

IL&FS Engineering and Construction Company Ltd

RISK MANAGEMENT POLICY

Framework & Procedures

(Approved by the Audit Committee in the meeting held on 11 Feb 2015)

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1. INTRODUCTION

1.1. Overview

Risk management is a holistic, integrated, structured and disciplined approach to managing risks with the objective of maximizing shareholder's value. It aligns strategy, processes, people & culture, technology and governance with the purpose of evaluating and managing the uncertainties faced by the organization while creating value. Effective risk management allows an organization to:

- i. have increased confidence in achieving its desired goals and objectives,
- ii. effectively constrain threats to acceptable levels,
- iii. take informed decisions about exploiting opportunities.

IL&FS Engineering and Construction Company Limited (IECCL) realizes the need to better understand, anticipate and mitigate business risks in order to minimize the frequency and impact of risks. A robust risk management framework has therefore been developed which:

- i. Allows a clear and concise view of risks,
- ii. Prioritize the risks that matter ('RTM'),
- iii. Put in place appropriate mitigation plans to manage the RTMs.

This Framework will continue to evolve and mature as risk management is implemented at IECCL and experience is gained. It is expected to be reviewed and amended on a regular basis to ensure its ongoing relevance and viability.

Risk Management is everyone's responsibility and needs to form part of every decision making and monitoring process at IECCL. The Risk Management Policy thus aims at outlining the framework adopted by IECCL to assess and mitigate the impact of risks and report to the Board of Directors/ Audit Committee on the risk assessment and mitigation procedures.

1.2. Guiding Principles for the Risk Management Framework

The company's attitude to risk is based on the following key *principles*:

- 1 ***Shareholder value based:*** Risk management will be focused on sustaining the creation of shareholder value and protecting the same against erosion.
- 2 ***Embedded:*** Risk management will be embedded in existing business processes to facilitate management of risks across processes on an ongoing basis.
- 3 ***Supported:*** Risk management will provide support in establishing appropriate processes to ensure that current risks are being managed appropriately and assurance is provided to the relevant stakeholders.

- 4 **Reviewed:** The effectiveness of the risk management program will be reviewed on a regular basis to ensure its relevancy in a dynamic and changing business environment.

1.3. The Risk Management Framework

The objective of the Risk Management Framework is to formalize and communicate 'IL&FS Engineering and Construction Company Ltd's approach to the management of risk. It will have the following attributes:

- i. Responds to the Executive Management's need for enhanced risk information and improved governance,
- ii. Provides the ability to prioritize, manage and monitor the increasingly complex risks in the business,
- iii. Provides an explicit, comprehensive process to satisfy the regulators, and other stakeholders, that significant risks are being effectively managed.

An effective Risk Management Framework comprises of:

- i. Risk Management Process and
- ii. Risk Management Structure.

2. RISK MANAGEMENT PROCESS

Effective risk management process requires consistent assessment, mitigation, monitoring and reporting of risk issues across the breadth of the company. Essential to this process is a well-defined methodology for determining corporate direction and objectives.

The risk management process consists of 3 steps:

- 1 Risk Assessment and Reporting,
- 2 Risk Mitigation and
- 3 Risk Monitoring and Reporting.

2.1. Risk Assessment

Risk assessment is defined as the process of identification, prioritization and analysis of risks. An effective risk assessment requires a common risk language and a continuous process for identifying and measuring risks. These elements need to be applied consistently across IECCL to understand the nature of the prioritized risks and their impact on business objectives, strategies and performance.

Risk assessment is an on-going systematic process to be carried out at periodic intervals. It consists of the following activities:

- 1 Risk identification,
- 2 Risk prioritization based on standard rating criteria,
- 3 Risk Reporting.

The entire process would be supported by enablers listed below:

- 1 Risk Classification Framework,
- 2 Risk Rating Criteria,
- 3 Risk Event Listing,
- 4 Emerging Risk Log.

2.1.1. Risk identification

Overview and guidance

Risk identification captures the significant risks that may have an adverse impact on the IECCL' objectives and is the first step in building the IECCL risk profile. In this regard, the focus would be on strategic / business risks that may have an impact on the ability of IECCL to achieve its plan targets. A statement of a risk should encompass the cause of the impact, and the impact to the objective, which might arise.

Approach for implementation

Risk identification will be done by involving personnel at the senior and middle management level of all key functions at IECCL, to achieve a holistic view of risks. The activity of risk identification will be managed by the Chief Risk Coordinator ('CRC'). The identified risks will be reviewed by MD, CFO and CTO.

The frequency for conducting risk identification will be as follows:

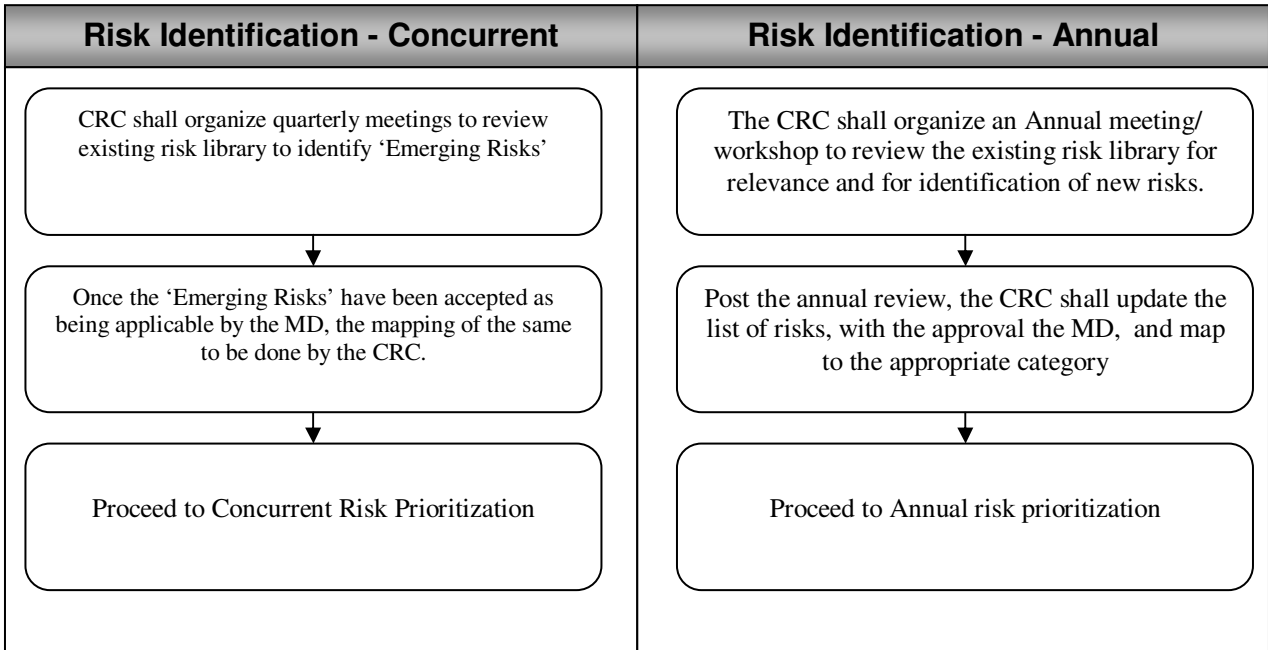
i. Annual risk identification

In this process the existing risks identified for the business will be updated (addition/ deletion/ modification) based on discussions with key personnel. This activity shall be carried out once a year, preferably as part of the annual budgeting/ planning exercise. The identified risks will be mapped to the appropriate risk category in the risk classification framework post the review and approval of the MD (*Refer 2.1.4 (a)*)

ii. Concurrent risk identification

It is imperative for the success of risk management that any risk which has emerged post the annual risk identification exercise is flagged off to the MD and senior management team for deliberation and initiation of action in line with the risk management process. These risks can be identified across the entity through emerging Risk Log (*Refer 2.1.4(d)*). This activity shall be carried out once a quarter. The identified risks will be mapped to the appropriate risk category in the risk classification framework (*Refer 2.1.4 (a)*)

