the risk shall be evaluated for all impacts and the highest score shall be used for escalation and evaluation purposes. Once a risk has been escalated by a BU to a Sector, it shall be analysed at the Sector level; and accordingly treated/ retained and escalated to the Group.

The risks assessed can be placed on a "heat map" which is a graphical representation of the impact and likelihood.

Likelihood					
Almost Certain	5	10	15	20	25
Likely	4	8	12	16	20
Possible	3	6	9	12	15
Unlikely	2	4	6	8	10
Rare	1	2	3	4	5
	Insignificant	Minor	Moderate	Major	Catastrophic

Impact

The overall risk measurement will be assessed as below

Likelihood*Impact (Range)	Risk Zone
Score - less than 5	Low
Score – greater than or equal to 5 but less than 12	Medium
Score – greater than or equal to 12	High

3.3.3. *Risk Evaluation*

Risk evaluation is the process to determine whether the risk and/ or its magnitude is acceptable or tolerable.
The intent of risk evaluation is to:

- Enable escalation to the appropriate level of Management as per risk measurement criteria (Refer Annexure-3 for the process of escalation).

- Prioritize for treatment implementation

Risk evaluation helps ensure appropriate resource allocation for the purpose of risk treatment and channelling of Management attention towards risks of significant concern.

Risk evaluation will involve risk prioritization for each BU, Sector, Corporate Services and the Group. Risk evaluation shall be done individually and collectively by Risk Steering Committees at various levels.

a) Risk Escalation

A critical element of ERM is an effective system of escalation which ensures that specific issues are promptly communicated to relevant authorities. In the context of the Group, escalation may stem from one or more of the following:

- Identification of new risks at BU/Sector/Corporate Services/GHB level.
- Change in impact/ likelihood of identified risks causing a change in the risk evaluation
- Unforeseen contingencies

In order to bring risks to the notice of appropriate levels of Management, the process to be used has been depicted in Annexure 3. It is to be noted that at each level of escalation, the risk shall be reassessed so that only the key risks are filtered upwards on a timely basis.

b) Risk Prioritization

The ranking of risks in terms of net potential effect provides Management with some perspective of priorities. This should assist in the allocation of capital and resources in the business. Although the scales of quantification will produce an automated ranking of risks, Management may choose to raise the rank of certain risks for other reasons. This may be justified because of non-financial influences such as media implications, social responsibilities or regulatory pressures. The ranking of risks should be shaped by strategic and business objectives. The prioritized risks must be compared with the risk appetite and all risks falling beyond the acceptable appetite must be short listed for risk treatment.

3.4 Risk Treatment

Risk treatment involves selecting one or more options for managing risks, and implementing such action plans. This phase of the ERM process is intended to:

- Understand existing controls/mitigation mechanisms in place for managing risks
- Generate a new risk treatment plan
- Assess the effectiveness of such treatment plans

For the purpose of risk treatment, risk owners may consider various options (as indicated below) for risk treatment:

- Avoiding the risk by deciding not to start or continue with the activity giving rise to such risk.
- Taking or increasing the risk in order to pursue an opportunity.
- Removing the risk source.
- Changing the likelihood or consequences of risk by instituting new control/ monitoring activities.

- Sharing the risk with another party or parties (eg: insurance, back to back warranties etc.)
- Retaining the risk by informed decision
- Putting in place a mechanism to monitor the risk

Risk treatment can be a choice from the above or a combination of multiple options.

For example, a combination of partially sharing the risk (through insurance) and partially accepting the risk can be the chosen treatment for a risk.

The choice of an appropriate treatment option must consider balancing the costs and efforts of its implementation against the benefits derived

Steps for risk treatment:

- Evaluate the strategic mitigations in place for key risks
- Evaluate control requirements
- Verify and evaluate the controls currently in place for key risks
- Identify and evaluate the post event measures in place for risk
- Review the financial risk protection measures in place to respond to the consequences of risk events
- Take decisions on the acceptability of identified risks and controls
- Document action plans for risk mitigation
- Use the outputs of risk assessments for budgeting and capital allocation processes

Risk Profiling

Individual risk profiles (Refer Annexure 6) shall be prepared for the prioritized risks that shall serve as a descriptive record of each key risk. Details such as risk, risk owner, treatment plans, risk limits and monitoring plans shall be maintained in the risk profile. The ERM function may assist in preparing risk profiles for each key risk. The risk profile shall be owned, regularly updated and reported to the respective BU/ Sector/Corporate Services/Group Risk Steering Committee by the risk owner.

