

Enterprise Risk Management Strategy: SLA, Analytics, and Vendor Lock-in

Bibhu Dash

Abstract— Customer security, employee security, and operational security are all very necessary for any firm to establish healthy work traditions in this digital age and competitive business environment. The organization should centralize and standardize its risk data or process. Connect controls, mitigating actions, and hazards throughout the audit-board platform are very critical. As a result, enterprise risk management in business refers to the strategies and procedures employed by businesses to control risks and take advantage of opportunities associated with the accomplishment of their goals. Modern ERM tools and techniques offer a strong framework for risk management, which typically entails identifying specific occurrences or circumstances pertinent to the organization's goals (threats and opportunities), evaluating their likelihood and potential impact, choosing a response strategy, and monitoring procedures. This article talks about procedures and the importance of ERM and how it affects SLA, process analytics, and vendor management.

Index Terms—ERM, SLA, internal control, strategic planning, ORM, KRI, Vendor lock-in.

I. INTRODUCTION

Enterprise risk management (ERM) is crucial for several reasons, especially in the complicated and dynamic corporate environment of today. ERM is a tactical strategy that aids businesses in recognizing, evaluating, managing, and keeping an eye on risks that may hinder their capacity to accomplish their goals [1]. The importance of ERM is highlighted below.

a) Safeguard shareholder value: ERM identifies and addresses risks that could jeopardize the organization's financial stability and reputation in order to safeguard and increase shareholder value.

b) Better Decision-Making: ERM offers a structured framework for assessing risks, enabling organizations to decide whether to accept, mitigate, or avoid risks. Better decisions are made as a result at all organizational levels.

c) Compliance and Regulatory Requirements: Risk management and reporting are subject to stringent regulatory requirements in many businesses. ERM assists businesses in adhering to these rules, lowering the possibility of penalties and other legal repercussions [2].

d) Efficient Resource Allocation: ERM aids business in more effective resource allocation by ranking risks

according to likelihood and potential impact. This makes sure that the most serious risks get the greatest attention.

e) Stakeholder Confidence: Stakeholder confidence can be increased through efficient risk management. Businesses that take a proactive approach to risk management are more likely to have the trust of their clients, investors, and business partners.

f) Competitive Advantage: Companies with strong risk management practices may have an advantage over rivals. They are better equipped to take advantage of opportunities, deal with unknowns, and adjust to shifting market conditions.

g) Promotes Innovation: ERM can promote innovation by encouraging staff members to recognize and control risks connected to fresh concepts and initiatives. It enables businesses to take calculated chances in search of innovation.

h) Long-Term Sustainability: ERM helps businesses identify and manage risks that may endanger their ability to remain viable in the long run. This is crucial for companies to focus on long-term success and enhanced resilience.

II. SERVICE LEVEL AGREEMENT

Service level agreements (SLA) are critical for managing day-to-day operations and are an integral part of IT vendor agreements [3]. These agreements are the clear line of demarcation, regular communication, and contract enforcement between the client and the provider. These are clearly stating what a client is looking for as part of a support or line of service and what a vendor is going to provide as a support provider. These SLAs are defined for different activities and vary whether the client has a very business-critical operation (production) or non-prod regular maintenance activities or development SLA. SLA does not only cover the descriptions of the services, but it is expected to cover the metrics required to measure and manage each party's responsibilities, and a solid protocol for adding and removing metrics going forward [1]. See below to understand 3 key items in an SLA.

A. Clear Line of demarcation for each service

When any business is going into an SLA agreement, lines of demarcation should be clearly defined for the client and provider. The main point is to understand the problem statement take ownership of this task and communicate to the client within a specified time limit. The communication needs to be actively circulated by keeping all in the loop.

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A. Contract enforcement for making applications available.

It is very important to have a written contract to define the reward and penalties clearly in case of system failures. The rewards and penalties are in monetary form and need to be clearly defined for internal and external vendors.

C. Indemnification clause

The SLA should have an indemnification clause in which the service provider agrees to indemnify for any breaches of the warranties. Any miss in the indemnification clause can force the third-party vendor to be liable for the monetary equivalent loss of the customer. It varies with technical quality, security, and business results to measure the easily collected measures.