The following is a workflow indicating the major tasks to be conducted for risk identification phase:



2.1.2. Risk Prioritization

Overview and guidance

Risk prioritization is the process of rating the risks in order to identify those risks which may have the most significant impact on the achievement of the stated goals and objectives of the business. The identified risks shall be prioritized based on the following parameters:

- i. *Inherent risk rating* – It highlights the intrinsic nature of the risk to the business in the current environment irrespective of the existence or effectiveness of plans to mitigate it. Inherent risk is derived based on the rating of the impact the risk can have on the stated business objectives and the probability of its occurrence. (Refer rating criteria 2.1.4 (b)). The simple average rating (after allocating all the votes) will be assigned to the Impact and Likelihood for each risk and the inherent risk score will be computed as follows:

$$\text{Inherent Risk Rating (IRR)} = \{ \text{Rating for Impact} \times \text{Rating for Likelihood} \}$$

- ii. *Mitigation Control effectiveness rating* – It is the rating assigned to the existing mitigation plans based on their operational efficiency in reducing either the impact of the risk or the likelihood of its occurrence. (Refer rating criteria 2.1.4 (b)). The simple average rating (after allocating all the votes) will be assigned to the mitigation plan effectiveness for each risk.

Approach for implementation

Risk prioritization will be done by involving personnel in the IECCL Risk Management Committee (RMC) to get an overall view of the criticality of the risk as well as the effectiveness of the existing plans to mitigate the risk. The entire activity of risk prioritization will be managed by the CRC.

The frequency for prioritizing risks will be as follows:

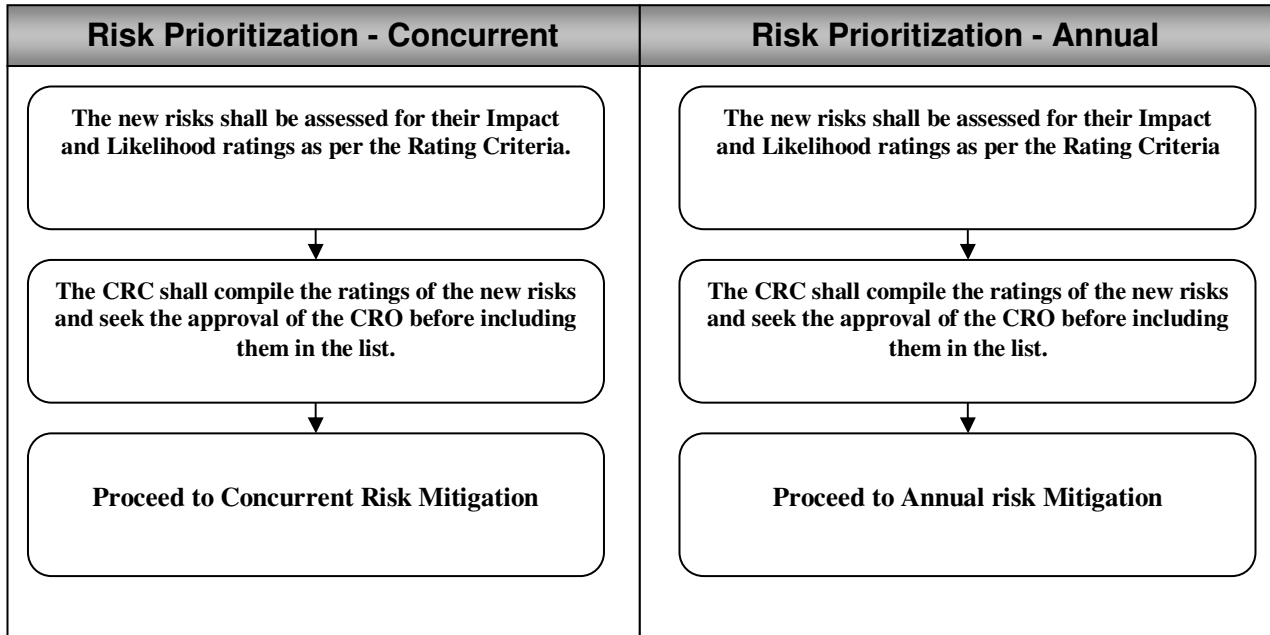
i. Annual risk prioritization

In this process the finalized list of risks will be voted on by the identified personnel to determine their inherent risk rating and the effectiveness of the current mitigation plans. This activity shall be carried out after the annual risk identification exercise. Annual prioritization of the entity level risks would be done by the CRC. Post compilation and analysis of the voting results the CRC shall compile the list of risk in order of priority, clearly identifying the RTMs.

ii. Concurrent risk prioritization

If new risks are identified as part of the quarterly risk review meetings, the MD along with the CRC shall deliberate to determine their inherent risk and the current effectiveness of the mitigation plans. The activity related to the compilation and analysis will be done by CRC, who shall then include the new risk in the existing list of RTMs.

The following is a workflow indicating the major tasks to be conducted for the risk prioritization phase:



2.1.3. Risk Reporting

Overview and guidance

Results of risk assessment need to be reported to all relevant stake holders for review, inputs and monitoring.

Approach for Implementation in IECCL

The CRC would be required to prepare on a quarterly basis a report for the MD detailing the following:

- i. List of applicable risks for the business, highlighting the new risks identified, if any and the action taken with respect to the new risks,
- ii. Prioritized list of risks highlighting the ‘Risk That Matter’,
- iii. Root causes and mitigation plans for the RTMs and
- iv. Status of effectiveness of implementation of mitigation plans for the RTMs for all the risks till date through the self assessment process (see below).

The MD would be required to report to Board of Directors on a half-yearly basis the following:

- i. An overview of the risk management process in place,
- ii. Key observations on the status of risk management activities in the half year, including any new risks identified and action taken with respect to these risks,
- iii. Status of effectiveness of implementation of the mitigation plan for RTMs.

2.1.4 Enablers

a. Risk classification framework

In order to promote a common risk language, improved understanding of risks and the ability to consolidate risk information across the company, a risk classification framework has been developed, consisting of risk categories and sub categories.

The risk classification framework will continue to be updated with the specific categories and sub-categories identified through various risk assessments and inputs received. *Refer Annexure 1.1 and 1.2 for the risk classification framework Annexure 1.2.1 for risk category definitions.*

b. Risk rating criteria

It is important to prioritize the identified risk events to focus on those risks that have the most significant impact on the achievement of the stated goals and objectives of the business.

The risk rating criteria explains the basis on which the risk events will be prioritized. The rating criteria comprises of the following three aspects:

- i. Impact is defined as the level of consequence that the potential risk can have on the achievement of business/functional objectives,
- ii. Likelihood is defined as the probability of occurrence of the potential risk,
- iii. Mitigation Controls effectiveness is defined as the effectiveness of the existing controls for the risk in the business processes and
- iv. Inherent risk categorization grid based on which the criticality rating (critical, high, moderate or low) will be assigned to the risk.

