



CORPORATE INDIA RISK INDEX

2023

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FROST & SULLIVAN

SECTOR REPORT 2023

TELECOM & COMMUNICATION



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Preface

Corporate India Risk Index is primarily an academic exercise to understand the level of risk that companies are facing and also assist in developing a successful risk aversion plan, CIRI is a first-of-its-kind risk measurement tool to gauge the level of a company's risk exposure and preparedness.

This Corporate risk comprises of various aspects of the business—spanning customer, competition, regulatory environment, business operations, technology finances, environmental factors etc. The impact of unprecedented events is significantly higher now.

This Index is a comprehensive framework that draws upon global risk management best practices and comprises of 32 risk elements across 6 broad dimensions. The Risk Index is based on the principles of Lean and Six Sigma that qualify business processes by measuring effectiveness and efficiency.

ICICI Lombard's Corporate India Risk Index provides a crucial tool for assessing and addressing risks, fostering resilience and adaptability in the ever-evolving global landscape. In the current climate of increasing macroeconomic uncertainties, it is essential for corporates to prioritize robust risk management. We believe that a proactive approach to risk management not only fortifies individual businesses but also contributes significantly to India's overall economic growth and stability.

Executive Summary

The Telecom and communications sector in India witnessed remarkable growth and development in 2023, solidifying its position as one of the key pillars of the nation's economy. With a staggering 1.079 billion subscribers (wireless and wireline) as of December 2023, India ranked second in the world in terms of telecom users. This growth was fueled by factors such as affordable tariffs, expanding 4G and 5G coverage, and government initiatives to bolster domestic manufacturing capacity. However, alongside its success, the sector faced several risks that threatened its stability and growth.

One significant risk dimension was market and economy, characterized by dwindling average revenue per unit, high spectrum acquisition costs, and weak financial standing for some operators. Taxation policies and regulatory hurdles also posed challenges, requiring continuous adaptation and compliance efforts. Mitigation strategies included monitoring legislative developments and updating business strategies accordingly.

The sector also grappled with technological risks, including cyber-crimes and data compromise. With the increasing adoption of digital technologies like AI and IoT, cybersecurity became a pressing concern. Telcos implemented measures to anticipate and de-escalate cyber threats, but the evolving nature of technology necessitated ongoing vigilance.

Operational and physical risks, such as critical infrastructure failure and workplace accidents, underscored the importance of maintaining robust infrastructure and ensuring employee safety. Telecom companies focused on enhancing business continuity measures and investing in workforce development to mitigate these risks.

Natural hazards and events posed additional challenges, requiring careful site selection and planning to mitigate the impact of environmental factors. Pandemics and other global epidemics highlighted the sector's crucial role in providing essential services and the need for resilient infrastructure.

Strategic risks, including resource scarcity and competitive pressures, emphasized the importance of innovation and collaboration. Telecom operators explored opportunities for partnerships and ecosystem development to drive growth and adapt to changing stakeholder expectations.

Despite these risks, the telecom sector remained a cornerstone of India's economic development, unlocking opportunities for connectivity, innovation, and digital transformation. With a focus on mitigating risks, embracing emerging technologies, and fostering collaboration, the sector continued to drive progress and resilience in the Indian economy.

Introduction

ICICI Lombard Corporate India Risk Index is a one of its kind, unified, credible, standardized corporate Risk Index that spans over the country level, the industry level, and the company level. The index has a comprehensive sector coverage.

Aerospace and Defence, Agriculture and Food Processing, Automotive and Ancillary, BFSI, Biotech & Life sciences, Chemicals and Petrochemicals, Education Skill Development, Energy, FMCG, Healthcare Delivery, Infra and Realty, IT/ITES, Manufacturing, Media and Gaming, Metals and Mining, New Age & Startup, Pharmaceuticals, Telecom and Communication Technology, Tourism and Hospitality, Transportation and Logistics.



The impact is identified across key business risk (internal and external) under the following 'Strategic Risk Areas', The ICICI Lombard Corporate India Risk Index Framework comprises of 32 risk elements across 6 broad dimensions.



Market and Economic Risk

Corporate Risks arising due to market and economy related factors, such as internal or external political uncertainty, global slowdown, taxation-regulatory changes etc. Market and economy related risks are also identified as 'Systematic Risks', we have further classified the risks into below mentioned categories.

- **Inflation:** Inflation is the general increase in prices within the economy. The rising prices for businesses could result in bigger production spending and a fall in profitability. The companies should be attentive, acute, and responsive to changes in inflation to efficiently manage the prices of final products.
- **Taxation:** In a large democracy like India, complexity of multiple taxes (multiple taxes like GST, custom duties, central excise duty, etc.) is a major concern. The changing legislations, increased scrutiny by tax authorities and increasing public attention are together resulting in tax risks for organizations. There is, thus an increasing urgency for firms to manage their tax affairs efficiently to minimize tax risks.
- **Regulatory Risks:** Regulatory risk is the risk of changes in regulations and laws that might affect an industry or businesses. The regulatory changes can pertain to tariffs and trade policies, business laws pertaining to employment, minimum wage laws, financial regulation, Foreign Direct Investment etc.

- **Foreign Exchange Risk:** The exchange rate plays an important role for firms who export goods and import raw materials. The fluctuations in foreign exchange will have great impacts on the prices of traded goods. For example, if the currency depreciates (devaluation), the exporting firms will benefit. However, the firms importing raw materials will face higher costs on imports. The firms need to hedge their exposure to foreign exchange risks to insulate themselves from the impact from forex changes.
- **Geo-political Tension:** Geopolitical risk means the political and economic risks that are a potential threat to the financial and operational stability of companies.
- **Competitive risk:** Competitive risk is the risk associated with the fact that there are multiple companies competing in the market, each seeking to obtain the highest position and consumer ratings, to gain maximum benefits for themselves. The companies devise different strategies to garner a higher market share and acquire customers from competitors. Any failure in managing the competitive stand could lead to losses in business, thereby making marketing and competition a major risk in market.



Technology Risk

Technology risks are also identified as information technology related risks which may arise due to failure of any installed hardware or software system, spam, viruses or any malicious attack. Also delay/over/under adoption of trending disruptive technologies can lead to technology related risks. We have classified the risks in below mentioned categories.

- **Innovation Risk / Obsolete Technology:** Innovation is the key to success in all the industries. Risk of redundancy and losing out to competition on account of poor R&D is a major concern.
- **Intellectual Property risk:** Dependence on trade secrets and unpatented proprietary know-how.
- **Disruptive Technologies:** These will fundamentally alter the financial prospects of the industry.
- **Data Compromise:** Hardware failure refers to malfunctions within the electronic circuits or electromechanical components (disks, tapes) of a computer system; Software failure refers to an operating system crash. Such failures lead to stoppage of entire computer or operating systems creating substantial losses to business.



Operational and Physical Risk

Risk of losses caused due to faulty or failed processes, systems or human resource related inefficiencies are classified as operational and physical risks. We have classified Operational & Physical risks in below mentioned categories.

- **Critical Infrastructure Failure / Machine Breakdown:** Industries with a heavy dependence on machinery consider any rise in machinery breakdowns a hindrance to their businesses operations. An untimely equipment breakdown can bring businesses to a standstill or be the root cause for fires and explosions. Mostly, human errors and deferred maintenances are the major reasons for such breakdowns. The companies should actively invest in timely maintenance of all machineries.
- **Business Continuity / Sustainability:** Non adoption of Business Continuity/ Sustainability Plans and Lack of Internal Control tools would result in: Failure of businesses, Brand Equity / Loss of reputation, Financial Loss, Business model Failure, Ineffective engagement/communication with stakeholders, Losses in productivity, Lack of opportunity monitoring.
- **Supply chain risk:** Raw Material unavailability and Heavy Dependence on Global Supply Chains / Supplier concentration risk. Unavailability of raw materials owing to disruption in the supply chain or heavy dependency on one source (company/country) which is unable to supply owing to some geo-political tensions, fires, or any other incidents. Transportation is one of the key activities for companies making it an important risk to mitigate. The loss of goods in transit and spillage is one of the major concerns as it accounts for a sizeable loss of revenue to companies.
- **Commodity Price Risk - Volatility in prices of raw materials:** The fluctuations in raw material prices creating a margin pressure / top-line pressure in the scenario of rising input costs.
- **Portfolio Risk:** Loss of key customers, Customer concentration - Key customers accounting for a larger share of revenue, Over-dependence on suppliers, Business Model Risk: Transformative changes in business model, Tail Risks: Ability to overcome or manage extreme worst-case scenarios.
- **Environmental Hazard Risk:** Any environmental hazard having the potential to affect the surrounding environment.
- **Workplace Accident:** Fire and Explosion Hazards, Containment Incidents and Workplace Injuries.
- **Human Resource:** Key person risk: This risk occurs when a business or business unit becomes heavily reliant on a key individual. Talent acquisition and retention - The companies require a highly skilled labor force for R&D as well as continuous production. Accessing skilled resources and expertise on an on-going basis is one of the major challenges; moreover, retention of trained staff is imperative. Labor shortages, Union Strikes & Industrial Actions, Employee health, safety, and security (SHE/Sustainability risk).
- **Financial Risk:** Financial Reporting Risk: Material misstatement of Financial Statements, whether due to fraud or error. Interest rates and equity prices: Interest rate risk arising out of working capital borrowings at variable rates. Equity price fluctuations affect the Company's income or the value of its holdings of financial instruments. Liquidity Risk (Credit Risk / Receivables).
- **Breaches of law (local/ international):** Voluntary/ involuntary breaches of law can lead to costly lawsuits.



Crime & Security Risk

Cybersecurity risks relate to the loss of confidentiality, integrity, or availability of information, data, or information (or control) systems and reflect the potential adverse impacts to organizational operations. These attacks can cause major financial losses, reputational harm, and a loss of client trust. Regarding cybersecurity, the BFSI industry in India has several difficulties, including difficult-to-secure legacy systems, a shortage of qualified cybersecurity personnel, and the requirement for ongoing system and network monitoring. There is a significant investment in cybersecurity tools like network monitoring, endpoint security, access control, and threat intelligence. Many organizations are also implementing cutting-edge technology like artificial intelligence and machine learning to strengthen their security posture.

We have classified Crime & Security risks in below mentioned categories.

- **Cyber Crimes:** Data Theft, Spam, scams and phishing, Hacking, Malwares and Viruses, Piracy, Fraud, Corruption, Malicious attacks
- **Counterfeiting:** Counterfeiting of goods/services leads to loss of revenues, profits and ultimately affects the brand equity
- Threat to Women Security
- **Terrorism:** Un-lawful use of violence and intimidation, especially against civilians, in the pursuit of political aims.