III. ROLE OF SLA IN ERM STRATEGY

SLAs are formal agreements that define the terms and expectations for the delivery of services between the service provider or vendor and its stakeholders [4]. SLAs are very important for below reasons:

A. Clear Expectations and Accountability

SLAs clearly define what is expected of the service provider and the client in terms of service performance, quality, and availability. This transparency reduces the likelihood of misunderstandings and conflicts. SLAs make service providers accountable. They create quantifiable indicators and benchmarks that enable clients to hold service providers accountable for upholding specified service levels.

B. Risk Mitigation

SLAs can play a crucial role in a company's risk management plan, especially when working with outside service providers. They aid in recognizing and controlling hazards pertaining to the caliber and effectiveness of services [4].

C. Performance Monitoring

SLAs offer a framework for assessing how well service providers are performing. Organizations can detect and take proactive measures to resolve possible concerns by routinely evaluating SLA compliance.

D. Continuous Improve

SLAs can motivate efforts for continual improvement by proving goals and performance standards. Service providers can boost efficiency and customer happiness by regularly meeting or exceeding SLA standards.

IV. ANALYTICS

Predictive analytics is a big breakthrough in this data-driven world to make business run smoothly. Its features can be used in many ways by executives and managers to help track the progress of ongoing work and future opportunities. With the help of open-source tools and

technologies, it is very effective to build, manage, and monitor the status, workload, availability, and progress of each piece of work and employee or vendor performance. As explained by Kent(2005), as the business dynamics are changing with market acceleration, more and more people are seeking opportunities to streamline business decisions with the help of analytics and AI. These elevated features give the opportunity for setting up and monitoring KPIs, measuring and managing the health of company resources, and focusing more on the strategic business units. It gives a strong ability to calculate, track, and react to KPIs through the availability of data, and infrastructure by the decisionmakers [3]. The below functionalities have influenced the use of predictive analytics in the last decades:

1. Managers empower rather than escalate.

Using the new age technologies/analytics, the managers do not have to log in and approve before proceeding further. The auto approval system makes both the employee and his manager sync with robot chat for approving and making final decisions. It saves time, and money and makes the process faster than before.

2. On-demand reports to executives

Unlike in previous times, now managers are instantly getting access to reports, logs, and charts to verify the ongoing happenings and take precautionary measures for failures. It gives them more than a report. It helps them monitor key business decisions throughout the negotiation and planning process. It is the best tool for managers to gain advantage for time-to-market [5].

3. Improving decision-making by know-how

Whether it is fraud analysis, managing risk or creating new product lines, vendor management, adding new customers in every aspect of business analytics is helping managers to make proper decisions. Using a marketing decision management system, the new analytics technology helps companies target marketing campaigns and improve customer response [6]. There is a saying that your business is in your systems. So, how well we manage or utilize our system, accordingly the company benefits and grows. Decision management system with automation and data analytics is helping companies adapt to constantly changing circumstances.

V. ROLE OF ANALYTICS IN ERM STRATEGY

By giving firms data-driven insights and tools to better understand, manage, and mitigate risks, analytics plays a critical role in boosting Enterprise Risk Management (ERM) strategy [7]. Here are a few methods for incorporating analytics into an ERM strategy:

A. Risk prediction and assessment

Analytics can help organizations mine vast amounts of data both historical and operational to identify threats, trends, and patterns. Predictive analytics can help identify potential risks and their likelihood of occurrence. ERM can strategize to allocate resources to handle that.

B. Risk Prioritization and scenario analysis

Using analytics, risks can be rated numerically according to their likelihood and potential impact. This aids in categorizing hazards and concentrating attention on the most pressing ones. Organizations can utilize analytics to examine how various risk scenarios might impact their operations through scenario analysis. This enables better decision-making and risk-reduction tactics [2].

C. Risk Monitoring

Analytics help real-time monitoring of processes and response to threats. Key Risk Indicators (KRIs), which are certain indicators that offer early warning signs of potential problems, can be developed using analytics. Organizations can identify problems before they become more serious by monitoring.