Refer Annexure 2 for the risk rating criteria.

c. Risk event listing

All the risk events identified through one time risk assessment process and emerging list log will be collated to form the risk event listing for each function. All risk events identified through the above processes will be tagged to the risk categories and sub-categories of the IECCL's Risk Universe. The risk event listing will lay the foundation towards development of IECCL's risk profile and will be used for developing the risk surveys.

d. Emerging risk log

Emerging risk log is the list of all new/emerging risks, identified/reported by personnel across IECCL. The log will be collated by the CRC on a quarterly basis and evaluated by the relevant function heads to identify the ones that will require mitigation initiatives.

The Chief Risk Coordinator (CRC) will report the status of the log and function head's evaluations to the risk management committee on a quarterly basis. The CRC will also escalate the risk events which they believe to be critical and not prioritized by the function heads to the MD.

2.2 Risk Mitigation

Overview and guidelines

Risk mitigation is the process to initiate responsive action for managing the identified risks and restricts them at a tolerable level. The entire process is broken down into the following activities:

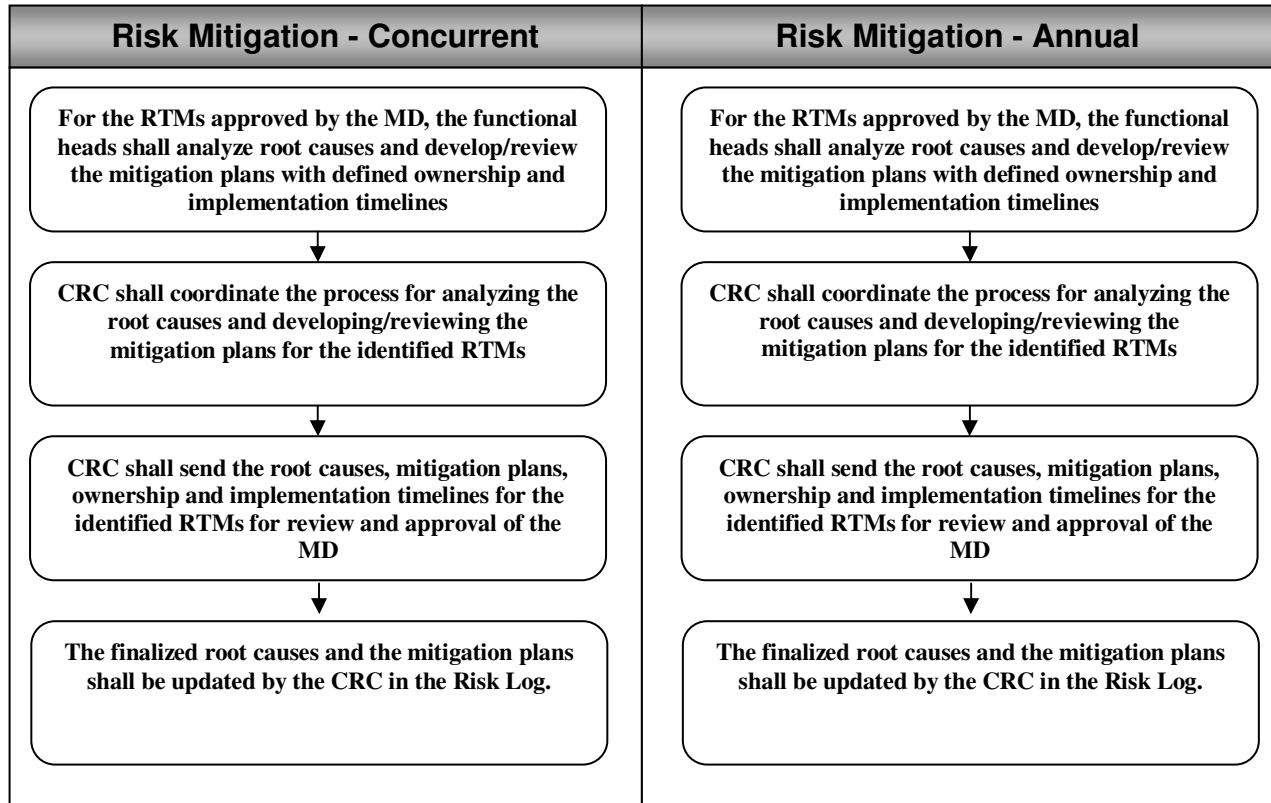
- i. Root cause analysis (RCA) to identify the reasons/drivers for existence of the risk (documentation of RCA is mandatory for critical risks identified),
- ii. Development of broad level mitigation plan with proper ownership and implementation

- timelines,
- iii. Development of detailed action steps for implementation of the mitigation plans and
- iv. Identification of risk indicators, where possible, to monitor the effect of the risk.

Approach for implementation in IECCL

In case of both the concurrent as well as annual risk mitigation exercise, the functional heads shall participate in the process for identification of root causes and development of mitigation plans. The CRC shall organize and manage the activity related to the identification of root causes and development of mitigation plans.

The following is a workflow indicating the major tasks to be conducted for the risk mitigation phase:



2.3 Risk Monitoring and Reporting

Overview and guidelines

The risk monitoring and reporting process provides appropriate controls for the risk management activities and ensures that the procedures are understood and followed. Effective risk management requires a monitoring structure to ensure that the risks are effectively identified and assessed and the appropriate mitigation plans are in place.

A monitoring and reporting process will help to determine:

- i. The adopted measures results in what was intended;
- ii. The procedures adopted and information gathered for undertaking the assessment were appropriate; and
- iii. Improved knowledge would help in reaching better decisions and identify what lessons

Approach for Implementation in IECCL

MD will be responsible for monitoring the self assessment on quarterly basis. The mitigation owners will provide status on implementation of the mitigation plans and self assessment on the effectiveness of the implemented mitigation plans.

The CRC will collate all the status reports and the self assessment reports to form the summary report delineating the following information:

- Mitigation plan(s),
- Effectiveness (what is the result),
- Status on the implementation and
- Reason(s) for non-implementation (if applicable).