The chosen risk treatment option shall be supported by a detailed implementation plan clearly outlining.

- Activity plan clearly drafting the various steps to be performed
- Intended outcome of the activity plan
- Resource requirements to achieve successful implementation
- Accountability and responsibility for the activity plan
- Implementation time schedule
- Performance evaluation criteria to measure implementation status and the effectiveness of the treatment plan

3.5 Risk Monitoring & Review

Risk monitoring, review and reporting are critical components of the ERM process. The intent of monitoring and reviewing risks and their respective treatment plans is to:

- Analyse and track events, changes, trends which affect identified risks. As part of this, the impact of such events on treatment plans is also assessed.
- Detecting changes and assessing the impact of changes to risk appetite, risk portfolio, risk treatment plans.
- Ensure that risk treatment mechanisms are effective in design and operation

Risk monitoring shall be conducted by each Sector/ BU/ Corporate Services on a monthly basis, for identified risks, in order to track the status of treatment plans and consequently update changes to risk profiles.

Risk reviews shall be conducted to enable continuity of the ERM process. Risk reviews entail the re- assessment of all risks recorded in the Group, Sector, BU and Corporate Service function level risk registers along with new/ emerging risks to ensure concurrence and relevance of risks and their treatment. Risk reviews will be carried out at a minimum on a quarterly basis.

While the SPG/ BPG shall be responsible for the monitoring and review process at the Sector/ BU level, the ERM function shall assist the monitoring and review process at the GHB level. The ERM function shall ensure that results of the monitoring process depicted in the form of risk reports are reported internally and externally, as appropriate.

The calendar for monitoring/ reviews is provided below:

Activity	Timing
Risk monitoring by BU/Corporate function	Monthly
Risk monitoring by Corporate Services	Monthly
Risk monitoring at Sector level	Monthly
Risk review at BU/Corporate function level	Quarterly
Risk review at Sector/Corporate Services level	Quarterly
Risk review at Group level	Quarterly

3.6 Bid and opportunity risk assessment

The Group is expected to pursue several new Bids/ Opportunities at any given point as part of its business development and expansion activities. In order to enable robust growth, Management shall take risk- informed decisions while choosing to pursue an opportunity or submit a bid. It is therefore essential to follow a rigorous process for evaluating bids for projects, and look for options that maximize value and optimize risks at the inception stage of a project.

This section outlines the role of ERM department and process to be followed as part of Bid and Opportunity risk assessment.

3.6.1 Purpose

The purpose of Bid and Opportunity risk assessment is to enable early cognizance of risk factors associated with the project being pursued. This is not intended to substitute any existing risk analysis or assessment which is undertaken by businesses as part of their bid evaluation process, but is meant to act as an independent evaluation of bids.

3.6.2 *Responsibility*

The primary onus of identifying risks associated with the Bid/ Opportunity as well as treatment plans vests with the respective function/ BU Head in each business. The ERM team/ function shall assist in conducting an independent assessment of the risks associated with the Bid/ Opportunity and present its analysis to the respective BU Head/CEO/ Business Chairman (as deemed relevant for each sector) as part of the approval process.

The BU Head/CEO/ Sector Head/ GHB who approves the bids shall ensure that the input of the ERM function is obtained for all Bid/Opportunities to facilitate risk assessment.

3.6.3 *Scope*

The scope of Bid/ Opportunity risk assessment shall include various risks that may arise at any stage of the project, both pre-implementation, during execution as well as during operations. The risks to be assessed may include, but shall not be restricted to the following:

- Funding Risk – financial closure and financial flexibility
- Completion Risk – clearances/gestation period/land acquisition
- Risk due to alliances/vendors/partners
- People/resource related risks
- Environment, Health and Safety risks
- Technology risk
- Construction risk including contractor's experience, contractor's creditworthiness and safeguards in contracts
- Regulatory risks
- Market risks – offtake risks, counterparty risks, pricing risks
- Operating efficiencies including operation and maintenance risk
- External and environmental risks including the competitive environment and political environment
- Financial risks such as:
    - Debt service coverage
    - Debt/equity
    - Internal Rate of Return (IRR)/ Net Present Value (NPV)
    - Cash flows
    - Degree of exposure to interest rate risk/currency risk/commodity risk
    - Revenue sensitivity
- Country risk – especially relevant to overseas projects

3.6.4 *Process*

Initiation: The process for Bid and Opportunity risk assessment shall commence when the Bid/ Opportunity has been identified by the Business Development team within the Sector. Each Bid/ Opportunity pursued shall be duly notified by the Sector/ BU personnel to the ERM function representative on a timely basis.