Natural Hazard Risk

A natural hazard is the threat of an event that will likely have a negative impact. A natural disaster is the negative impact following an actual occurrence of natural hazard if it significantly harms a community. Due to India's geographical structure, it is one of the most disaster-prone countries in the world. Natural hazards like floods, earthquakes, landslides, and cyclones are common risks faced by India. The situation has worsened due to rise in GHG emissions, loss of biodiversity, deforestation, and degradation of environment. Such natural disasters hamper the day-to-day operations of corporates, and it is important for them to understand that such risks cannot go unheeded. Over the years, Indian corporates have learnt to mitigate such risks by diversifying their supply chains, having multiple logistics partners, diversified geographical presence and multiple vendors.

- **Pandemic and other global epidemic diseases:** Risk to business owing to disruptions caused by COVID-19 pandemic and similar another global epidemic.



Strategic Risk

Strategic risk is the risk that failed business decisions may pose to a company. Strategic risk is often a major factor in determining a company's worth, particularly observable if the company experiences a sharp decline in a short period of time. Several factors, such as unethical or unlawful activities, poor customer service, product recalls, data breaches, or unfavorable media coverage, can lead to strategic risk. An organization's reputation can be severely harmed by a single negative incident, such as a high-profile data breach or fraud scandal, resulting in a loss of clients, income, and market share.

- **Resource scarcity / Misutilization / Overall Utilization:** Difficulties in acquisition of land, water, fuel, or other resources for operations of business.
- **Public Sentiment:** Current events playing out in the public scene can change the public sentiment.
- **Delay in execution of projects:** Delays in execution of projects can surge in the capex.
- **Increased number of recalls and quality audits:** Impacts both the brand equity and increased operational expenses.
- **Failed / Hostile Mergers & Acquisitions:** High dependence on inorganic growth.

Bottom-Up Risk Assessment Approach

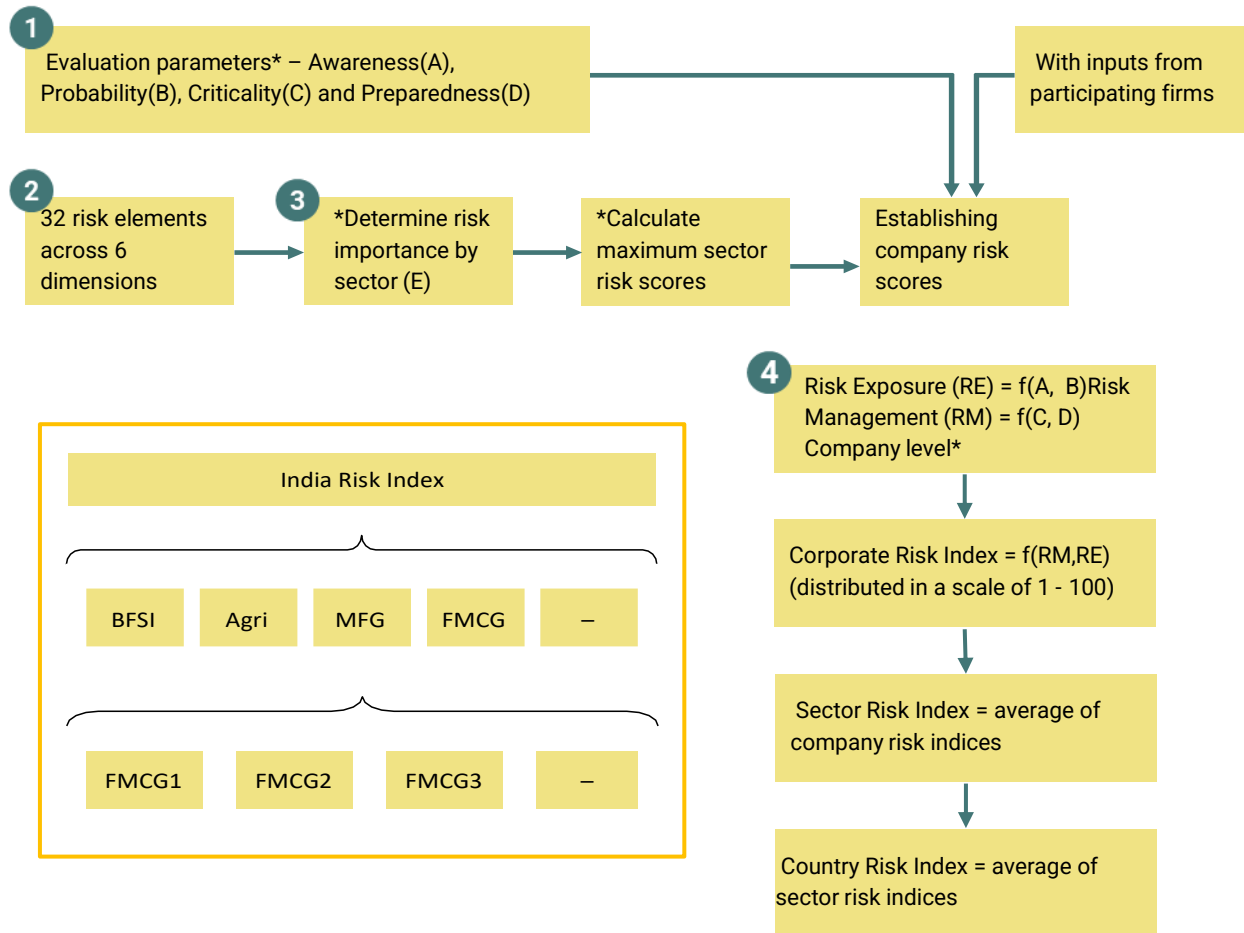


Figure 1: Risk Assessment Approach

- 1. Evaluation Parameters*:** The index maps the risks faced by any enterprise basis of Awareness, Probability, Criticality and Preparedness against the defined Risk elements. The evaluation Parameters are defined as:
 - Awareness - Level of awareness of potential risk affecting the firm.
 - Probability - Likelihood of risk to affect the business goals of the firm adversely.
 - Criticality - Level of impact of the identified risk on the success of business goals.
 - Preparedness - Risk handling practices/ mechanisms already in place to handle the risk.

2. **Determining Risk Importance*:** Importance/Impact of individual risk element is established against individual sector based on the published corporate risk reports, in depth sector understanding by F&S team and SMEs.
3. **Calculating Maximum Sector Risk Score:** Weighted Sum of all risk elements based on their importance to the respective sector.
4. **Company Level*:** All the Risk Index scores for companies in a sector are averaged to represent the sector; and sectors average to India. Risk Exposure is defined as the function of corporate's Risk Awareness and Probability of risk occurrence. Risk Management is defined as the function of an enterprise risk preparedness and criticality risk impact assessment.

Defining the Risk Scale

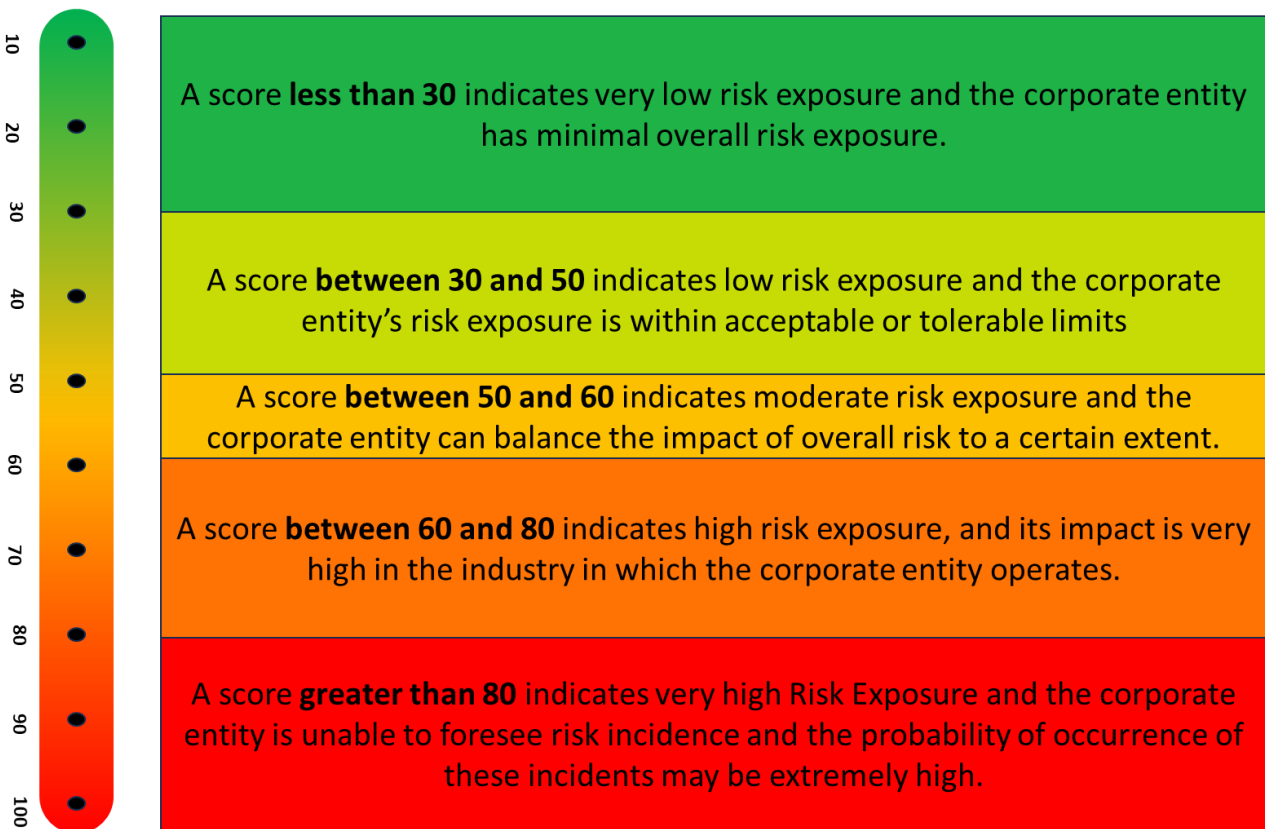
We have selected 20 Sectors to understand the current stand of our country today in terms of risk. Risk for various Sectors is measured on the risk exposure scale and risk management scale.

A. ICICI Lombard Corporate Risk Exposure – Scale

Risk Exposure: The impact of any internal, external or strategic occurrence on the financial performance of an organization is defined as the corporate risk exposure.