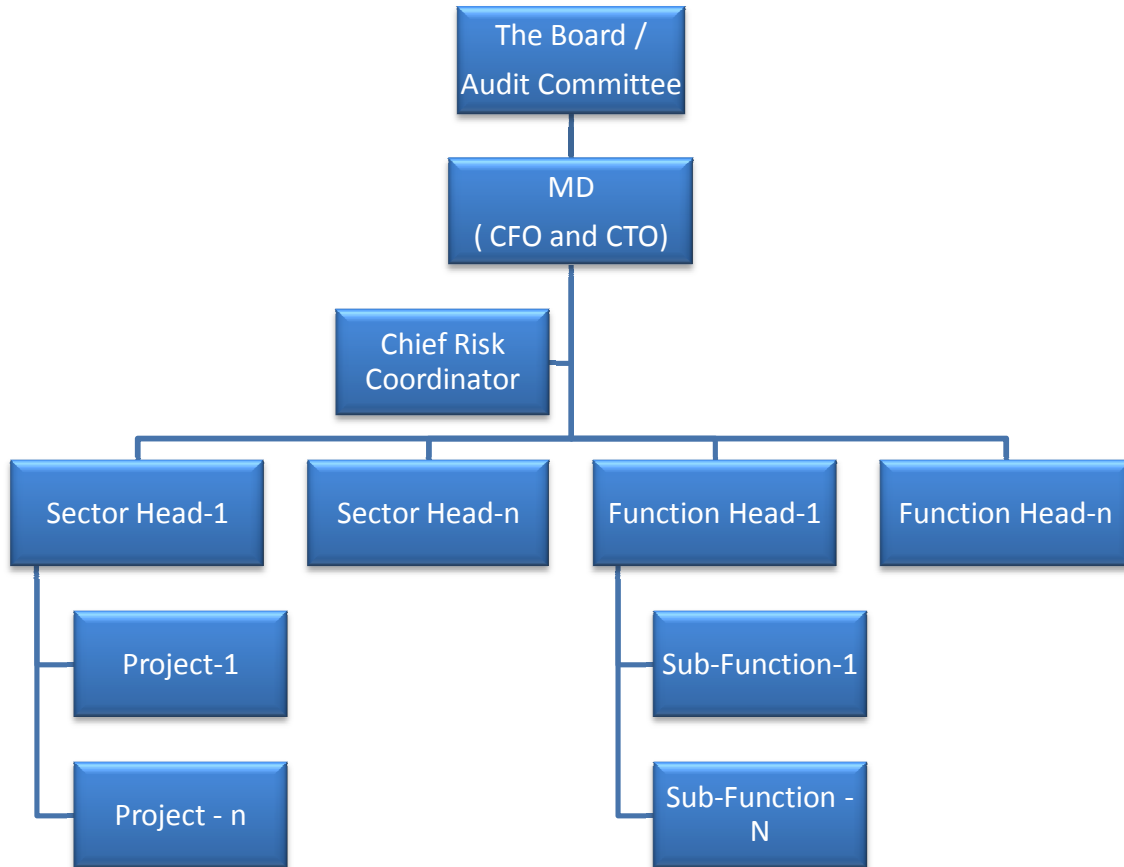
Based on the effectiveness of mitigation plan, MD / CFO/CTO may suggest the revised mitigation plan or the Risk Owner himself/ herself may propose revised mitigation plan and get it approved on approval of MD/ CFO/ CTO.

2.3 Risk Monitoring & Reporting

The CRC will submit a detailed report to MD and MD will submit to the Audit Committee/ the Board of Directors

3. RISK MANAGEMENT ORGANIZATION STRUCTURE

Risk Management Organization Structure at IECCL



3.1. Roles and Responsibilities

The Risk Management Organization at IECCL will comprise of the following:

- A. Board of Directors (BoD)
- B. Managing Director
- C. Chief Risk Coordinator (CRC)

A. The Audit Committee/ the Board of Directors

The Audit Committee / The Board of Directors would review the risk assessment and mitigation procedures across the entity after approval of the same by MD.

B. Managing Director

a. Overview

The MD, with the support from CFO and CTO, would have the overall responsibility of:

- i. Providing direction to the Risk Management initiative
- ii. Review results of the identification, prioritization and mitigation plan development processes for the applicable risks reported by the CRC
- iii. Review the quality of mitigation plans reported to assess appropriateness, and ensure that all risks are addressed
- iv. Report to the Board of Directors, on the results of the risk identification, prioritization and mitigation plan development processes across the Company.

b. Roles and responsibilities

The specific roles and responsibilities of the MD across the various components of the Risk Management framework are detailed below:

Risk Assessment

- Review the annual and quarterly results reported by the CRC on the risk identification and prioritization exercise and provide inputs.

Risk Mitigation

- Review the mitigation plans developed along-with the root-causes, ownerships, timelines and status reported by the CRC and
- Seek clarifications and provide inputs on the mitigation plans to the CRC.

Risk Reporting & Monitoring

- Report to the Board of Directors on the status of the risk management on a half-yearly basis.

Risk Management Structure

- Review the need for additional risk management related activities across IECCL and assign responsibilities.
- Provide overall guidance related to the Risk Management processes across IECCL.
- Review the Risk Management activity calendar to ensure compliance with the agreed processes and timelines.

C. Chief Risk Coordinator

a. Overview

The Chief Risk Coordinator (CRC) would be responsible for coordinating and managing all the risk management activities and shall directly report to the MD.

b. Roles and responsibilities

The specific roles and responsibilities of the CRC across the various components of the Risk Management framework are detailed below:

Risk identification and prioritization

1 Annual risk identification and prioritization

- Facilitate the annual risk identification and prioritization exercise.
- Provide guidance to the nominated personnel on the approach for risk identification.
- Compile the risk library (including mapping of risks to the categories in the risk classification framework) based on the inputs received from the nominated personnel.
- Finalize the risk library based on the inputs received from the MD, CFO and CTO.
- Facilitate the session for prioritization of risks.
- Compile the risk prioritization results and prepare the list of risks in the order of priority clearly identifying the RTMs.
- Send the identification and prioritization results to the MD, CFO and CTO for review and approval.

2 Concurrent risk identification and prioritization

- Organize and facilitate the quarterly risk review meetings.
- Articulate any new risk identified as part of the meeting.
- Obtain the prioritization ratings for the new risks and the current mitigation plan effectiveness rating from the participants.
- Submit the new risks and the prioritization results for the review and approval of the MD, CFO and CTO

*Risk Mitigation**1. Annual risk mitigation*

- Initiate the annual mitigation exercise.
- For the ‘Risks That Matter’, coordinate identification of root causes and development of the mitigation plans with the nominated personnel.
- Submit the root causes and mitigation plans for the review and approval of the MD
- Update the root causes and mitigation plans for the RTMs in the Risk Log

2. Concurrent risk mitigation

- Based on the quarterly risk review meetings, if any reportable risk is identified, coordinate development of mitigation plans for the same.
- Submit the root causes and mitigation plan for the review and approval of the MD.
- Update the finalized new risk(s) and mitigation plans in the Risk Log

Risk Monitoring and Reporting

- Generate self assessment questionnaires for mitigation plan owners.
- Send the self assessment questionnaires to the respective mitigation plan owners.
- Collate the results for the self assessments.
- Submit the compiled results to the MD for review and confirmation.

3.2 Risk Management Activity Calendar

The risk management activity calendar shall be as follows

Process	Frequency	Suggested Timelines
Risk Assessment		
Annual Risk identification and Prioritization	Annual	To coincide with Annual Budgeting / Planning Exercise
Concurrent Risk Identification and Prioritization	Quarterly	To coincide with QRM Exercise except during Annual Review.
Risk Mitigation		
Annual Risk Mitigation	Annual	To coincide with Annual Budgeting / Planning Exercise
Concurrent Risk Mitigation	Quarterly	To be completed within a week after completion of concurrent risk prioritization.
Risk Monitoring and Reporting		
MD (with the support from CFO and CTO) to review annual risk assessment and results	Annual	To coincide with annual budgeting/ planning exercise.
Roll out of self assessment of mitigation plans	Quarterly	To be completed at least 5 days before the QRM exercise.
MD (with the support from CFO and CTO) to review concurrent risk assessment and results	Quarterly	To coincide with QRM exercise except during Annual Review.
Audit Committee/ the Board to review risk management performance	Half-Yearly	To coincide with every BRM exercise.
* <i>QRM – Quarterly Review Meeting</i>		
* <i>BRM – Half Yearly Business Review Meeting</i>		

For operational convenience, Annual Risk Identification and Prioritization is planned during Jan to March. Detailed timelines may be planned every year based on the operational convenience.