Information Gathering: The ERM function representative shall request for and receive all information pertinent to the Bid/Opportunity being pursued. This information shall include, at a minimum, the following:

- Background of the opportunity

- Documents such as the tender/ request for quotations/ pro-forma contracts/ due diligence and consultant reports
- Financial and other models prepared to assess viability including key assumptions used therein
- A list of risks envisaged by the Sector/ BU personnel and treatment thereof

Risk assessment and validation: The ERM department representative shall perform the following activities:

- Understand the context and requirements of the opportunity by scrutinizing the documents, and conduct interviews with relevant Sector/BU personnel.

- Prepare a Bid/Opportunity risk register based on risks envisaged by Sector/BU personnel which shall catalogue the risks across the various categories.

- Assess if Bid/Opportunity is evaluated based on multiple scenarios (e.g. base case, best case, worst case) while pricing.

- Evaluate the impact and likelihood of the residual risks vis-à-vis the measurement scale for qualitative parameters where possible.

- Discuss risk assessment performed to factor inputs from various teams/ business. In case of divergent views, the same may be escalated to the respective CEO/ Business Chairman (as deemed relevant for each sector).

Reporting: The ERM function representative shall submit the risk register as part of the Bid/ Opportunity dossier to ensure that the Management is cognizant of the risks in the Bid/ Opportunity. The ultimate decision on go/ no go or relating to the risk provision to be carried in the Bid/ Opportunity price shall rest with the respective business.

3.7 Managing Materialized Risks

In the event of a particular risk materializing, it is necessary to have in place a crisis/ incident management plan for timely and effective management of such events. The incident management plan is a set of well-coordinated actions aimed at preparing and responding to unpredictable events with adverse consequences. The intention of this plan is to preserve the confidence of internal and external stakeholders in the Group's risk readiness for potentially adverse events

The Group recognizes the need for and shall design such a plan that will detail:

- The situations for which action plans shall be invoked
- The manner in which such plans shall be actioned
- The individuals/ departments involved in such planning and execution

3.7.1 Loss Event Database

Tracking of data pertaining to materialized risks is an essential input to the development and functioning of ERM. Such data is crucial for fine-tuning estimates of impacts of potential risks based on actual experience in the past.

The data pertaining to materialized risks shall be captured in a "Loss event database". Typical loss events can include (but may not be restricted to):

- Environment, Health and Safety incidents
- Damage to physical assets
- Business disruption
- Fraud – internal and external
- Loss of key customers/ vendors/ alliances
- Technology/ system failures

The format for the "Loss event database" is appended in Annexure 7.

3.8 Relationship between Management Assurance Group and ERM Department

The Management Assurance Group (MAG) plays a significant role in providing assurance on ERM activities. The operating effectiveness of risk responses shall be periodically reviewed and validated by MAG as part of the Management Assurance plans.

Outputs of risk assessments can be incorporated in developing Management Assurance plans and output of Management Assurance will be considered in developing risk treatment plans.

Management of risks prioritized by Management and Audit Committee must be incorporated for review into Management Assurance plans. The risk assessment process is useful for Management Assurance staff because it provides the necessary priorities regarding risk as opposed to using standardized audit plans and programs. The audit activities will focus on adherence to controls for the key risks that have been identified. In addition, Management Assurance staff may direct Management towards the need for better controls around key risks.

In order to enable MAG to effectively leverage the ERM output and vice versa:

- ERM department shall share the list of risks identified to MAG on a need basis. MAG may use this information as an input for developing a risk based assurance plan.

- MAG shall share the respective assurance reports with the ERM function on a need basis. The ERM function may use this information as an input for risk treatment plans.

4. Reference

This section seeks to provide specific reference documents to the ERM practitioners, including guidelines on ERM documentation, document retention and glossary of useful terms.

4.1. Documentation

Document	Description	Owner	Periodicity of Review	Format Reference
Risk register	Record/ log of information about identified risks	Designated SPG/ BPG person for the Group/ Sector/ BU and Corporate function	Monthly	Annexure 2
Risk report	A report/ form of communication intended to inform particular stakeholders by providing information regarding the current state of key risks and its management. It is represented by a "Heat Map" where key risks are plotted and is supported by the detailed risk profiles	Risk Steering Committee	Quarterly	Annexure 5
Risk profile	Detailed description of a risk which is deemed priority to the Business Unit/ Sector/ Corporate Services or the enterprise. It shall include current risk response, and details of management action plans for further treatment including responsibilities and timelines	Risk owners	Monthly	Annexure 6
Loss event Database	Whenever a loss event occurs, its severity and date of occurrence would be entered into a loss event database and attributed to the BU it affected/ it belonged to	Risk Steering Committee	Event driven i.e., as and when the loss event occurs	Annexure 7

4.2. Document Management

The ERM framework is owned by the Head of the ERM department. Changes to the document need to be processed through the owner, and require the consensus of the GHB for ratification.