Risk has traditionally been seen as something to be avoided – with the belief that if behavior is risky, it's not something a business should pursue. But the very nature of business is to take risks to attain growth. Risk can be a creator of value and can play a unique role in driving business performance.

Let's look at the risk exposure scale.

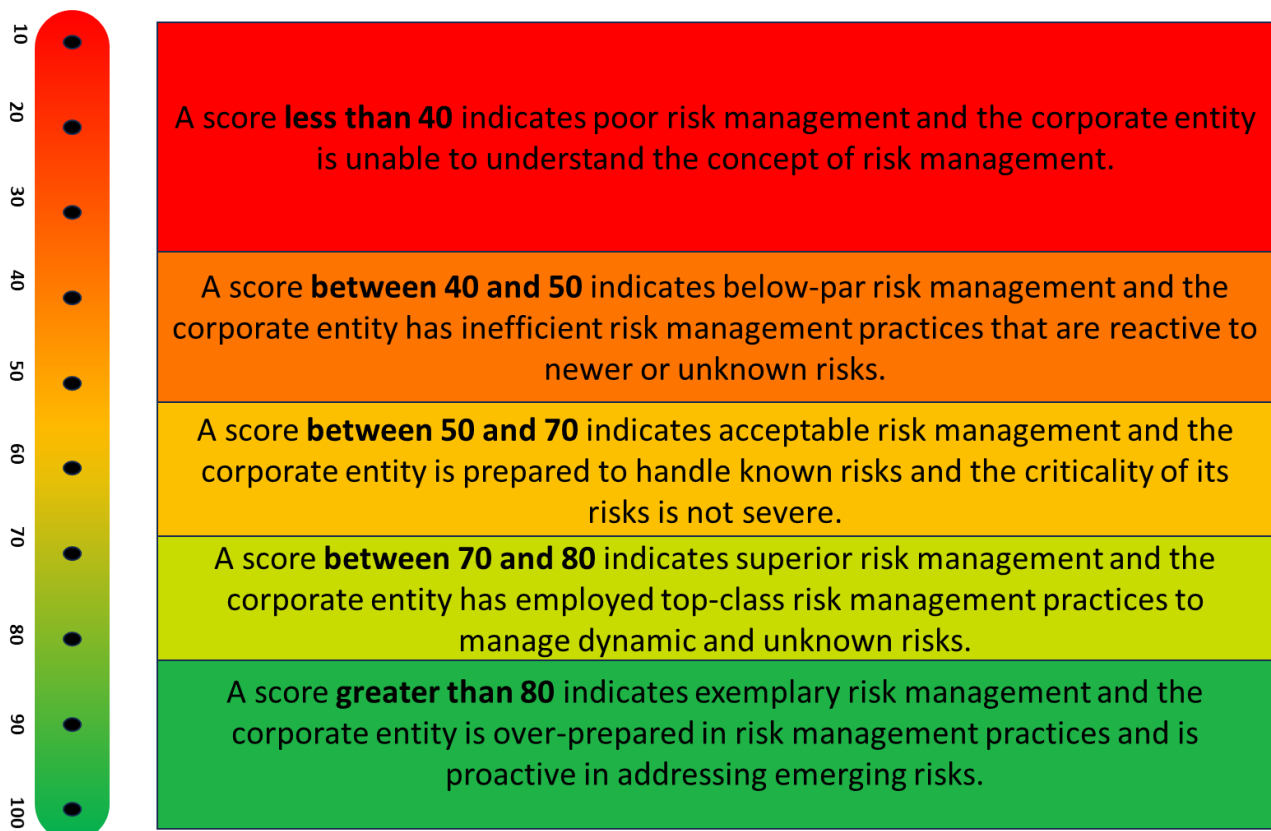


B. ICICI Lombard Corporate Risk Management – Scale

Risk Management: Identification, Evaluation and Prioritization of corporate risks followed by well-coordinated steps to minimize the occurrence of uncertainties in the foreseeable future is defined as Corporate Risk Management.

The risk management scale works counter to the risk exposure scale.

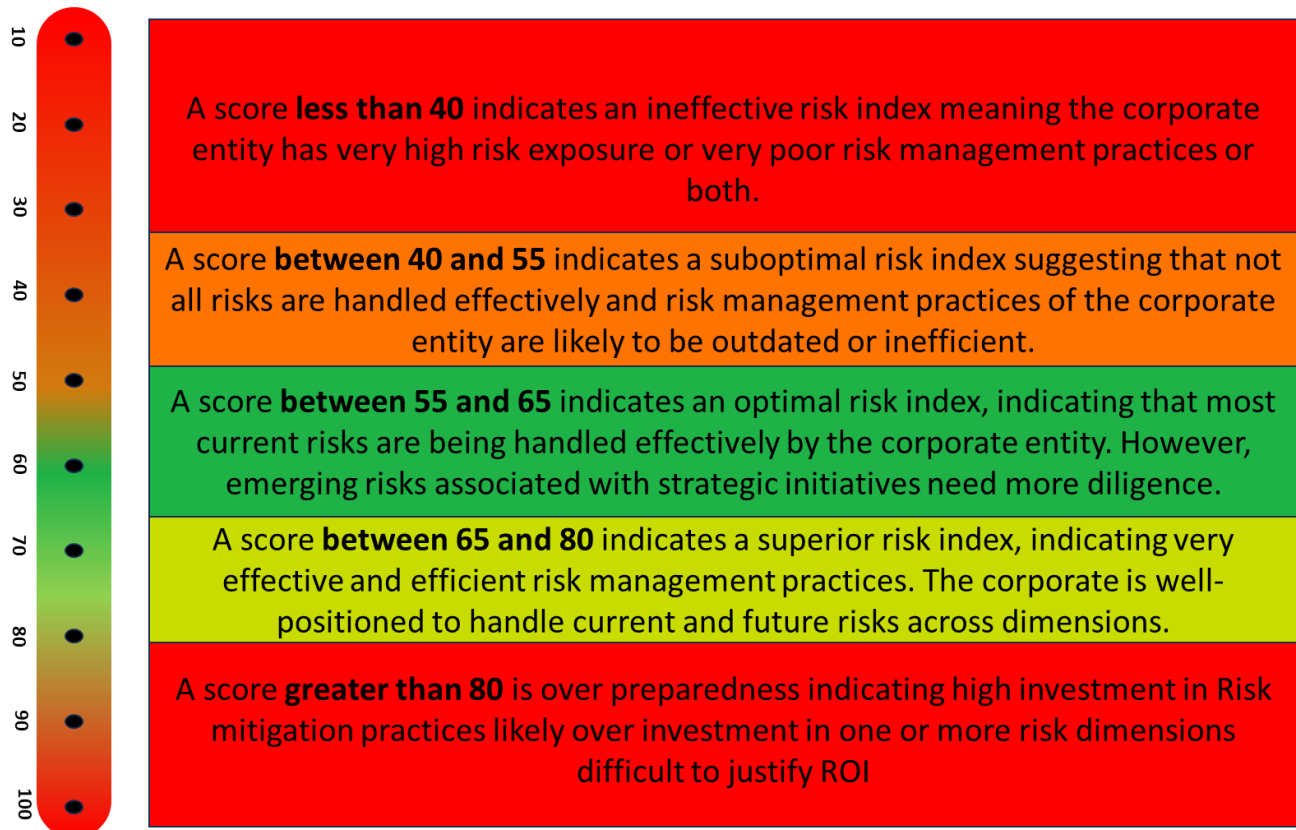
Let's look at the risk management scale.



c. ICICI Lombard Corporate Risk Index – Scale

Risk Index: Risk Index is a measurement tool to gauge the level of Risk Exposure against Risk Preparedness. The score intends to give companies/Sector/Country access to an extensive and quantifiable metrics of risk management.

Let's look at the risk Index scale.



India - Emerging Superpower with Optimized Corporate Risk Handling

In 2023, India witnessed a number of developments in various sectors, reflecting changes in consumer preferences, technological advances and regulatory trends. These developments shaped the industry and affected strategic decisions among industry players.

Electric vehicles (EVs) gained traction across sectors, driving investments in infrastructure and incentivized by government policies promoting electric mobility. The Automotive industry witnessed a surge in demand for EVs, while Logistics & Transportation embraced electric fleets to reduce carbon emissions and operational costs. Digital transformation accelerated across sectors, fueled by the COVID-19 pandemic. Telemedicine, online banking, and remote work solutions proliferated in Healthcare, BFSI, and IT/ITES sectors, enhancing operational efficiency and customer experiences.

In 2023, sustainability took center stage as sectors across India embraced eco-friendly practices. The Energy sector witnessed a shift towards renewable energy sources, with significant investments in solar and wind power. Industries like Manufacturing and FMCG prioritized energy efficiency and waste reduction initiatives. Hospitality and Real Estate sectors focused on green building practices, while Agriculture adopted precision farming techniques to conserve resources.

AI integration surged in 2023, revolutionizing business operations across sectors. Manufacturing companies leveraged AI for predictive maintenance and quality control, enhancing efficiency and reducing costs. Healthcare adopted AI-powered diagnostics and personalized treatment plans, improving patient care. Financial institutions utilized AI for fraud detection and risk assessment, bolstering security and compliance.

Social media emerged as a powerful tool for brand building and customer engagement in 2023. FMCG and Retail sectors capitalized on social media platforms to launch targeted marketing campaigns and drive product sales. Hospitality and Tourism industries utilized social media influencers to enhance brand visibility and customer loyalty. By leveraging social media analytics and customer feedback, companies across sectors tailored their strategies to effectively connect with their target audience and build brand reputation.

The "Make in India" initiative drove significant changes in supply chain operations in 2023. Sectors like Automotive, Manufacturing, and Pharmaceuticals emphasized local sourcing to reduce dependency on imports. Companies diversified their supplier base and optimized logistics networks to mitigate supply chain risks. This strategic shift towards domestic production enhanced resilience and competitiveness across industries.

Diversity, Equity, and Inclusion (DE&I) initiatives gained momentum in 2023, fostering inclusive workplaces across sectors. Companies in BFSI and IT/ITES led the way with diversity training programs and gender-neutral policies. Healthcare organizations focused on addressing healthcare disparities among marginalized communities. Manufacturing and Retail sectors prioritized inclusive hiring practices to tap into diverse talent pools, driving innovation and employee engagement.