D. Risk Modelling and ORM

Monte Carlo simulations to model the effect of different risks on financial performance can be made easier with the help of analytics. This aids businesses in understanding the variety of possible outcomes and planning appropriately. Analytics are also useful for stress testing [7]. Analytics can spot odd trends or anomalies in financial transactions, which can be used to spot fraud. Analytics can be used by businesses to identify supply chain weaknesses and create mitigation plans for disruptions [6].

E. Compliance and Regulatory reporting and scorecard

Organizations can decrease the risk of non-compliance fines by using analytics tools to track and report on compliance with industry-specific rules. To ensure transparency and adherence to internal rules, analytics can produce audit trails and records. Analytics can examine user activity, system records, and network traffic to identify and address cybersecurity issues in real-time [8].

F. Performance Monitoring and Risk Communication

Analytics can be used to perform post-event analysis to determine what went wrong and how to avoid such events in the future after a risk event occurs. Analytics may assist in the development of engaging and educational data visualizations that make complex risk information more understandable and actionable for stakeholders. Analytics dashboards can be used by businesses to give crucial risk information to decision-makers in real time.

G. Cybersecurity or online threat management

Analytics can examine user activity, system records, and network traffic to identify and address cybersecurity issues in real-time. Analytics can be used by businesses to rank the importance of patching and mitigation activities based on the susceptibility of their IT systems.

VI. VENDOR LOCK-IN

Vendor lock-in makes a customer dependent on a vendor for products and services without switching to other vendors due to substantial switching costs or heavy dependencies [9]. It sometimes brings confusion and anti-trust between the parties. Below are the steps to mitigate vendor lock-ins:

- a) Negotiate well for both the entry and exit upfront

during the negotiation phase to avoid penalties.

- b) Keep backup vendors ready, multi-vendor model and focus on auto-renewals.
- c) As Opera-Martins, Sahandi and Tian (2017) outline, vendor lock-in issues are associated with cloud providers and try to keep on-premises options open to overcome these issues with ownership of data.

This, as a viewpoint, is the most important reason to continue using the continuing setup's backup. To lower project risk, organizations must put strategies and supporting structures for negotiating SLAs into place and steer clear of vendor lock-ins. Minimize the impact on the business, requires adequate pre-planning and due diligence so that the right vendor can be brought on board with the most acceptable risks [9]. Vendor lock-ins are a threat to independent organizational ERM strategy and it's an open disadvantage.

VII. PROS AND CONS OF VENDOR LOCK-IN

Vendor lock-in describes an episode in which a consumer becomes so reliant on a specific provider of goods or services that it becomes challenging or expensive for them to switch providers. This dependence may develop for several reasons, such as contractual, technological, economic, or strategic considerations, goodwill in the market, executive recommendations, etc. [10]. Depending on the situation and the nature of the relationship with the vendor, vendor lock-in can have both benefits and drawbacks. Here are some important factors to think about as detailed in Table 1 (See Appendix).

VIII. ERM INCLUDED STRATEGIES FOR VENDOR LOCK-IN

ERM principles and strategies must include vendor management stratagems as part of its long-term operational goal. Many organizations are highly dependent on vendor resources for IT and non-IT services for continuity plans, so vendor lock-in strategies need to be called out explicitly as part of the ERM rule book.

A. Evaluate Alternatives and negotiate favorable terms.

Always keep an eye out for new providers or technologies that could be able to satisfy your needs. Keep a backup plan for switching, just in case. Negotiate clauses in vendor contracts that give you flexibility and safeguard your interests, such as guarantees and departure clauses.

B. Adhere to industry standards.

Prioritize companies and technology that follow industry standards to provide simpler system integration and lower lock-in risks.

C. Stick to open-source and Hybrid solutions.

Think more about open-source systems and software, which frequently offer greater freedom and less vendor dependence. Use a hybrid approach that blends on-premises and cloud technologies for additional flexibility

and control.

D. Include an Exit plan.

If necessary, create a well-thought-out exit strategy that details the actions and expenses involved in moving away from a vendor.