The framework shall be reviewed annually to ensure that the intent of the same and its covenants are relevant to the Group and its entities.

The ERM department shall ensure that updates to the framework are communicated across the organization, and shall also be responsible for promoting risk awareness across the Group. The ERM function may use tools, workshops, newsletters, formal training sessions, and undertake other initiatives as deemed required for this purpose.

Record Retention

For the purpose of ensuring traceability of ERM activities, documentation shall be maintained in physical or electronic form and retained as defined by the Group's Corporate Record Retention Standards.

Records, both physical and electronic, at an Enterprise level shall be maintained by the ERM function on behalf of the GHB/ Board of Directors.

However, those at the business and Sector levels shall be maintained by individual BU and Sector representatives designated for this purpose.

4.3. Sample Risk Categories

Risks identified and assessed can arise from multiple categories. Some sample categories are provided below

Risk Category	Definition
Accounting and Financial Reporting	Potential risk arising from improper accounting or financial reporting.
Credit	Potential risk arising from counterparty default or internal credit downgrades.
Ethics/Compliance	Potential risk arising from unethical employee actions or deviations from internal policies (e.g. Code of Conduct).
Human Resources	Potential risk arising from the Company's inability to attract, retain or properly train qualified individuals.
Information Technology	Potential risk arising from the failure or inadequacy of information technology.
Legal	Potential risk arising from legal action, contractual breaches or adverse statutory modifications.

Risk Category	Definition
Market	Potential risk arising from adverse market movements or liquidity constraints Market risk sources: ***Financing cost fluctuations*:** Resulting in elevated funding costs or reduced investment returns or credit rating downgrades ***Commodity price fluctuations*:** Resulting in any given calendar year cash flow mismatch between authorized revenue requirements and cash collections ***Foreign exchange fluctuations*:** Resulting in profit or loss on account of change in foreign exchange rates between time of incurrence of expense/ income and actual payment/ collection. ***Liquidity constraints:*** Resulting in the Company's inability to meet short- term obligations. Liquidity constraints are generated from two primary sources: 1) an inability to sell assets (market liquidity risk) in a timely manner and 2) an inability to obtain adequate funding without incurring unacceptable losses (funding liquidity risk)
Operational	Potential risk arising from ineffective internal business processes and procedures, people, systems.
Physical Asset	Unplanned and unbudgeted events impairing the Company's physical assets and affecting the ability to generate and deliver services to its customers.
Regulatory	Potential risk arising from industry regulatory violations or adverse regulatory amendments/rulings/decisions.
Reputation	Potential reduction to equity value or market share (revenue) arising from negative publicity.
Environment, Health and Safety	**Environment:** Potential risk arising from detrimental environmental (air, land, water) events (e.g., spill, emissions) related to the Company's operations. **Health:** Potential risk arising from exposures to hazardous substance that may have damaged or will damage the heath of exposed persons. **Safety:** Potential risk arising from threats or inadequate safeguards to maintain both the well-being of the Company's human capital and the public's safety.
Strategic	Potential risk arising from poor business decisions, improper service or offering, inadequate physical infrastructure support or limited business analysis.
Tax	Potential risk resulting from improper tax application, non-compliance or adverse tax rulings.
Financial	Potential risk of cash flows generated not being adequate to meet financial obligations.
Business Continuity	Potential risks arising from disruption to business due to natural/ man-made disasters, accidents, unavailability of supporting infrastructure or people.
Business Development	Potential risks arising from inability to identify potential opportunities, create long term partnerships with suppliers, customers or alliance partners.

5. Annexure

This section collates all annexure that have been hitherto referred to in this document

Annexure 1: Roles and Responsibilities

A. Group Holding Board/ Group Chairman/ Board of Directors

- Establishing expectations with respect to risk management throughout the business and lifecycle of the Group.

- Reviewing and approving risk management related policies, procedures and parameters that govern the management of the Group, Sectors, BUs and Corporate Services.

- Allocating adequate resources for treating critical risks and (or) risk events at a Group level and

- Owning key risks impacting GMR at a Group level, and establishing a risk environment that is consistent with accepted practices and fulfils the expectations of the shareholders.