Leadership risks emerged as a critical concern in 2023, prompting sectors to reassess their leadership strategies. Companies in BFSI and Technology faced challenges in adapting to rapid technological advancements and changing market dynamics. Healthcare organizations navigated leadership transitions amidst the COVID-19 pandemic, emphasizing the need for agile and resilient leadership. Strategic investments in leadership development and succession planning became imperative to mitigate leadership risks effectively.

Disruptive technologies like artificial intelligence, blockchain, 5G, and IoT reshaped traditional business models, offering new avenues for innovation and growth in sectors such as Telecom & Communication, Biotech & Life Sciences, and New Age Industries.

The scenario of the Indian economy in 2023 had a myriad of risks and opportunities in various sectors. Cybersecurity emerged as a pervasive risk, affecting industries from banking and finance to healthcare and IT/ITES. With more than 400 million cyber threats detected in nearly 8.5 million locations by 2023, organizations prioritized strong cybersecurity measures. Advanced threat detection systems, encryption protocols and employee training programs were implemented locally to enhance cyber resilience and protect sensitive data.

Another common risk was supply chain disruption, exacerbated by factors such as geopolitical pressures, natural disasters, and semiconductor chip shortages. To mitigate these risks, companies diversified their supplier base, invested in inventory management systems, and adopted agile supply chain practices to enhance resilience and flexibility.

Regulatory uncertainty was rife in industries such as Pharma, Energy, Telecommunications, which required active engagement with regulators. Furthermore, environmental risks emphasized the importance of sustainability and green technologies, renewable energy and waste management practices to reduce environmental impact around us and compliance with legal standards.

Despite the challenges posed by common risks, several sectors emerged as resilient performers in 2023, whose efforts helped us understand the situation in 2023 better. Noteworthy efforts included the "National COVID-19 Vaccination Drive" in healthcare, "Electric Vehicle Adoption Mission" in automotive, and "Green Freight Movement" in logistics. Additionally, initiatives such as the "Make in India Defence" program in aerospace and "Skill India Mission 2.0" in education underscored the nation's commitment to innovation and development.

The Automotive industry in India showed resilience in the face of supply chain disruption and regulatory uncertainty. Focusing on sustainability and innovation, the sector saw an increase in electric vehicle (EV) adoption, with sales reaching Rs 4.22 lakh crore.

The Aerospace & Defence sector focused on developing indigenous manufacturing capacity and technology to strengthen national defence by investing Rs 1.5 lakh crore.

In the Healthcare sector, India has invested heavily in digital health solutions and infrastructure to combat the lingering effects of the COVID-19 pandemic. With a total investment of more than Rs 50,000 crore, companies have expanded telemedicine and implemented AI-powered diagnostics to improve patient care.

The Manufacturing sector prioritized digitalization and process optimization to enhance productivity and competitiveness amidst supply chain disruptions and inflationary pressures. Companies invested Rs 1.2 lakh crore in automation technologies and smart manufacturing initiatives to streamline operations and reduce costs. The Logistics & Transportation companies invested Rs 800 crore in blockchain-based traceability systems and cyber security protocols to secure supply chains and protect sensitive data from cyberattacks.

The Hospitality industry adapted to customer preferences and regulatory requirements through new service offerings and customer engagement strategies. With an investment of Rs 0.5 lakh crore, companies also focused on using contactless technology to improve health and safety measures, ensuring that guests have satisfaction and compliance.

The Agricultural & Food Processing sector embraced technological initiatives to increase agricultural productivity and ensure food security in the face of climate change and supply disruptions. With an investment of Rs 1 lakh crore, companies focused on precision farming and farm-to-fork traceability solutions to improve crop yield and quality.

The BFSI sector focused on digital transformation and risk management to address cyber threats and regulatory challenges. Banks and financial institutions invested Rs 2,50,000 crore to implement advanced cyber security measures and fraud detection systems to protect customer data and prevent financial fraud.

The Biotech & Life Sciences sector showcased innovation and resilience amidst regulatory complexities and supply chain disruptions. The Chemicals & Petrochemicals sector navigated environmental regulations and market volatility through sustainable practices and operational excellence initiatives. Digital learning and job training were adopted to meet workforce challenges and enhance productivity in the face of technological disruption and demographic changes in the Education & Skill Development sector.

The Energy sector has shifted towards renewable energy and sustainable development policies to mitigate the risks of climate change and reduce dependence on fossil fuels. Moreover, with investments of Rs 1.5 lakh crore in smart grid technologies and demand-side management initiatives to optimize energy consumption and reduce emissions, the sector prioritized grid modernization and energy efficiency.

The IT ITES sector continued to drive digital transformation and innovation to address cybersecurity threats and meet evolving customer demands. With investments of Rs 4 lakh crore, companies focused on cloud computing and cybersecurity solutions to protect data and ensure business continuity.

The Metals & Mining sector focused on sustainable practices and community engagement to address environmental concerns and social risks associated with resource extraction. With investments of over Rs 0.8 lakh crore, companies implemented reclamation and rehabilitation projects to restore mined areas and promote biodiversity conservation.

The New Age sector, comprising startups and technology companies, showcased innovation and resilience amidst market uncertainties and funding challenges. Additionally, the sector prioritized talent acquisition and retention, with investments of Rs 0.5 lakh crore in employee benefits and workplace diversity initiatives to attract top talent and foster a culture of innovation.

The Telecommunication sector continued to expand connectivity and digital infrastructure to meet growing demand for broadband services and IoT applications. With investments of over Rs 2 lakh crore, companies deployed 5G networks and fiber-optic cables to enhance network capacity and speed.

In summary, India's diverse sectors demonstrated resilience and innovation in navigating through a challenging operating environment in 2023. As India continues its journey towards economic prosperity, proactive risk management and innovation will remain critical drivers of success across diverse sectors.

India Showcasing an Optimized Risk Handling



Figure 2: Corporate India Risk Index 2023

A score of 64 on the Corporate Risk Index indicates optimal handling of risk by the Indian companies. However, to enter the superior risk handling territory, the Indian companies have scope to improve upon their risk management practices in the areas of crime & security risks and strategic risks. It was observed across sectors that there is an increased focus on cybersecurity and other technological risks.

In the sectorial analysis of risk exposure, it was found that companies were most affected by market & economy and operational & physical risks due to inflation, global volatility and geopolitical events like the Red Sea crisis, Israel Palestine conflict and Russia Ukraine War.

Another common risk was supply chain disruption, exacerbated by factors such as geopolitical pressures, natural disasters, and inflation. To mitigate these risks, companies diversified their supplier base, invested in inventory management systems, focused on localization and adopted agile supply chain practices to enhance resilience and flexibility.

It was observed that risk management is getting an increased focus in the growth strategy of every organization with companies having dedicated risk teams to manage their risk exposure. All the organizations fell either into 'Superior Risk Management' or 'Optimal Risk Management' category indicating good risk management practices.

Below is a broader categorization of sectors in terms of risk index:

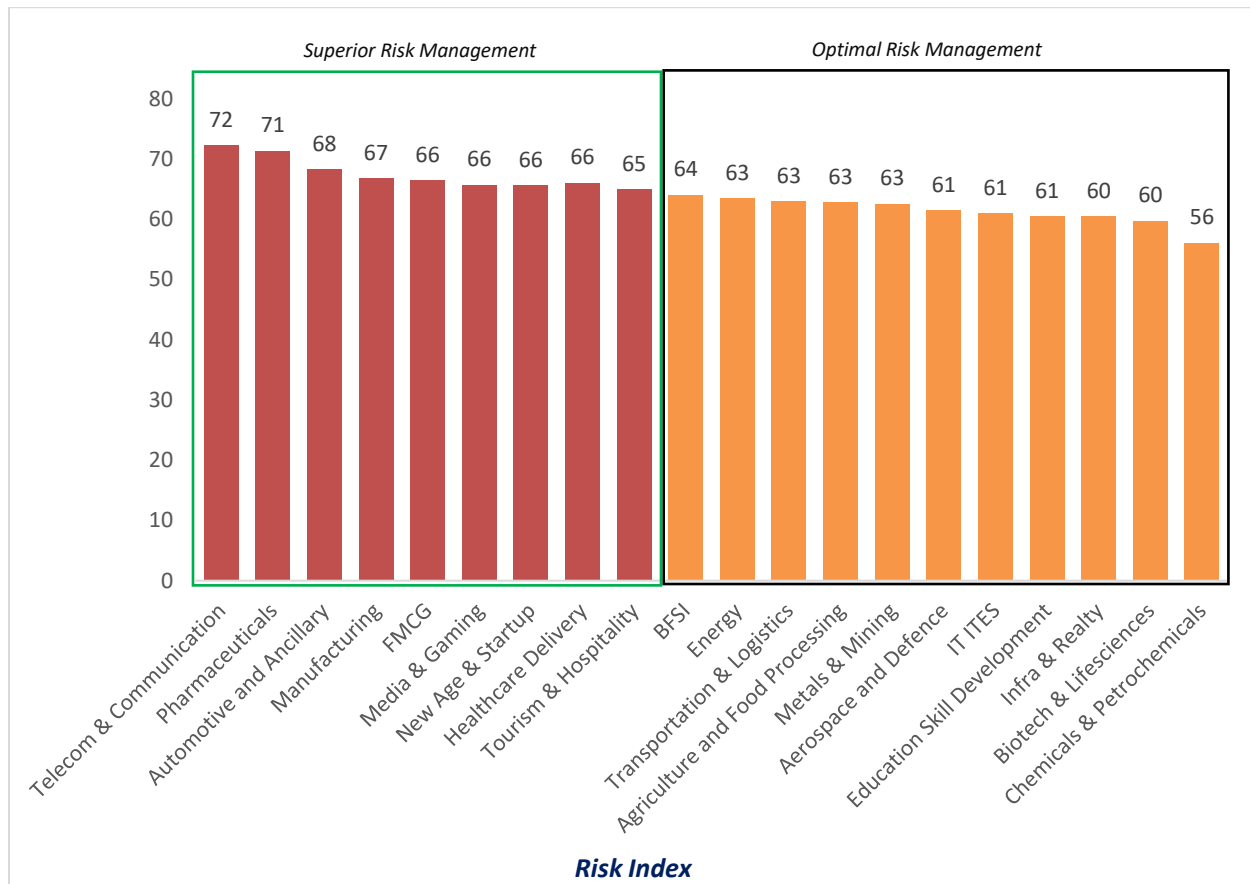


Figure 3: Corporate India Risk Index 2023 Sector Score

Superior Risk Index

Superior risk handling was found in nine industrial sectors: Telecom & Communication, Pharmaceuticals, Healthcare Delivery, Automotive & Ancillary, Manufacturing, FMCG, Media & Gaming, New Age & Startups and Tourism & Hospitality.