Annexure -1 : Risk Classification

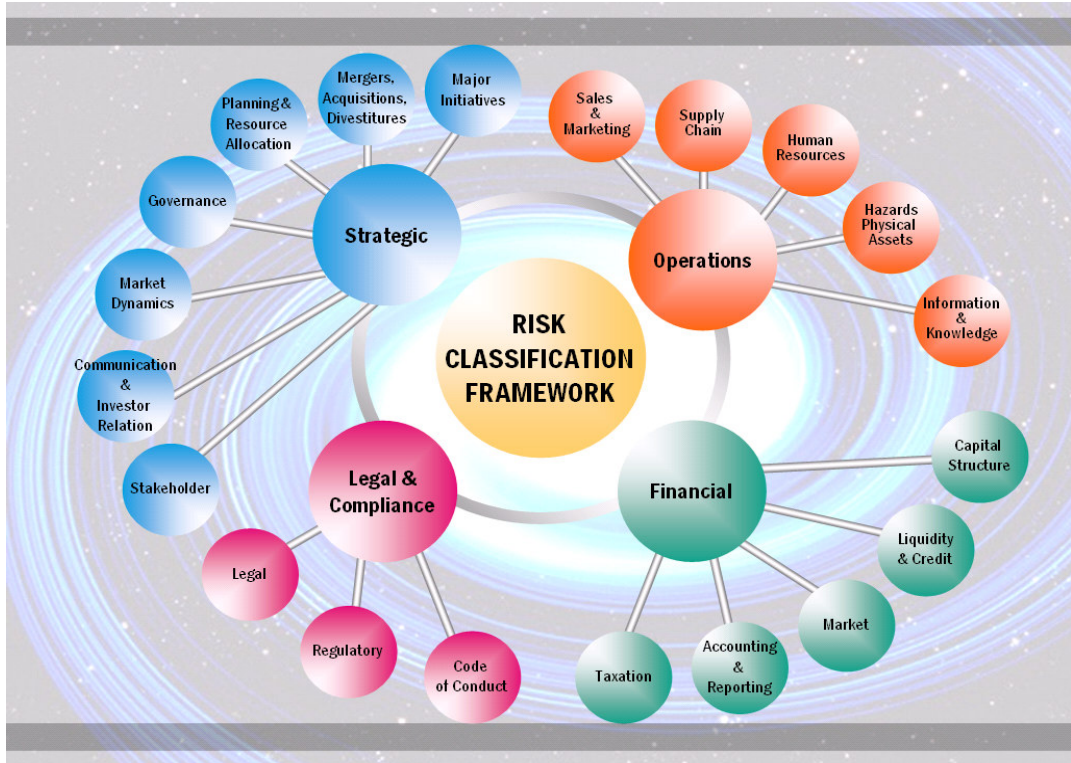
Annexure 1.1 Primary Risk Classification:

In line with the IL&FS Group Risk Management Policy, all identified and assessed risks will be categorized as follows:

Preventable Risks	Risks which are largely controllable and must be eliminated; these relate mainly to routine operational processes, and must be managed within moderate tolerance limits
Strategic Risks	Risks voluntarily assumed in order to generate superior returns; these are not inherently undesirable, and require a high level of involvement of Senior Management and Board in setting the optimum level of risk to be assumed, while maintaining preparedness in case the downside materialises
External Risks	Risks beyond influence and control, eg. natural calamities or political risk. Some of these can be transferred out through insurance. Management at the highest level needs to maintain a constant watch for early signs of risk

The above classification is intended to co-exist with generic risk classification of project or operational risks and support development of mitigation strategies.

Annexure 1.2: Generic Risk Classification:



Annexure 1.3: Risk Category Definitions

The Risk Universe is a classification framework which details the typical risks faced by each organization in today’s business scenario. It provides a logical breakdown of risks into broad organizational categories by implication, for e.g. risks having an impact on the strategic objectives of the Company would be grouped under the heading ‘Strategy’.

The document serves as a reference to ensure comprehensive identification of risks. Further, by indicating the broad area impacted, it gives the management of the Company a suitable starting point from where to chart out a course for dealing with the risk effectively. The Universe also assists the Company in building a perspective towards identifying new risks and planning accordingly.

The Risk Universe is an ideal tool for undertaking a preliminary identification of risks at the strategic planning stage. Thereafter, it can be used continually for updating and maintaining the Risk Management framework.

1. Strategic Risk

The strategic focus of the organization is driven by the stakeholder expectations, industry outlook, market dynamics as well as the way the organization is governed and guided. This category covers the risks which may impact the strategic focus and future of the organization.

1.1. *Stakeholders*

Stakeholder is an Individual or an institution that has an interest or is impacted by the business. It comprises of the shareholders, customers, suppliers, business partners, the community in which it operates and the Government (including regulatory bodies). This would include having an interest in or benefiting from the outcome of the business, having invested resources in the business, and having other business activities that depend on the success of the business.

- **Shareholder**

A Shareholder is legal owner who has a stake in the share capital of the organization. Improper handling of shareholder grievances and poor financial performance leading to low returns on capital hampers the investor confidence and hinders the capacity of the organization to sustain share valuations.

- **Business partner**

An entity with a contractual relationship to combine resources and activities jointly with an organization to share in the management of specified activities, and in the profits/losses directly related to those activities. Ineffective mechanism for selection of channel partners to promote the sale of products or development of service lines thereby resulting in poor performance of these partners leaves a negative impact on the reputation of the company. Inefficient or ineffective alliances, joint ventures, affiliates and other external relationships affect the company's capability to compete or may cause losses; these losses arise due to choosing the wrong partner, poor execution, taking more than is given (resulting in loss to a partner) and failing to capitalize on partnering opportunities.

- **Customer**

A Customer is a buyer of products and services. Single consumer dominating a major chunk of the revenue, lack of reference sites to promote the sales of the products, loss of key customer, inadequate consumer growth or lack of consumer loyalty leads to limitations in revenue growth or pricing pressures on the organization.

- **Government**

Government means the political parties responsible for governing applicable laws and regulations. Change in government or hostile government, red-tapism in the licensing and regulatory approval results in inconsistency in the policies and directives related to the industry and favoritism in the business dealings.

- **Supplier**

Suppliers are Independent entities that provide goods and services to the organization. Dominant supplier, inadequate supplier mix or inadequate monitoring of supplier's performance impacts the continuity of the operations and may affect the prices at which

the supplies are procured.

- **Community**

Community is the society in which the organization operates. Community may be dissatisfied due to inadequate initiatives by the organization to fulfill commitments towards the community in terms of generation of jobs, clean and peaceful environment and other social benefits.

1.2. *Market Dynamics*

This includes characteristics of a market (size, location, customer and supplier behavior), which are appropriately manipulated to provide for ease of entry and diffusion of information on buyer and seller actions. Concentration on a market segment with significant pricing pressures or changing consumer preferences pose a threat to the business activities.

- **Competitor**

An entity that is selling or buying products or services in the same market as the company is a Competitor. The industry players' incessant strive towards a competitive advantage through improvisation of products and processes increases the intensity of rivalry in the industry. The resultant strategies and counter strategies affected in a bid to preserve market share may cause loss in revenue or inflated cost structures. Further, given the dynamic nature of the market, inability of the company to expand into newer segments and adapt to changing consumer tastes and preferences may leave the company vulnerable to the actions of competitors or new entrants to the market. This impairs the company's competitive advantage or even threatens its ability to survive.

- **Economic**

Movements in prices, rates, indices, government policies and overall economic conditions may impact the value of the organization's financial assets and stock price, cost of capital and supply of resources and the demand for the products

- **Country risk**

Area, region, territory, nation etc., for conducting business may undergo changes in a repeated manner. Adverse political actions and social events in the country/region of operation may threaten the organization's ability to viably operate in the particular region/country.