- Reviewing the critical aspects of the Group's overall risk profile through the periodic review of high-level reports that address material risks and strategic implications.

- Endorsing the risk management structure and authorizing roles and responsibilities for key stakeholders.

- Independent review of the ERM department and its activities pertaining to the risk management intent in form and spirit.

B. Risk Steering Committee (Group/ Sector/ BU/ Corporate Services)

- Recommend changes on risk appetite parameters for approval of the GHB
- Ensuring risk identification and assessment for:

  - New bids and ventures (need basis)
  - Projects and operating assets (ongoing)
  - Sector (ongoing)

- Conducting risk analysis and evaluation including:

  - Identifying root causes/ sources for individual risks.
  - Assessing the impact of risks on achievement of objectives.

  - Aggregating risks at a Sector, BU and Corporate Services level.
  - Comparing with risk thresholds/ appetite.

- Identifying and implementing risk treatment plans and measures for residual risks.

- Providing risk responses and evaluating sufficiency of existing risk treatment mechanisms.

- Managing materialized risks by

  - Initiating immediate actions for controlling the impact of the materialized risk event.
  - Coordinating with corporate communications/ GHB for external and internal communications.

- Supporting the GHB in Group level risk identification, assessment and treatment.

- Providing necessary support to the ERM department in performing risk management activities as envisaged.

- Communicating to the ERM department significant developments/ changes to business and other key business decisions.

C. ERM Department

- Providing overall leadership to ERM process in line with directions of the GHB.

- Developing and assuming ownership of the risk management policy, framework and process. Implementing the ERM framework, policy and process across the Group, Sectors, Business Units and Corporate Services.

- Establishing procedures and timelines for various risk management activities.

- Provide necessary information and feedback to facilitate definition of risk thresholds at Group, Sector, Business Unit, Corporate Services and bidding levels.

- Liaising with Risk Steering Committees at various levels for deploying the ERM process.

- Facilitating risk identification, evaluation, prioritization and consolidation.

- Providing input and feedback on proposed risk treatment plans and initiatives.

- Monitoring progress of implementation of risk treatment plans and strategies.

- Ensuring that risk reviews are carried out on a periodic basis in order to maintain continuity of the risk management process.

- Preparing and communicating risk reports with risk mitigation measures to relevant stakeholders.

- Training and collaborating with the SPG/ BPG in carrying the ERM process further on a regular basis to aid management in decision making.

- Promoting risk management culture through trainings, reporting and other internal communications.

- Developing the analytical systems and data management capabilities to support the risk management program.

- Developing an annual risk management training calendar to ensure that individuals engaged in risk management are:

  - Updated about risk management policies, processes and practices
  - Developed with appropriate risk management skills and competencies

- Reviewing significant deviations from the risk management framework or other risk management procedures and bringing it to GHB's attention as appropriate.

- Rendering support to the GHB for effecting changes to the risk management organization and process.

- Assisting with implementation of procedures for proactive review of risks for projects, transactions, new businesses, etc.

- Monitoring external trends and factors that may have significant impact on the risk profile of the Group and communicating the information to all stakeholders within the Group.

- Take ownership of implementation and ongoing improvement of e-enablement initiatives for ERM function.

- Developing risk management policies and proposing necessary updates.

D. Sector Planning Group/Business Planning Group

- Supporting the CEOs & BCM for the identification of Sector/ BU/ Corporate Service level risks.

- Facilitating and supporting the Risk Steering Committees and ERM function in identifying, assessing, monitoring and reporting risks by deploying the ERM framework.

- Assisting the respective sectors in the identification of risk owners for each risk.

- Supporting the CEOs in implementing the risk mitigation strategies including:

  - Resource requirements (including contingencies)
  - Assigning ownership and responsibility for risk mitigation to various functional departments.

  - Detailed activity plans, timelines and schedules

- Collaborating with Corporate Strategy and Planning department, ERM and CEOs to ensure that the impact of risks and the treatment strategies are factored in the strategic planning process.

E. Risk owners

- Assuming overall responsibility for managing the individual risk.

- Coordinating with the BU/ Sector Head, the SPG and the ERM department in delineating an appropriate risk treatment option for the risk assigned.

- Monitoring the progress of the risk treatment plans and periodically evaluating the risk against the risk threshold level.

- Managing the impact of residual risks and taking appropriate measures to monitor and control the same.

- Report to the respective BU/ Sector Head on the status of the risk and its treatment plan.

- Timely escalation of challenges, concerns or unforeseen developments pertaining to the risk.