Optimal Risk Index

Optimal risk handling was found in 11 industrial sectors: BFSI, Energy, Transportation & Logistics, Agriculture & Food processing, Metals & Mining, Aerospace & Defence, IT ITES, Education & Skill Development, Infrastructure & Realty, Biotech & Lifesciences and Chemicals & Petrochemicals.

Telecom & Communication Sector Insights 2023

The Indian telecom industry ranks second in the world with a staggering 1.079 billion subscribers (wireless and wireline) as of December 2023. In an effort to stay competitive in the market, the major players concentrate on rolling out the 5G network and expanding network capacity nationwide. The industry's exponential growth over the last few years is primarily driven by affordable tariffs, wider availability, roll-out of Mobile Number Portability (MNP), expanding 4G and 5G coverage, evolving consumption patterns of subscribers, Government's initiatives towards bolstering India's domestic telecom manufacturing capacity, and a conducive regulatory environment. The industry's contribution extends beyond just user experience. It's the fourth largest sector in terms of FDI inflows, attracting 6% of the total and directly employing 2.2 million people, with a further 1.8 million indirect jobs created. However, high spectrum acquisition costs and intense competition have led to financial stress for some telecom operators. To further unlock potential, 100% Foreign Direct Investment (FDI) has now been permitted in the telecom sector.

The Telecommunications industry is divided into the following subsectors: Infrastructure, Equipment, Mobile Virtual Network Operators (MNVO), White Space Spectrum, 5G, Telephone service providers, and Broadband. According to GSMA estimates, India is on track to become the world's second-largest smartphone market by 2025, boasting around 1 billion installed devices and a projected 920 million unique mobile subscribers, including 88 million 5G connections.

Furthermore, 5G technology is expected to contribute a staggering INR 37 Lakh crore to the Indian economy between 2023 and 2040. The Department of Telecommunications (DoT) has set ambitious goals for December 2024, targeting 100% broadband connectivity in villages, 70% liberalization of telecom towers, average broadband speeds of 50 Mbps, and a pan-India rollout of 50 lakh kilometers of optic fiber. Reaching these ambitious goals requires overcoming infrastructure hurdles, especially in geographically remote areas. Broadband connections themselves have witnessed a monumental rise, surging from 61 million in March 2014 to a staggering 904.54 million in December 2023, reflecting a growth of 1382%.

The 2020 pandemic resulted in an accelerated and permanent change in the behavior of consumers—one centered on seamless digital experiences, whether for work, shopping, or entertainment. Today's consumers value speed, convenience, transparency, and accurate knowledge when interacting with companies and will quickly seek out other options if these needs aren't met. As a result, now more than ever, organizations need to deliver game-changing experiences.

Companies across industries are increasing their digital investment by implementing modern technologies like artificial intelligence (AI), 5G and the internet of things (IoT) to meet the new consumer landscape and deliver these optimized experiences. Powering these technologies requires sophisticated digital infrastructure and increased bandwidth from telecommunications providers.

The primary obstacles facing this sector include dwindling average revenue per unit, high licence fees, weak financial standing, and a dearth of communication infrastructure in rural areas. The strain of industry

debt has grown as a result of the high expenses associated market-widening spectrum and the need of network upgrades.

The sector's main threats at the moment are a more competitive broadband market, scarce spectrum, inadequate sustainability agenda management, cybersecurity, and risk management. The global pandemic's devastation is gradually abating, which is reducing the hazards to the economy and the entire market. Providers appear to have little to no pricing power on increasingly commoditised connectivity and data services, revenues from internet access—our proxy for spending on broadband activity—will rise at only a modest 4% CAGR to INR 76 lakh crore through 2027. At the same time, telecommunications companies (telcos) must make heavy investments in the costly infrastructure that enables them to serve customers. Telecom operators further are facing increasing challenges in the digital era. From the past experiences of some of the world's well-known telecom operators, the best strategy is to build up an open platform that can attract participation from hardware providers, end device suppliers, content developers, and end users. Telecom operators should also lead the healthy development of this ecosystem, and the gene combination of Internet and telecom companies will become the core competitiveness.

The telecommunication sector however has been instrumental in the development and poverty reduction through the empowerment of the masses, unlocking economic growth, employment generation, bringing in FDI, and digital transformation of essential services like education, healthcare, financial services, etc.

Looking towards the future, the Indian government's vision includes developing 100 smart city projects, where IoT will play a critical role. The National Digital Communications Policy 2018 aims to attract a staggering INR 83,00,000 crores in investments for the telecom sector. A major driving force behind meeting the industry's present and future needs is the Atmanirbhar Bharat program, with a strong push towards developing indigenous 5G technology to propel India's rapid 5G adoption. But innovation doesn't stop there – India is already planning for the future with investments in 6G technology development. With its unwavering focus on digital connectivity, fostering innovation, and attracting investment, the Indian telecom industry is a cornerstone of the country's economic development.

Telecom & Communication Sector Risk Index 2023 Vs 2022

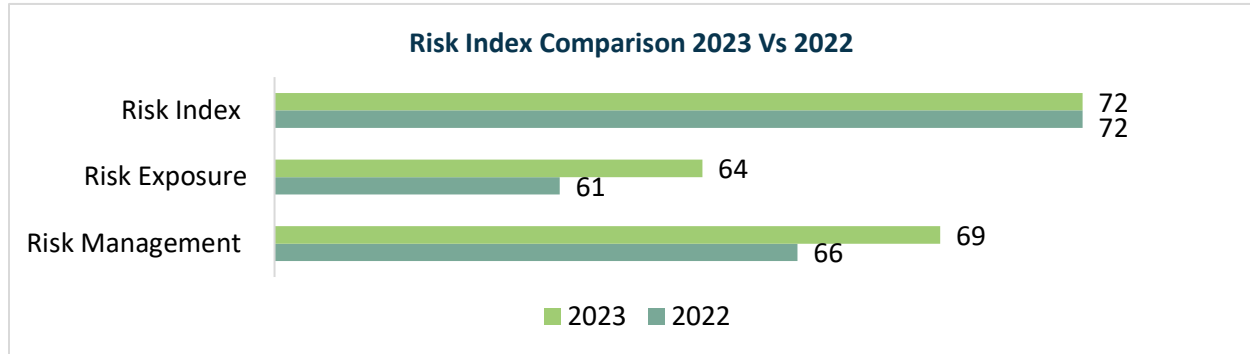


Figure 4: Detailed Comparative Analysis 2023 Vs. 2022

Telecom and Communication Sector Risk Index 2023 vs 2022

In 2022-23, the Telecom and Communication Sector experienced a stable Risk index from 2022 to 2023 at 72. There was a rise in the risk exposure which can be attributed to several reasons. Firstly, there was a significant increase in natural hazard risk, highlighting the sector's vulnerability to environmental disruptions. Additionally, the decrease in the technology risk index score suggests potential challenges or adjustments in technological capabilities and cybersecurity measures within the sector. Crime and security risk also saw an increase, reflecting growing concerns around data security and regulatory compliance.

The stable market and economic risk index score indicate a consistent economic environment, while the stable risk index suggests potential shifts in long-term planning strategies within the sector. It underscores the evolving landscape of risks faced by the industry, necessitating proactive risk management measures to mitigate potential vulnerabilities and ensure resilience.

Telecom and Communication Sector Risk Exposure 2023 Vs 2022

In 2022-23, the Telecom and Communications Sector experienced an increase in its Risk Exposure from 60 to 64, indicating more risk factors impacting the industry. This rise can be attributed to various factors. An uncertain economic environment along with changes in currency valuation has led to an increase in the market and economic risks to the industry. The technology dimension also saw an increased risk exposure score posing a threat to the Telecom Industry. Crime and security risk exposure increased, signalling heightened concerns around cybersecurity and regulatory compliance issues. Better hazard preparedness has also impacted the overall score.

Lastly, the strategic risk exposure score remained relatively stable, reflecting consistent strategic planning efforts within the sector. The rise in Risk Exposure for the Telecom and Communications Sector highlights the intricate and changing risk environment the industry confronts, emphasizing the need for proactive risk management approaches to effectively navigate these challenges.

Telecom and Communication Sector Risk Management 2023 Vs 2022

The Telecom sector experienced a notable increase in Risk Management Score from 64 in 2022 to 69 in 2023, indicating a heightened focus on risk management strategies within the industry. This rise can be attributed to various factors. There was an improvement in market and economic risk management, reflecting a more stable economic environment post-COVID recovery and the potential impacts of geopolitical events like the Russia-Ukraine conflict.

The increase in operating and physical risk management can be attributed to evolving infrastructure challenges and safety concerns. Technology risk management also saw a significant increase due to advancements in digital technologies and the use of Artificial Intelligence and Blockchain Technology within the sector. Better disaster preparedness was also seen in the Telecom Sector. Overall, the increase in the Risk Management Score for the Telecom sector reflects a proactive approach to addressing emerging risks and ensuring resilience in the face of evolving challenges.

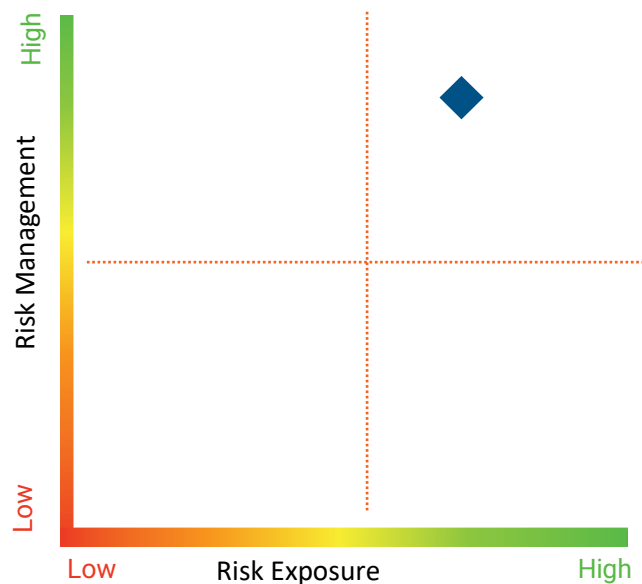
Key Highlights



Risk Dimension Analysis: Market and Economy

Risk Exposure Score: 65

Risk Management Score: 71



Inflation

- The cost-of-living crisis is causing households to re-evaluate whether they're getting value for money.
- Inflation will exacerbate the need for chips brought on by 5G upgrades and the severe supply chain strains resulting from a high reliance on equipment basics.
- Some regulators are demanding that telcos do more to offer "social tariffs" to improve affordability.