1.3. *Major Initiatives*

- Entry of the company into non-core businesses without adequate expertise and management skills exposes it to risk of failure; this may result in financial losses and loss of reputation or affect the operations of the core business of the company.

1.4. *Mergers & Acquisitions (M&A)*

The phrase mergers and acquisitions or M&A refers to the aspect of corporate finance strategy and management dealing with the merging and acquiring of different companies as well as assets. Usually mergers occur in a friendly setting where executives from the respective companies participate in a due diligence process to ensure a successful combination of all parts.

- **Failure of mergers**

The number of variables surrounding a deal makes it impossible to draw a perfectly accurate picture of an M&A. The common grounds of M&A failure are agency problems, misguided managers or failure to grasp, articulate the strategic intent behind the deal, non realization of expected synergies, integration issues and cultural differences.

- **Inability to capitalize on opportunities**

Slow pace of realizing opportunities for inorganic growth may constrain the growth of the company and affect its long-term market competitiveness.

1.5. *Planning & Resource Allocation*

- **Strategic planning**

This is a Process of discovery, evaluation and selection among alternatives that provides optimal direction to an organization. Absence of clearly defined long term vision and strategies, the projections to support the same and being communicated to the personnel misdirects the organization and leads to misuse of effort and time. The company has an obsolete business model and doesn't recognize it and/ or lacks the information needed to make an up-to-date assessment of its current model and build a compelling business case for modifying that model on a timely basis.

- **Resource allocation**

The allocation of resources required for effective execution of strategies, goals and objectives. Absence of centralized resource management group for monitoring and allocating resources to project as and when required, inappropriate capital allocation and incorrect technology deployment decisions for the organization's may restrict the ability of the company to generate sufficient revenue.

1.6. *Governance*

Governance implies the tone at the top. It is the way the organization is led and managed in pursuit of its objectives. This category covers risks that may arise due to inappropriate strategic focus/ direction, actions impacting the reputation of the company or the immoral conduct of employees

- **Ethics**

Standard of employee behavior necessary to provide a positive influence on the way business is conducted. However, absence of standards for the conduct and ethical

behavior documented and circulated resulting in ignorance among employees across the organization leads to improper conducting of business and impacts the general public perception of the organization.

- **Corporate monitoring**

This is the process of on-going and periodic assessments of the quality of an organization's performance over a period of time. Absence of critical metrics for the monitoring of the progress of the initiatives and effective review mechanism to track and monitor competitor movements and industry trends may impact the organization's ability to generate planned/anticipated returns.

- **Reputation**

This is the favorable organizational character that is maintained with customers, suppliers, business partners, employees and the surrounding community. Ineffective product performance and service delivery, negative publicity and public image and absence of corporate communication group to handle public information releases made by the company damages the goodwill of the organization.

1.7. *Communication & Investor Relations*

- Ineffective communication channels may result in messages (both to internal and external parties) that are inconsistent with authorized responsibilities or established performance measures.
 - Inability to optimize the media mix in alignment with product features and marketing objectives may result in failure to reach the target segment and consequent wastage of marketing efforts
 - Failure of corporate communications personnel to handle negative PR appropriately and effectively undertake crisis management may have an adverse impact on the company's image
 - Inadequate internal communication of organizational goals and objectives may result in departmental conflicts as well as non alignment of employee values with organizational values.

2. **Financial**

Financial risk is the risk that cash flows and financial risks are not managed cost-effectively to (a) maximize cash availability, (b) reduce uncertainty of currency, interest rate, credit and other financial risks, or (c) move cash funds quickly and without loss of value to wherever they are needed most.

2.1. *Accounting & Reporting*

Reporting –Process of capturing data in a meaningful format to provide information to stakeholders for decision making purposes.

- **Regulatory and compliance**

These are systems, primarily external in nature, by which an organization's conduct is

directed and governed. Absence of comprehensive listing of compliance and statutory requirements and non compliance with the reporting norms laid down by various statutes draws attention of various parties as well as hampers the reputation of the company.

Accounting - Accurate recording and true and fair reporting of all financial transactions in the proper accounting period in accordance with existing standards, laws and regulations helps in preventing frauds and errors and gives a true picture of the financial position of the company.

2.2. *Liquidity & Credit*

Liquidity – the marketability of an asset (i.e., ability of an asset to be converted to cash). Credit – Contractual agreement to receive money, goods or services without paying for them in the near term

- **Funding**
Portfolio of capital investments that are expended based on specified commitments or in accordance with terms of an agreement. Incorrect selection of source of funding, all funds held in a single bank and insolvency of the bank holding the funds may result in a crisis situation in the company.
- **Hedging**
These are purchase or sale transactions that effectively minimize profits or losses arising from price fluctuations. Lack of approved investment policies, an unhedged investment portfolio and inappropriate cover to safeguard against the fluctuations in forex rates gives birth to risk in this domain.
- **Cash management**
Systems used to monitor day-to-day decisions related to the administration of funded activities. Inaccurate forecast of requirements of funds and insufficient working capital may interrupt the operations and slowdown the process.
- **Collectability**
Optimal level of payment received occurring as a result of a prior business transaction. Improper provision for bad debts and unsettlement of losses may restrict generation of anticipated profit.

2.3. *Market*

This is the buyer/seller network for the exchange of capital and credit such as the stock, commodities and foreign exchange markets.

- **Interest rate**
Significant movements in interest rates expose the company to higher borrowing costs, lower investment yields or decreased asset values.

- **Currency**
Volatility in foreign exchange rates exposes the company to economic and accounting losses.
- **Financial Instruments**
There is exposure to excessive management costs or losses due to complexity or unintended consequences of financial instrument structures.
- **Commodity**
Physical product, such as metals, foreign currencies, food, grains, etc., which is interchangeable for product of the same type, and which investors usually buy or sell – usually through futures contracts or cash commodities. The commodity risk refers to the impact of changes in the prices of commodities, e.g. raw materials, on the Group's net profit. The Group regularly assesses its commodity risk exposure and hedges this risk employing generally used commodity derivatives whenever this is possible and economically viable.

2.4. *Capital Structure*

Financing of an organization represented by debt, preferred stock and net worth (capital, capital surplus and retained earnings).

- **Equity**
This is the legal interest in property or business over what is owed. Price of company's stock not increasing proportionately to the earnings or market value of stock below its book value may lead to withdrawal of stake and discourages potential investors.
- **Debt**
Money, goods, or services that are owed to another by virtue of an agreement – expressed or implied. Restrictive debt covenants or highly leveraged company imposes huge liability to the business.

2.5. *Tax*

Compulsory payments levied on income, property, sales, etc. Incorrect computation and deposit of tax liability, fraudulent submission by Associates to claim exemptions may lead to charges and penalties against the company thereby posing a negative impact on its reputation. Taxes and other levies imposed by the central or state governments in India that affect the cost of production and prices of the products are:

- Customs duties on import of raw materials and components;
- Excise duty on manufacture of cars;
- Central and state sales tax;
- VAT; and

- Road and registration tax.

Failure of the government to initiate gradual reduction in import duties for raw materials, sales tax relaxation and provide land at concessional rates may affect domestic sales and the country's chances of emerging as a global manufacturing base for passenger cars.

Failure of the company to undertake strategic tax planning / decision making and devise a framework to effectively utilize tax advantages according to the nature of operations would result in incidence otherwise avoidable liabilities.