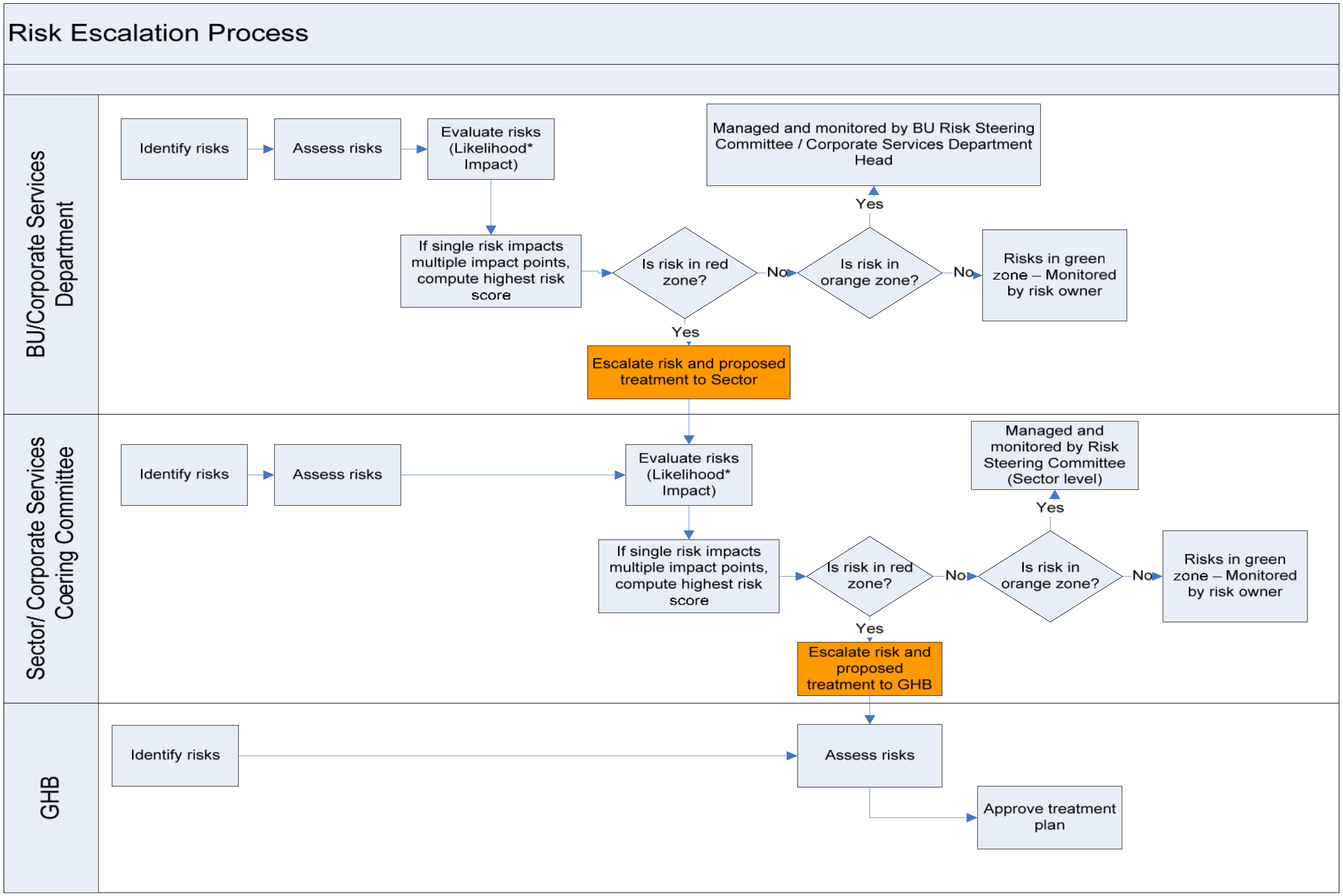
Annexure 2: Risk Register Format

Risk Register:
Name of Interviewees:

Risk#	Risk Type/ Category	Risk Description	Root Causes	Likelihood	Impact	Likelihood *Impact	Risk Owner	Risk Response	Key Risk Indicators	Comments

Date of Interview:
Interviewed By:

Annexure 3: Risk escalation process



Annexure 4: Risk Assessment Parameters

Parameter		Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Reputation	**Investors / Analysts/ Lenders/ Rating Agencies**	No effect on ability to raise funds	Effect on ability to raise short term funds for a specific project/ sector	Effect on ability to raise short term funds for the Group	Effect on ability of the Group to raise long term funds	Existing lenders / investors pull out
	Key Customers *(Any customer contributing to 5% or more of the legal entity's top line)*	Loss of future business from 1 non- key customer	Termination of existing business with 1 non-key customer	• Loss of future business from 1 key customer • Termination of existing business from multiple non- key customers, amounting to <=5% of total revenue.	• Termination of business from customers amounting to between 5 % - 15% of total revenue. • Inability to attract new customers within a limited geography or a minor business segment.	• Termination of business from customers amounting to >15% of total revenue. • Inability to attract new customers within large geography or major business segment (s).