Taxation

- The Indian tax regime can undergo frequent changes, requiring telecom companies to continuously update their compliance procedures. Failure to do so can result in tax penalties and fines.

Regulatory Risks

- Regulatory priorities are shifting, with growing focus on network supply chains, the digital divide and support for vulnerable customers.
- Fragmented regulatory approaches pose particular challenges, with many countries enacting or amending data protection rules, while growing regulatory focus on AI may add to risks relating to fragmentation.
- Digital policies can also create opportunities in the future for telcos, such as through government support for infrastructure upgrades.
- To mitigate potential risks in the industry, businesses are required to keep a close eye on legislative developments and modify their business strategies accordingly.

Foreign Exchange Rates

- Disruptions in the global supply chain can lead to fluctuations in the prices of imported components, creating an additional layer of foreign exchange risk.
- A significant portion of telecom equipment, especially advanced technology for 5G deployment, is imported and priced in US dollars. A depreciation of the Indian Rupee (INR) against the USD can lead to Increased Equipment Costs & Reduced Profitability.

Competitive Risk

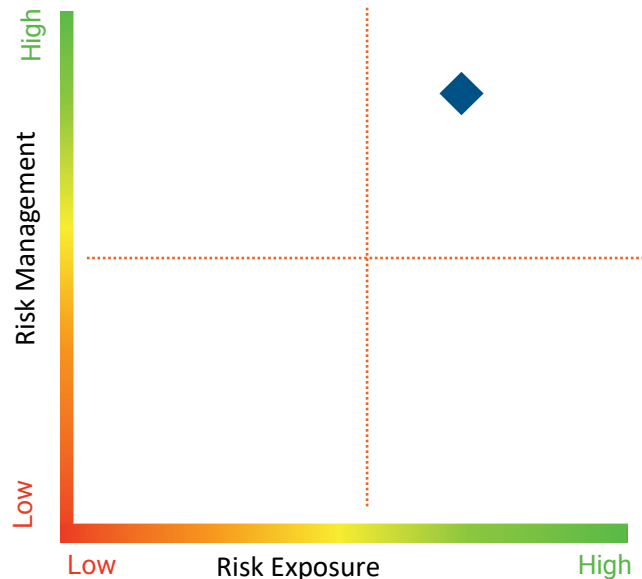
- New offerings by telcos also don't necessarily align with the needs and desires of enterprise customers.
- Plenty of operators are putting B2B growth opportunities at the forefront of their priorities, thanks to saturation in consumer markets and constrained average revenue per user. But because the revenues from the likes of IoT and cloud are yet to be on a larger scale, the benefits are yet to show themselves.
- There's a growing demand for private 5G networks and suppliers that offer ecosystem relationships to their business customers. All of these developments require telcos to escalate external collaboration. Yet only 11% of telcos view multiple partnerships as core to new business models.



Risk Dimension Analysis: Technology

Risk Exposure Score: 71

Risk Management Score: 71



Disruptive Technology

- The sector faces a challenge of balancing the ever-increasing need for sophisticated IT with the need to keep IT costs reasonable.
- Studies find that their ability to transform through new technologies is hampered by complexity in various forms. (Source: EY Tech Horizon Study)
- IoT has skyrocketed in terms of its application with connected devices, creating more entry points in the process. Not all these points are patched properly, and they leave accounts for users, clients and companies exposed.
- Many companies face significant challenges in maintaining their highly sophisticated and frequently custom-built programmes up to date and integrating them with new systems.

Data Compromise & Security Risks

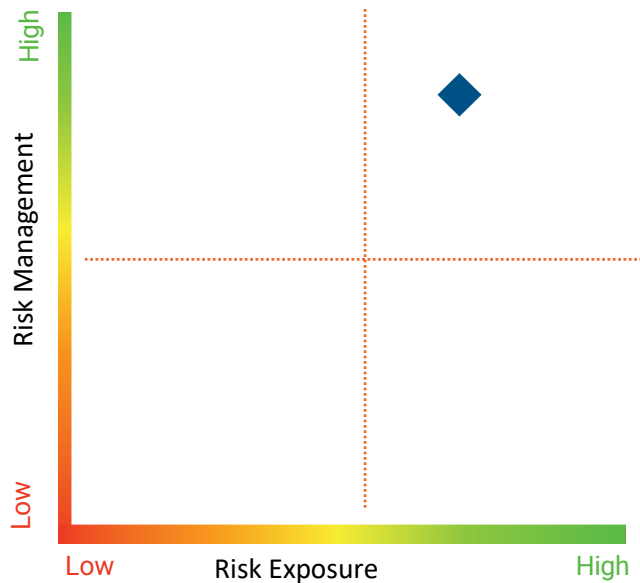
- Telcos are struggling to stay ahead of growing cyber threats: 46% of consumers believe that it is impossible to keep their data secure when online. At the same time, 39% of telecoms chief information security officers (CISOs) believe security aspects aren't adequately factored into strategic investments
- Over half of CISOs think the pandemic has enabled cybersecurity professionals to raise their profile. However, the security function often faces relatively low levels of trusted consultation with other parts of the business.



Risk Dimension Analysis: Operational and Physical

Risk Exposure Score: 62

Risk Management Score: 68



Critical Infrastructure Failure / Machine Breakdown

- The reliability challenge for operators is compounded by relentlessly rising data usage and continuing worries over the digital divide, with the pandemic having further polarized the digital haves and have-nots.
- The EY Global Decoding the Digital Home Study shows that 28% of households frequently experience an unreliable broadband connection.
- Even in areas where networks are available, households struggle to afford packages, meaning more must be done to convert infrastructure coverage into take-up of services.

- Due to The absence of requisite infrastructure in rural and semi-rural areas makes it difficult for the operators to set up initially

Business continuity/Sustainability

- Internal challenges persist, with most telco CEOs believing a clearer distinction between core and non-core infrastructure could help their divestiture plans and many believing they have missed opportunities to reimagine their core business when divesting.
- Customer needs are also evolving rapidly: 47% of large businesses do not think that vendor 5G and IoT use cases adequately address their sustainability needs. Operators must raise their game if they are to adapt to changing stakeholder expectations.

Commodity Price Risk

- The prices of raw materials like copper and silica used in fiber optic cables can fluctuate. A sudden increase in these prices can make network expansion or maintenance more expensive.

Workplace accident

- There is a significant amount of risk involved in working at telecom centers and doing field installations. Technicians working in the field, often working at great heights while handling equipment during installation and maintenance, are especially prone to risk.
- Since critical telecom site infrastructure requires constant physical security monitoring but are unmanned due to their location, telecom sites and towers are more vulnerable to intrusion.
- Telecom towers are frequently erected in remote and isolated areas due to coverage reasons. Because of their difficult and inaccessible locations, such establishments are difficult to guard physically. This makes the telecom site more vulnerable to break-ins and thefts.

Human resource

- With new technology cycles in both GenAI and edge computing on the horizon, digital talent is increasingly in demand. In addition, a shortage of network engineers presents a more immediate challenge to the industry.
- This trend is compounded by financial pressures, which are threatening the future talent pipeline.
- Telcos must take steps to strengthen their existing workforce with a deeper focus on learning, upskilling and reskilling. Engaging with employees in new ways is vital, not only to build new software-led capabilities but to create more successful connections with customers and stakeholders through renewed organizational purpose.
- With hybrid working now more common than ever and flexible environments encouraged, workforce culture is making a seismic shift - and the views of employees and their employers are moving further apart as a result of that. Staff turnover is on the up, and telcos are encouraged to listen to their workforce to retain talent before it moves to competitors or other industries entirely.

Financial Risk

- Indian telecom operators participate in auctions to acquire spectrum, the radio frequencies essential for mobile services. These auctions can be very expensive, leading to high levels of debt for some companies.
- The Indian telecom market is highly competitive, with multiple players offering aggressive pricing plans. This can lead to pressure on profit margins and difficulty in recouping spectrum acquisition costs.
- Companies need to invest in keeping pace with new technologies to remain competitive, creating a continuous financial strain

Breach of International law

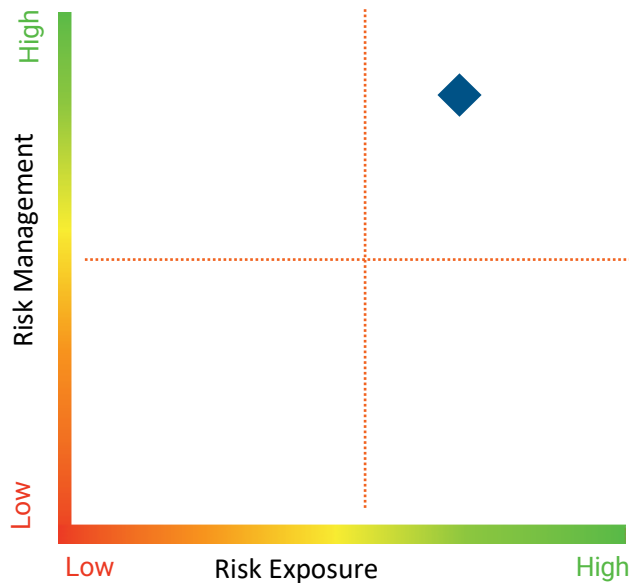
- The Telecom Regulatory Authority of India (Trai) has the power to regulate and carry on the proceedings against violators of laws.



Risk Dimension Analysis: Crime and Security

Risk Exposure Score: 62

Risk Management Score: 67



Cyber-crimes

- In a landscape of mass cyber disruption, cyberthreats are growing - and a key mission for telcos is to anticipate and de-escalate a possible threat before it actually poses a real one.
- DDoS or Denial of Service attacks along with advanced distributed reflection denial of service (DrDoS) is rampant these days. These are usually done using the standard network protocols along with IoT devices and Mobile devices that are compromised. These attacks are even more critical since they have a direct financial impact if there is an outage or disruption of business.
- Bad actors can take infiltrate systems remotely and take control of physical elements, thereby impacting infrastructure and manipulating systems as they wish to. Once they infiltrate the systems, they can then acquire important data and information on personal data, agreements between entities and at times even intellectual property.
- Phishing remains one of the top concerns where cyber criminals send malicious links through emails or messages.