3. Operations

Operations risk is the risk that operations (resources and processes which come together to create products and services) are inefficient and ineffective in executing the company's business model, satisfying customers and achieving the company's quality, cost and time performance objectives.

3.1. Business Development

This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.

- **Order forecasting**

Ineffective forecasting techniques or lack of accurate market information leads to incorrect estimation of order book/demand, thus affecting the company's ability to meet its projections and to mobilize its resources.

- **New Construction Methods and New Plant & Machinery**

Failure to develop next generation of services and adopt the "speed to market" approach disables the company to bring innovative construction methods and plant & machinery at the right time with the right technical effectiveness and expertise and at the optimal cost thereby hindering the growth and the ability to meet customer expectations. Moreover, insufficient evaluation prior to commencement of execution of the project may lead to frequent changes in the construction methodology, design specifications and/ or abandonment of projects mid-way resulting in wasteful expenditure and increased costs to the company.

- **Quality**

Non compliance with the quality norms specified by customers and inefficient and unreasonable quality norms results in errors in the deliverables thereby impacting the delivery process. Moreover, non availability/sub-optimal utilization of appropriate equipment, manpower and material & adequate systems of checks may also expose the company to quality lapses.

- **Brand**

Development of the brand without hurting the clients' expectations and parallel to the competitors helps the company to generate higher market share and goodwill as well create convenience in decision making for the customers. Erosion of a brand over time

due to lack of brand building activities etc. threatens the demand for the company's products or services and impairs its ability to grow future revenue streams.

- **Client satisfaction**

Inability to meet customer expectations such as completion of project on time with agreed quality and cost and service in DLP period. Further, lack of a structured customer feedback mechanism may lead to customer dissatisfaction and loss of key markets.

3.2. *Supply Chain*

A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of the material into intermediate and finished products; and distribution of these finished products to customers. The supply chain management includes warehousing and tracking inventory. Ineffective management of Supply Chain will lead to excess or insufficient resources for the operation thereby hindering the meeting of anticipated targets.

- **Inventory management and logistics**

(i) Lack of a clearly documented inventory policy defining warehousing conditions, stacking norms, stock holding periods, reorder levels, receipt & issuance procedures etc may encourage theft or other frauds as well as loss of material in the company

(ii) Inadequate tracking of stocks may lead to non availability of materials in requisite quantity & quality and unwarranted costs of inventory management. Inability to manage logistics (negotiation of transport contracts, container availability etc.) efficiently may affect timely availability of materials and deterioration of goods in transit as well as incidence of high costs.

(iii) Insufficient monitoring may lead to loss of material on account of pilferage.

- **Cost competitiveness**

High input costs, poor economies of scale, sub-optimal utilization of resources, tools & technologies as compared to competition as well as the inability of the company to raise capital at competitive rates reduces the company's cost competitiveness.

- **Capacity**

Insufficient capacity threatens the company's ability to meet customer demands and threatens the company's ability to generate competitive profit margins. Further, inability to utilize existing capacity in an efficient manner causes wastage of resources and incidence of otherwise avoidable costs.

- **Sourcing**

Limited sources of energy, metals and other key commodities and raw materials threaten the company's ability to produce quality products at competitive prices on a timely basis, both from domestic as well as global sources. Further dependence on single/limited vendors for raw materials, components etc may result in quality issues and affect the production schedules and profitability of the company.

- **Outsourcing**
Some manufacturers outsource production of several parts to the ancillary units. Outsourcing activities to third parties may result in the third parties not acting within the intended limits of their authority or not performing in a manner consistent with the company's strategies, objectives and procedures or not complying with the quality standard of the outsourcing party. This could affect production schedules of the company, lead to delays in servicing the consumer and result in loss of reputation in the market.
- **Cycle time**
The speed to market, ability to launch a superior product in a particular segment or create a separate segment, thus tapping unmet customer needs results in first mover advantage and ability to garner higher market share and increased profitability for the organization.

Unnecessary activities leading to inefficiency, untimely identification of products, untimely receipt of raw materials etc. threatens the company's capacity to develop, produce and deliver goods on a timely basis, leading to loss of possible business opportunities.
- **Channel effectiveness**
Dealers are an important part of the supply chain in the industry; they play a vital role in attracting customers and pushing the products to the right customers. Poorly selected or motivated dealers, improperly positioned distribution channels and inadequate distribution network may threaten the company's capacity to effectively and efficiently access current and potential customers and end users.

3.3. *Information Technology*

Information technology architecture is an integrated framework for acquiring and evolving IT to achieve strategic goals. It has both logical and technical components.

Technology risk- Technology Risk is the risk of being unable to adopt the right technologies in a timely manner.

- **Shift in technology**
The probability that there is an emergence of new technology in the construction/ manufacturing process which could make the existing product/ process redundant, thus affecting the quality, prices, market share and profitability of the company and its ability to offer up-to-date services to existing and prospective customers.
- **Obsolescence (product/process)**
Inability to leverage on significant technological advancements rising from:
 - Increased customer expectations;
 - Strict environmental compliance requirements; and

- Intense competition among players may affect the company's ability to achieve or sustain competitive advantage and achieve superior quality, cost and time performance in their products, services and processes.

- **Networks**
This is the interconnection of computers, including hardware and software that support them, for the purpose of sharing and transferring data. Inadequate network capacity to support the business needs slows down the operation.

- **Software**
This is the program of instructions that provide the commands or tasks for a computer or network. Investment in applications on a piece meal basis resulting in compatibility issues disables the organization to employ various business opportunities and face competition. Inability to detect and prevent virus and develop a backup in the system spoils the database hindering the smooth functioning of the business.

- **Hardware**
This is the mechanical, magnetic, and electronic design and structure of a computer. Inadequate information technology systems & infrastructure in terms of technically competent personnel, effective integration of business processes with and between platforms etc. and lack of well defined policy on access controls and maintenance of IT equipment could severely restrict smooth functioning between processes / departments and non fulfillment of business requirements of the company.

3.4. *Human Resources*

A lack of requisite knowledge, skills and experiences among the company's key personnel threatens the execution of its business model and achievement of critical business objectives. The three factors, which can affect the human resource deployment in an organization, would be:

- Availability
- Attrition/Retention
- Development

- **Manpower planning**
Placing the right man with the right skills in the right job is the prerequisite to effective functioning of the company. Proper job standardization through job specification and job description ensures effective manpower planning.

- **Health and safety**
Failure to provide a safe working environment for its workers exposes the company to compensation liabilities, loss of business reputation, closure of operations and other costs.

- **Industrial relations**

Existence of strong, uncooperative and militant labour unions coupled with the need to manage relations with organized labour, must be appropriately addressed, so as to minimize possibility of strikes/interruptions in operations and ensure compensation and benefits for labour are well-managed.

- **Training and skills updation**

This is the process of sharing of knowledge and skills within and across business lines. Unidentified training needs and lack of initiatives to enhance the skills of Associates periodically makes them incompetent and inefficient in the ever changing business environment.

- **Roles, authority and delegation**

Absence of clearly defined authority matrix (including job descriptions, authority limits etc.) and ineffective lines of authority in the company may hamper decision making (abuse of decision making powers, slow decision making etc.) and inhibit employees from appropriately discharging responsibilities. Further, inadequate segregation of roles and responsibilities may result in weakening of controls and loss efficiency in operations.

- **Empowerment Risk**

Empowerment risk is the risk that managers and employees (a) are not properly led, (b) don't know what to do when they need to do it, (c) exceed the boundaries of their assigned authorities, or (d) are given incentives to do the wrong thing.