Parameter		Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
	Key Vendors/ Alliance Partners *(Key vendor is defined as an entity from which the legal entity's procures at least 5% of the total spend during a year; All Alliance partners are considered as key)*	Loss of 1 non-key vendor	• Loss of more than 1 non key vendors amounting to < 5% of total spend • Inability to attract new key vendors within a business line or a geography	• Loss of one key vendor or multiple non-key vendors amounting to <= 5% of total spend • Existing alliance partner refuse to participate in future opportunities	• Loss of vendors affecting 5%-15% of total spend • Alliance breakdown affecting a single project/ assets • Inability to source fresh alliances for new projects	• Loss of vendors affecting > 15% of total spend • Breakdown in one alliance affecting multiple projects • Breakdown of multiple alliances
	Employees *(Critical Employees are defined as CEO/COO and Heads of department, or any employee who has been identified as critical to the business by virtue of specific knowledge/ skills Key Employees - Defined as employees who have been rated as exceptional performers for a continuous period of 2 years)*	Limited attrition of non-key employees – can be managed through normal recruitment.	Moderate attrition of non-key employees - may require focused effort on recruitment	• Extensive attrition of non-key employees - may require focused effort on recruitment • Loss of 1 key employee	• Loss of > 1 key employees • Loss of 1 critical employee	Loss of > 1 critical employee
		No effect on ability to attract new talent	Affects ability to attract new talent for a specific project in the short term.	Affects ability to attract new talent within a geography/ business/ sector in short term.	Affects ability to attract new talent within a geography/ business/ sector in long term.	Affects ability of Group to attract talent across all businesses.
	Media / General Public	Public concern restricted to local complaints	Reporting in local media	Isolated reporting in national media/ Attention from NGO	Extended press reporting in national media/ Isolated reporting in international media	Extended press reporting in international media/ Attention from multiple NGO/ activist groups.

Parameter		Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Other Qualitative Parameters	**Environment, Health & Safety**	Medical treatment/restricted workday case	Minor injury(s) causing loss of workdays	Major injury to worker / Third Party, but non-fatal	• Single Worker/ Third Party fatality • Multiple instances of major injuries	Multiple Worker/ Third Party fatalities
		Minor environmental effects extending within boundaries of project/ asset	Environmental effects outside boundaries of project/ asset - Moderate and reversible	Major environmental impact - Reversible/ contained	Major environmental impact - Reversible / widespread	Extreme environmental incident with irreversible impact
	Business Disruption/ Project Delays	• Airports: Less than 0.5 hours • Other sectors: Up to 2 days	• Airports: 0.5 to 1 hour • Other sectors: 2 days - 1 week	• Airports: 1 to 2 hours • Other sectors: 1-3 weeks	• Airports: 2 to 4 hours • Other sectors: 3-6 weeks	• Airports: > 4 hours • Other sectors: 6+ weeks
	Legal Issues	• Legal notices and penalties of <INR 1 Lakh • Government inquiry	• Legal notices and penalties of INR 1 Lakh or more but <INR 10 Lakhs • Warning received	• Legal notices and penalties of INR 10 Lakhs or more but < INR 50 Lakhs • Non public reprimand	• Legal notices and penalties of INR 50 Lakhs or more but <INR 2 Crore • Repeated non-public reprimands	• Prosecution • Legal notices and penalties of INR 2 Crore or more • Public reprimand
	Position with the Regulator	Credibility affected with regard to specific matter (project/ geography) for temporary period	Credibility affected with regard to specific matter (project/ geography) for prolonged period	Overall credibility of Group affected, but ability to influence policy not significantly impaired	Overall credibility of Group affected, and ability to influence policy significantly impaired	Overall credibility of Group, and loss of access to lobbying to influence policy.