Threat to Women security

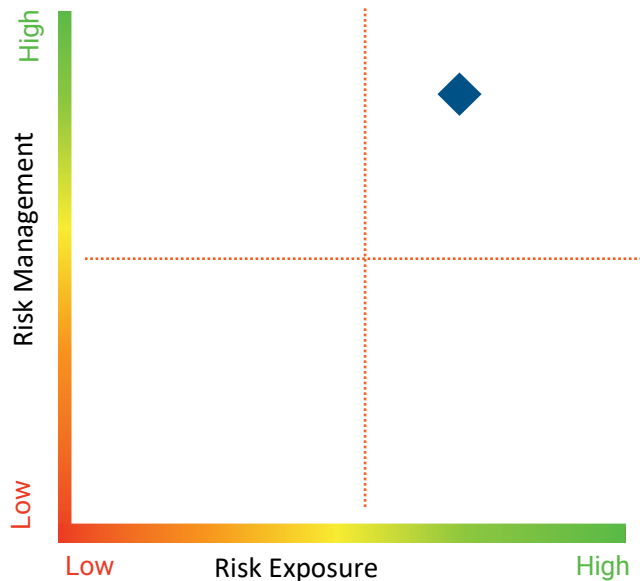
- The predominance of men in the telecom sector may contribute to a culture in which women encounter prejudice and feel less supported.
- The advancement of women's careers and general well-being are further harmed by instances of sexual harassment at work.



Risk Dimension Analysis: Natural Hazard and Event

Risk Exposure Score: 59

Risk Management Score: 68



Hazards & Climate:

- Location selection and planning for a telecom site is a strenuous task. The area's environmental and climatic conditions play a significant role in determining if the selected site is feasible for setting up a telecom tower. A meticulous Site Survey is essential before selecting a location, including assessing natural calamities and damaging nearby activities, like toxic chemical spills, etc.

- If the temperature gets too high, there's a possibility of thermal shutdowns and if the temperature gets too low, there are chances of soft failures and equipment breakdown. If not monitored and maintained, these issues are recurring and can become costly very quickly.
- The confined spaces in telecom sites are exposed to fire and gas explosion risk.
- One of the immediate impacts of any natural disaster is the collapse of communications infrastructures.

Natural Disasters & Pandemic and other global epidemic diseases

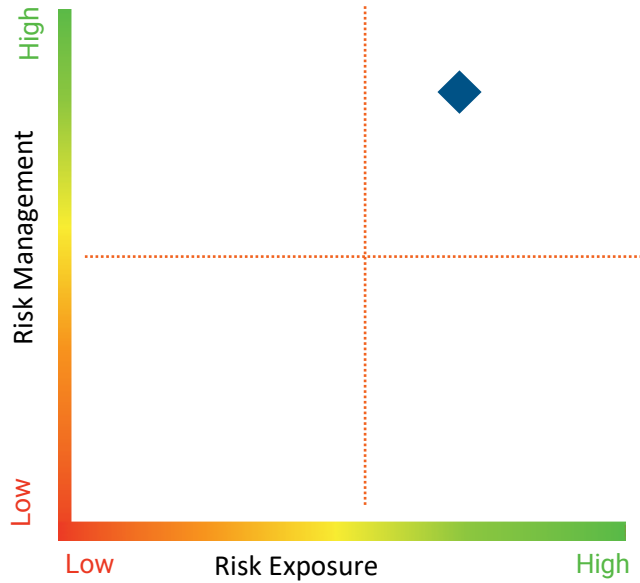
- During the Covid 19 pandemic, the sector was responsible for providing supportive services to all other sectors and kept the wheels of the economy moving.
- Natural disasters can disrupt the supply chain for equipment and materials needed for network maintenance and upgrades. This can delay repairs and hinder network expansion plans.
- During the pandemic, telecom technology, video conferencing, and remote working have rapidly become essential for business operations. Additionally, streaming services like Netflix have become the preferred source of entertainment, placing pressure on the telecom industry due to complaints about slow internet speed and other issues.
- Floods, earthquakes, hurricanes, and other natural disasters can damage physical infrastructure like cell towers, fiber optic cables, and data centers.
- COVID-19 exposed telecom industry's supply chain vulnerabilities as many organizations were dependent on China as a global manufacturing hub for the telecom industry and closure of factories amidst Corona fears resulted in the disruption of global supply chains.



Risk Dimension Analysis: Strategic Risk

Risk Exposure Score: 65

Risk Management Score: 69



Resource scarcity/ Over utilisation

- The radio frequency spectrum is a finite resource essential for wireless communication. As demand for mobile data increases, the available spectrum becomes more crowded, potentially leading to network congestion and slower data speeds.
- Telecom networks require a significant amount of energy to power base stations and data centers. Rising energy costs or potential energy shortages can increase operational expenses for telecom companies.

ICICI LOMBARD: Key Solution Offerings



Property

Evaluation of various risks to understand areas for improvement, such as fire preparedness, electrical safety, safety & emergency preparedness, maintenance and house-keeping, etc. By evaluating risks, we can identify potential hazards and advise on mitigating risks.

- **Property Loss Prevention:** We believe users should carry out detail risk visit followed by benchmarking of the industry good practices (Industry Risk Profiling). For instance, industries such as chemicals & petrochemicals impose a major challenge in manufacturing due to inherent risk. We recommend solutions for “Low Focus - High Loss Areas. This can help in minimizing severity losses. All the risk recommendations are grouped into four different segments based on cost-impact matrix and the priority is decided accordingly. Key decision makers at user’s end can ensure to get recommendations implemented.
- **Comprehensive Risk Assessment (CRA):** A Comprehensive Risk Assessment is a systematic approach to electrical safety specially designed for industries to evaluate potential hazards and recommend improvements, coupled with savings. It is an important tool for identifying risks, severity of hazards and avoid incidents arising out of electrical faults.
- **Electrical Risk Assessment (ERA):** An Electrical Risk Assessment is a basic solutions focused towards electrical safety designed to evaluate potential hazards and recommend improvements. Majority of fires in India are caused due to electrical installations. Ensuring safety of electrical installations of industrial unit or organization is critical to reduce risk and ensure safety compliance with Safety Standards and Regulation. ERA is an important tool which have 6 inbuilt activities such as Electrical Audit & Thermography built in with other such solutions.
- **Fire Hydrant IoT:** Fire hydrant monitoring is an automated solution that monitors key parameters such as Hydrant and Sprinkler line pressure, Main and Jockey pump on-off status. These can be interpreted to provide intelligence on unauthorized usage of water and leakage. This information pertaining to breach of above mentioned parameters is notified through dashboard & email alerts. Monitoring of such system is essential as these fire fighting systems are lifeline during any emergency.
- **Temperature & Humidity IoT:** Provides end to end plug & play ambient temperature and humidity monitoring Solution to manage temperature and humidity-controlled environment more efficiently. It generates - Automated reports (historical trends for different locations etc.). Intelligent Alerts - SMS & emails is sent to the concerned (one or multiple) stakeholders in case any anomaly.
- **Electrical IoT:** Electrical IoT is a patented solution (ILGIC Patented Solution) to avoid any instances of short circuiting due to abnormal voltage & current conditions. These are mainly built for application in warehouses. This solution has been created as these locations are having huge stocks with lesser manpower during emergencies mainly during non-business hours. The device automatically cuts off power in case of abnormality & restarts back when situation is normal.

- **Ultrasound technology for Gas Leak Detection:** Use of ultrasound technology for leak detection in process lines. The methodology recommends a non-destructive way of avoiding losses with no downtime. The main objective is to identify the leakages in all pressurized systems including pipelines by using ultrasound technology and tag them for rectification. It also includes listing leaks with individual CFM losses and cost savings possible. The outcome of the exercise will help the plant maintenance team to rectify the leaks and reduce the energy cost. This will also improve the process parameters and production quality.
- **Fire Mitigation Solutions:** Solutions have been designed based on their specific needs, keeping in mind the level of awareness and complexity of the location. These best in class solutions which are installed at correct places by risk assessors.
- **Renewable Solutions:** In line with our philosophy for recommending business solutions, we recommend advise on efficiency measurements for wind and solar power generating assets. Drones are used to provide high accuracy and the quick reach which is not possible through any traditional methodology. User get to know about the low performing module and ways to improve the same within the entire solar plant with latlong identification. We recommend advanced drone-based technology for inspection of wind turbines and solar PV modules.



Marine

In the dynamic realm of marine insurance, cargo faces a myriad of risks, from unpredictable weather conditions to unforeseen accidents, safeguarding against potential challenges at sea is paramount.

- **MLCE (Marine loss control engineering):** Frequent occurring losses due to Peril such as accident, wet damage, theft, non-delivery, pilferage, hijack of consignments, mishandling shall be examined with ground inspections, root cause analysis with MIS, claim assessment reports.
- **Technical engagements:** Uncertainty of the risk associated with the transit can be concluded with marine experts. Risk assessment of cargo from packing, handling, lifting, securing, transit and final delivery methodology shall be discussed with the logistics team. Vessel selection, stowage and securing methods can be jointly discussed with the User's logistics team for a safe transit, dispatch and delivery coverage after assessing the risk on desktop with a virtual or F2F engagement and / or a ground visit.
- **Transit Telematics:** With the government's constant agenda of upgrading to digitalized operations by introducing ULIP and NITI Aayog mode of operations, not having a visibility of transit will hamper your logistics operations. IOT and SAAS based products incorporating the design of a cost efficiency and loss mitigation system can help enhance delivery with safe operation. Additionally, a 24*7 risk control station and detailed post hijack recovery case studies is recommended to effectively monitor and mitigate theft / pilferage prone dispatches and ensure a safe transit delivery. Be it a temperature-controlled cargo, expensive cargo in transit or liquid bulk cargo in lorry tankers, it is essential to mitigate the risk and losses that might occur due to accidents caused by fatigue, unexplained conditions, or theft.



Liability

The growing adoption of technology in organizations has not only led to crucial data being stored and processed on digital platforms but also facilitated the automation of operations, thereby enhancing business efficiency. However, this shift also amplifies cyber risk, exposing sensitive information to potential threats and rendering organizations vulnerable to financial losses, reputational damage, and legal liabilities. As organizations delve deeper into the digital realm, fortifying cybersecurity measures becomes imperative to safeguard operational integrity and protect critical data from unauthorized access or breaches.