- (i) Leadership

The company's people are not being effectively led, which may result in a lack of direction, customer focus, motivation to perform, management credibility and trust throughout the company.

- (ii) Authority

Ineffective lines of authority may cause managers or employees to do things they should not do or fail to do things they should. Failure to establish or enforce limits on personnel actions may cause employees to commit unauthorized or unethical acts, or to assume unauthorized or unacceptable risks.

- (iii) Performance incentives

Unrealistic, misunderstood, subjective or non-actionable performance measures may cause managers and employees to act in a manner inconsistent with the company's objectives, strategies and ethical standards, or with prudent business practice.

- (iv) Organizational structure

An organization's inability to change its structure to meet the ever-changing business requirements can impair the organization in the long run.

(v) Integrity

Integrity risk is the risk of management fraud, employee fraud, illegal acts and unauthorized acts, any or all of which could lead to reputation loss in the marketplace.

- **Management fraud**
Intentional misstatement of financial statements or misrepresentation of the company's capabilities or intentions may adversely affect external stakeholders' decisions.
- **Illegal acts**
Illegal acts committed by managers or employees expose the company to fines, sanctions, and loss of customers, profits and reputation, etc.
- **Employee/3rd party**
Fraudulent activities perpetrated by employees, customers or suppliers, agents, brokers or third-party administrators against the company for personal gain (e.g., misappropriation of physical, financial or information assets) expose the company to financial loss.

3.5. **Hazards & Physical Assets**

Physical Assets-Tangible piece of property that is owned, has economic value, and is capable of providing future benefits.

- **Plant, property and estate**
Physical protection and stewardship over long-lived assets (such as land, buildings, equipment, furniture, fixtures, tools and machinery) designed to optimise longevity and utilization. Inadequate systems to ensure that these assets possess economic value and are capable of providing current and future benefits and are protected from natural hazards/ acts of theft or sabotage may lead to inability to meet the consumer demand and economies of scale, increase in cost and reduction in quality of production.
- **Other tangibles**
Physical protection and stewardship over other tangible assets (such as inventories, commodities, etc.,) designed to optimize utilization while minimizing obsolescence, contamination, etc. Damage of these assets may cause wastage of resources, delay in production and increase in cost thereby restricting the achievement of operational objectives

Hazards- Hazard if the potential to cause harm. Improper control over them causes business interruptions and inability to achieve the long term objectives.

- **Business interruption**
Business interruptions stemming from the unavailability of raw materials, information technologies, skilled labour, facilities, catastrophic losses or other resources threaten the

company's capacity to continue operations, provide essential products and services or recover operating costs. Moreover, natural disasters and riots also interrupt the continuity of the operation and restricts the achievement of the desired objective.

- **Insurance coverage**

Inadequate insurance coverage against potential hazards relating to business operations such as, replacement cost of plant and machinery, product liability costs for products sold in India and losses related to recall of design defects or replacement of components or spare parts may result in increased costs to the company and closure of business operations.

- **Force majeure**

The company is subject to force majeure risks of three kinds:

- Non political events, which are acts of God, such as floods, earthquakes, fires, etc.;
- Indirect political events such as war, terrorist attacks, strikes and public agitation;
- Political events such as changes in law.

Inability of the company to protect its operations from such events may result in destruction or closure of the operations, loss of revenue and profitability.

4. Compliance

Non-compliance with industry regulations and/or prescribed organizational policies and procedures may result in lower quality, higher production costs, lost revenues, unnecessary delays, penalties, fines, etc. The absence of a structured system of audits and lack of follow up on audit findings may lead to non compliances going unnoticed.

4.1. Regulatory

Compliance with the regulations laid down by the Government and other Statutes is a prerequisite for smooth functioning of the business and its survival.

- **Litigation**

The industry is susceptible to litigation on account of product liability arising out of defective products or use of poor quality raw materials in the manufacture of the end product

- **Government regulations**

Protection to domestic industry has been reduced due to relaxation of government rules & regulations, Free Trade Agreements (FTAs) etc. hence allowing formation of alliances by local players, entry of foreign manufacturers, etc.

4.2. *Legal*

Inability to operate within the legal framework of the state and consistently monitor compliance with existing laws and amendments

- **Contractual agreement**

Binding agreement between two or more parties for performing, or refraining from performing, some specified act(s) in exchange for lawful consideration. It also includes risk arising from contracts entered without being vetted by the Contracting department or modifications in the same without approval from the Contracting department.

- **Immigration**

This includes any legal responsibility, in the country of operation of the customers, to be complied with in order to send Associates for service delivery. Immigration must be effected with fair and true documents submitted by the Associates to ensure integrity in the process.

4.3. *Code of Conduct*

A code of ethics (otherwise an ethical policy, code of conduct, statement of business practice or a set of business principles) can be a management tool for establishing and articulating the corporate values, responsibilities, obligations, and ethical ambitions of an organization and the way it functions. It provides guidance to employees on how to handle situations which pose a dilemma between alternative right courses of action, or when faced with pressure to consider right and wrong. Incorrect or absence of code of conduct may lead to a negative impact in the minds of the outsiders. There will be no behavioural norms to be followed causing inconsistency in the execution of duties and responsibilities.

Annexure 2: Risk Rating Criteria

Risk Rating Criteria - Impact

Score	Rating	Quantitative Impact			Qualitative Description
		Revenue*	Cost*	Total Assets	
5	Fundamental	>10%	>10%	>10%	Very significant and catastrophic impact on Business
4	Major	6% - 10%	6% - 10%	6% - 10%	Significant Losses and inefficiencies necessitating timely addressal
3	Moderate	3% - 5%	3% - 5%	3% - 5%	Loss of operating capability, deterioration of efficiency.
2	Minor	1% - 2%	1% - 2%	1% - 2%	Negative impact on operations and efficiency, but not pervasive.
1	Insignificant	<1%	<1%	<1%	Limited/ No impact on operations and quality of operational efficiency.

As a % to the Contract Value of the concerned project

Rating Criteria - Likelihood

Score	Rating	Quantitative - Likelihood of Occurrence in the scale of 1%-100%	Qualitative Description
5	Almost Certain	>=90%	May occur routinely in the coming months on an ongoing basis.
4	Likely	41% - 89%	May occur in an year in most circumstances.
3	Possible	11% - 40%	May occur a few times within the next 1 to 3 years
2	Unlikely	2% - 10%	May occur once/ twice in the coming 3 to 10 years
1	Rare	<2%	May occur only in exceptional circumstances or after 10 years.

Rating Criteria: Inherent Risk Rating

Rating	Score	Qualitative Description
Critical	>15	Critical. Immediate Action is required.
High	9-14	Very Important. Corporate Senior Management attention and action is required.
Medium	4 – 8	Important. Sector Head/ Functional Head attention is required.
Low	<4	Can be managed by routine procedures.

Rating Criteria: Mitigating Control Effectiveness

Score	Rating	Qualitative Description
3	Effective	Mitigation Plans are in place and mapped to various management levels minimizing the possibility of occurrence and optimizing protection in the case of occurrence of the same.
2	Reasonably Effective	Mitigation Plans though in place do not ensure adequate control over risk occurrence / impact.
1	Needs Improvement	High scope for improvement in existing mitigation plans / Mitigation Plans do not exist.

Annexure – 3 Risk Heat Map

Risk Heat Map					
	Impact				
Likelihood	Insignificant	Minor	Moderate	Major	Fundamental
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

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