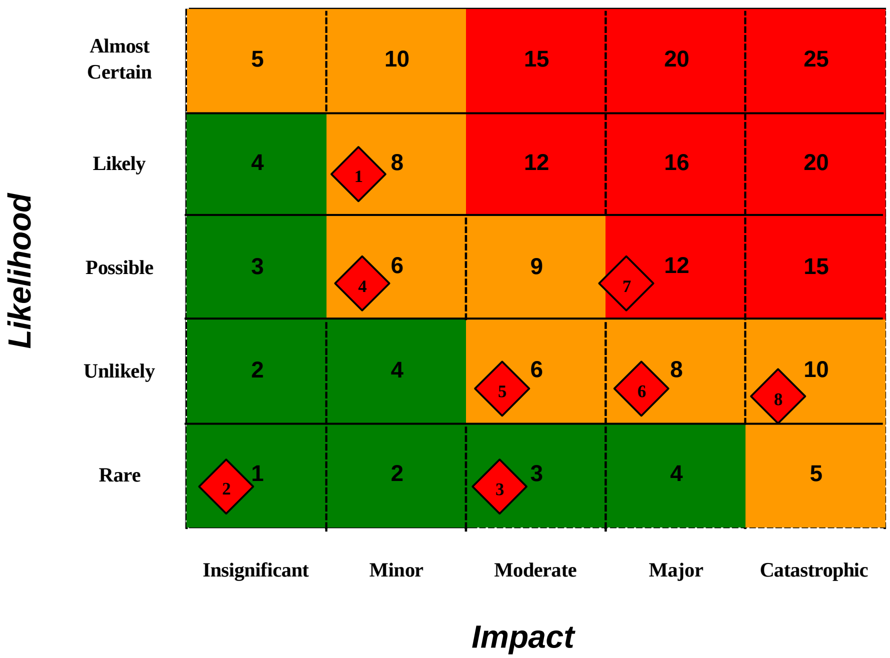
Parameter		Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Financial Parameters *(Annual budgeted figures to be measured vis-à- vis to each BU/ Sector/ entity evaluated)*	**Impact on annual budgeted revenue**	Less than or equal to 5%	More than 5% but less than or equal to 10%	More than 10% but less than or equal to 15%	More than 5% but less than or equal to 7.5%	More than 20%
	Impact on annual budgeted profit	Less than or equal to 5%	More than 5% but less than or equal to 10%	More than 10% but less than or equal to 15%	More than 15% but less than or equal to 20%	More than 20%
	Impact on Project IRR (variation from cost of capital)	Less than or equal to 2.5%	More than 2.5% but less than or equal to 5%	More than 5% but less than or equal to 7.5%	More than 7.5% but less than or equal to 10%	More than 10%
	Impact on Project NPV (variation from projected cash flows)	Less than or equal to 2.5%	More than 2.5% but less than or equal to 5%	More than 5% but less than or equal to 7.5%	More than 7.5% but less than or equal to 10%	More than 10%
	Impact on budgeted costs / Cost to Completion in case of Projects in Construction stage	Less than or equal to 2.5%	More than 2.5% but less than or equal to 5%	More than 5% but less than or equal to 7.5%	More than 7.5% but less than or equal to 10%	More than 10%

Likelihood of Occurrence

	Probability	Likelihood
Almost Certain	> 80%	Risk may occur multiple times in a span of 12 months
Likely	61 – 80%	Risk may occur once in a span of 12 months
Possible	41 – 60%	Risk may occur once in 1– 3 years
Unlikely	21 – 40%	Risk may occur once in 3 – 5 years
Rare	< 20%	Risk may occur once in over 5 years

Annexure 5: Risk review report format

Report for <Group/ Sector/ Business Unit> as on DD-MM-YYYY



<Risk 1>	*Shortage of skilled manpower*
<Risk 2>	*Inadequate succession planning*
<Risk 3>	*Erosion of brand and reputation*
<Risk 4>	*Poor forecasting and MIS*
<Risk 5>	*Litigation due to regulatory violation*
<Risk 6>	*Time and cost overruns*
<Risk 7>	*Lack of innovation*
<Risk 8>	*Inconsistent quality*

Note: This is an Illustrative "heat map"

Annexure 6: Risk profile format

Risk

Strategic objective

Risk description

Root causes for risks

Ownership

Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	5	10	15	20	25
Likely	4	8	12	16	20
Possible	3	6	9	12	15
Unlikely	2	4	6	8	10
Rare	1	2	3	4	5

Impact

Time to manifest	
Impact	
Likelihood	

Risk response

Action

Responsibility and timeline

Key risk indicators

Annexure-7: Loss Event Database

Sector:
Business Unit:

Incident Description	Incident Type	Incident Owner	Incident Cause	Reporting Month (MMM/YY)	Total Actual Cost to Date (INR)	Worst Case Potential Loss (INR)	Realistic Loss Expected (INR)	Actions	Action Complete?	Incident Open/Closed