- **Phishing Simulation:** Experience cutting-edge phishing simulation tests to fortify your organization's defenses against cyber threats. You can enable phishing attack simulations to educate your employees on identifying and handling potential risks. Through engaging and interactive scenarios, you can raise awareness and equip your team with the necessary skills to detect and thwart phishing attempts.
- **Awareness Campaigns:** With Cyber Awareness Campaigns, you can go beyond just educating organizations about cybersecurity. The campaigns are meticulously designed to empower your team with essential best practices, insights into global incident trends and a comprehensive understanding of potential risks. Interactive designs help you captivate and engage your employees, fostering a cyber-aware culture within your organization. Customized campaigns can perfectly align with your unique needs and requirements and stay informed and vigilant.
- **Incident Response and Readiness:** A bespoke service that fortifies organizations with robust processes and clear communication channels for proficient cyber-incident management. This recommendation not only trims down the incident response time but also facilitates prompt, accurate action within the crucial initial hours. By meticulously assessing your organization's incident response policies and sculpting response systems in alignment with global industry benchmarks, this ensures you are thoroughly prepared to tackle the evolving digital threat landscape.
- **CXO's Session:** CXO's Session service provides immersive training sessions, personalized coaching & interactive discussions to empower your CXOs with cybersecurity knowledge that aligns with your business objectives. The subject matter experts recommend strategic guidance and in-depth insights into the ever-evolving threat landscape, translating technical jargon into practical language. Regular cybersecurity forums facilitate peer-to-peer learning and benchmarking against industry standards. CXO- focused approach ensures a cyber-aware leadership team that drives your organization's success securely into the future.
- **Weekly Threat Intelligence Bulletin:** Stay ahead of cyber threats with the Weekly Threat Intelligence Bulletin. We meticulously curate this comprehensive bulletin, providing timely insights on emerging threats, vulnerabilities, and attack trends. Delivered directly to your inbox, it recommends proactive advantage by promptly identifying potential risks. With continuous updates and ongoing support, you can confidently adapt your Defence strategies to combat the most sophisticated threats. It enables you to make informed decisions and protect your organization from emerging threats with Weekly Threat Intelligence Bulletin.

- **Email Security:** Safeguard your organization's communication channels with the Email Security solutions. We recommend robust measures to protect against phishing, malware & other email-borne threats. The advanced email filtering and authentication technologies prevent malicious emails from reaching your users inbox. Implementing encryption protocols to ensure the confidentiality of sensitive data in transit is a good idea. With real-time monitoring and threat intelligence, email security measures provide proactive Defence, detecting and blocking suspicious activities promptly. You can protect your organization's reputation and sensitive information with comprehensive Email Security measures, ensuring a secure and reliable email environment.
- **Agent-less Patching:** Agent-less patching platform for companies and MSMEs who want a rapid solution to distribute critical security updates and vulnerability fixes without causing system downtime. The patching platform not only assists with patch deployment, but it also enables your system administrator in understanding the patches, Adjustments & impact of the patches on the system. Before applying the patch, the software generates a warning if the system requires downtime or a reboot. You can experience a hassle-free patching process with the platform recommending enhanced security for your organization.
- **EDR/MDR Services:** Elevate your organization's cybersecurity capabilities with the Endpoint Detection and Response (EDR) and Managed Detection and Response (MDR) services. These advanced solutions provide continuous monitoring, rapid threat detection & effective incident response, safeguarding your digital assets in real-time. With EDR, proactively detect and respond to threats at the endpoint level, while MDR service offers 24/7 monitoring and expert support. You can strengthen defenses against the most sophisticated cyber-attacks with EDR/MDR services, ensuring a resilient and secure digital environment.
- **All-in-one Operating System:** All-in-One Operating System is a true game-changing platform that provides a fortified desktop environment to foster secure collaboration and centrally managed cybersecurity resilience. Inbuilt endpoint security serves as a vigilant guard, blocking potential dangers. Effortless IT management provides with a user-friendly interface, leading to significant cost savings in IT infrastructure. It provides in-built end-point security, automated updates and patches along with extensive device reports. Organizations can unlock a secure and prosperous future by embracing the All-in-One Operating System in their IT infrastructure.
- **Cyber Risk Management & Compliance Dashboard:** Gain a clear understanding of your organization's cyber risk exposure with Cyber Risk Management & Compliance Dashboard. This powerful tool assesses your risk posture, quantifies potential financial Impact & evaluates compliance with industry standards and regulations. Armed with this information you can make informed decisions to prioritize cybersecurity investments and ensure compliance with relevant laws and regulations. The intuitive dashboard provides a comprehensive view of your cybersecurity performance enabling data-driven decision-making. This solution enables organizations to stay ahead of threats and ensure a resilient cybersecurity posture.
- **Security Score Card:** Track your organization's cybersecurity performance with a dynamic Security Score Card solution. This comprehensive rating provides a clear overview of your security posture, highlighting areas that require attention and improvement. It empowers data-driven decisions, allowing you to focus on strengthening key areas. Identify potential risks and compliance gaps with industry standards and regulations. With actionable insights, you can prioritize cybersecurity investments effectively, ensuring a robust and resilient Defence against cyber threats. This Security Score Card solution can be your strategic tool to proactively elevate your cybersecurity posture.

- **VAPT:** Enhance your organization's cybersecurity defenses with the Vulnerability Assessment and Penetration Testing (VAPT) service. Skilled professionals conduct rigorous assessments, simulating real-world attacks to identify potential vulnerabilities in your digital infrastructure. With detailed insights, you can fortify your defenses and proactively address weak points before malicious actors exploit them. This service goes beyond identifying vulnerabilities, you also get actionable recommendations to mitigate risks effectively. Organizations can be one step ahead of cyber threats, ensuring the security and resilience of your critical assets with the comprehensive VAPT service.

Engineering

In engineering risk management, it's vital to adopt a holistic approach that extends beyond immediate concerns to proactively tackle potential risks and uncertainties. Drawing upon considerable expertise in claims handling and risk evaluation, a robust and customized protection strategy can be ensured. Construction endeavors face a myriad of risks such as floods, cyclones, impact damage, fires, theft, and collapse. However, the adverse effects of these risks can be mitigated through the implementation of extensive loss prevention measures specifically tailored for engineering projects.

- **Engineering Loss Prevention Exercise (ELP):** To effectively manage losses in Engineering Risk, fostering a culture of loss prevention is crucial. It's widely acknowledged that each construction project is distinct, presenting specific challenges related to geography, geology, occupancy, and construction methodology, which in turn result in unique associated risks. To cater this challenge a specific risk management framework which deals about the unique requirement of each project could be created for the loss minimization with reference to some parameters of distinctive research and industries best practices.
- **Drone Solutions:** In recent years, the construction industry has undergone significant changes due to the introduction of drone-based construction solutions. These cutting-edge technologies are transforming the planning, design, and execution of construction projects. A major benefit of drone technology in construction is its capacity to conduct aerial surveys, providing extensive coverage and detail. Drones, equipped with advanced cameras and sensors, can rapidly capture precise images and data, offering project managers valuable insights into site conditions. This data can facilitate project planning, cost estimation and design optimization by providing a comprehensive understanding of the project's parameters.
- **CPM - Fleet & Fuel Management:** An advanced GPS-equipped sensor is available to precisely measure direct fuel consumption, evaluate engine efficiency, and detect potential tampering of diesel engines in both mobile vehicles and stationary machinery. This solution enables real-time alerts for service reminders and critical health issues, facilitating prompt resolutions and enhanced utilization. Additionally, it offers valuable insights into machinery and equipment performance through comprehensive analyses, resulting in optimized inventory usage and increased efficiency.



Health

We highly recommend exploring proactive and preventive healthcare solutions, which can make a significant difference in maintaining good health. Recognizing that majority of in-patient department (IPD) admissions could be prevented with timely interventions and regular healthcare, it is important to focus on health, not just during illness.

- **Pioneering Digital Platform:** We recommend exploring digital health innovations offered by industry leaders, which provide cutting edge health solutions through the IL TakeCare (ILTC) app. Our platform has transformed the way health services are delivered by introducing a fully digital and cashless Outpatient Department (OPD) and Wellness Program.
- **Health Advisory Services:** We recommend a suite of health advisory services on the IL TakeCare app. Users can access health risk assessments, diet and exercise trackers, health parameter tracking and trends and sleep, meditation & hydration reminders. In addition, the platform recommends a feature to upload health records up to 1GB, and provides informative health blogs.
- **IL TakeCare App:** IL TakeCare app is a One-Stop-Solution for users with insurance needs. This robust user engagement is a testament to the high-value features that the app provides. Unique to the app is the innovative self-health assessment feature, which includes Face scan technology that can measure blood pressure, heart rate, cardiac variance, and SpO2 levels. The platform provides seamless teleconsultations with medical practitioners and specialists, and even recommends access to mental wellness experts to the insured. The facility for cashless OPD services and the efficient claim settlement process further enhance user experience. By encapsulating a wide range of state-of-the-art health services and solutions, the IL TakeCare platform revolutionizes corporate health management and serves as a comprehensive digital health solution.



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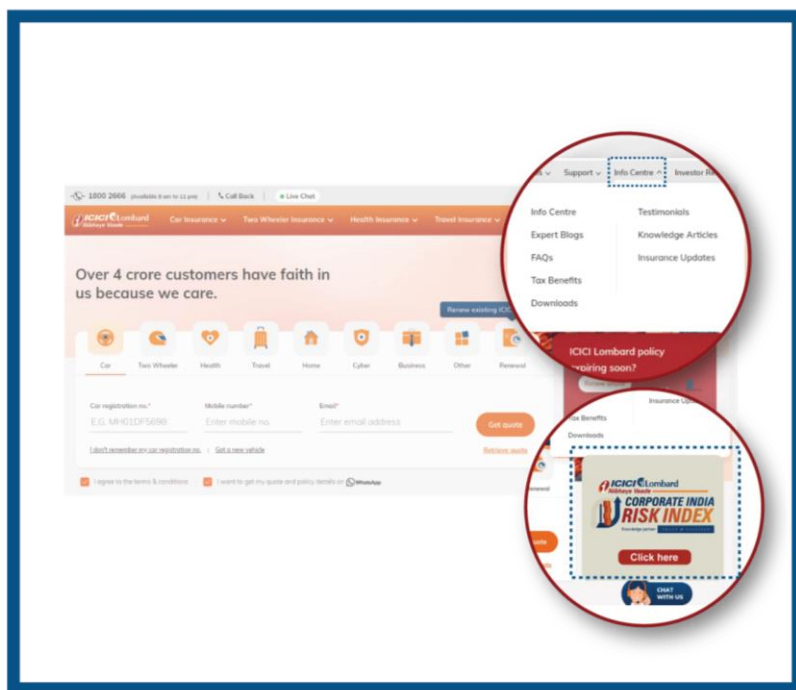
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