IX. ERM ENTERPRISE STRATEGY

ERM is very crucial for modern organizations and Enterprise risk management is a comprehensive strategy for identifying, evaluating, controlling, and keeping tabs on hazards across a whole organization [11]. Typical crucial steps in an ERM approach include the ones listed below (see Fig 1).



Figure 1. ERM Strategy Cycle [13]

- 1) *Risk Identification*: Recognizing potential hazards that might affect the goals of the organization. This covers a variety of hazards, such as monetary risks, operational risks, strategic risks, and compliance risks.
- 2) *Risk Assessment*: Figuring out the probability and potential consequences of identified risks. This stage aids in prioritizing which hazards demand urgent care and resources [12].
- 3) *Risk Mitigation*: Creating and implementing plans to lessen the effects of hazards with high priority. This could entail risk acceptance, risk avoidance, risk reduction, or risk transfer [13, 14].
- 4) *Monitoring and Reporting*: Monitoring the state of risks and the success of risk mitigation strategies constantly. To keep senior management and stakeholders informed, regular reporting is necessary [15].

5) *Integration with updated Strategy*: ERM strategy is dynamic and changes with time. Coordinating risk management with the strategic goals of the organization. To make sure that risks and opportunities are considered when making decisions, ERM should be an essential component of strategic planning [11, 12].

X. CONCLUSION

In conclusion, ERM procedure is critical because it enables improved decision-making in a dynamic and uncertain business environment, protects the value and reputation of businesses, and assists them in proactively identifying and addressing risks. It is a vital component of strategic management and good corporate governance. Organizations sometimes ignore but analytics and vendor lock-ins are essential components for an effective and long-term ERM strategy in a global business model. Also, analytics integration into ERM improves an organization's capacity for data-driven decision-making, proactive risk management, and general risk resilience. To properly use analytics for ERM, it's crucial to have the appropriate data architecture, knowledgeable staff, and analytics tools in place. Implementing a robust ERM framework has become critical as businesses battle to remain competitive and protect their valuable assets. ERM provides a framework for risk management and ensuring operational effectiveness while increasing compliance with regulations. Furthermore, it addresses several challenges such as business culture, board expertise, risk recognition, and timeframes by tactics such as nurturing delivering board education, transparency defining timescales, prioritizing critical risks, and increasing worker participation with ERM. A plan, performance evaluation, and alignment of communication with business are the five important pillars of effective ERM.

The benefits of simplicity and cost savings that come with vendor lock-in can be counterbalanced by concerns associated with flexibility and dependence. To achieve the correct balance and minimize the possible drawbacks of vendor lock-in, careful planning, evaluation, and strategic decision-making are necessary. Modern ERM strategies are independent of domains and are for eradicating hazard risks, financial risks, operational risks, strategic risks, and data privacy.

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APPENDIX

Table 1. Pros and Cons of Vendor Lock-In

Vendor Lock-in			
Pros		Cons	
1. Streamlined Integration	Vendor lock-in can simplify integration and compatibility as the vendor uses single code repo and products or services.	Less Flexible	Vendor lock-in can restrict an organization's capacity to respond to changing customer needs, capitalize on new technology, or partner with suppliers that might provide superior solutions.
2. Cost Saving	Vendors offer discounts and maintenance support if contracted for long-term and bundled services.	High switch cost	If you continue for a long time with a vendor, with time it will cost you more to switch to a new vendor with system access knowledge transfer, etc.
3. SME Support	Vendors some scenarios provide domain specific Subject Matter Expertise (SME support) as they are pioneers in some products or services with experience.	High dependency	Limited vendors mean the company has high dependencies on those for day-to-day delivery and support. It is a bottleneck in the flexibility and transparency of the organization.
4. Reliability and consistency	Relying on a single vendor may result in a more dependable and consistent experience because the vendor has created their goods or services to integrate easily.	Lack of Innovation after a point	Overreliance on a single vendor may prevent innovation since the seller will be less motivated to do so if the client has few other options.
5. Easy work environment	In many cases, it is very easy to work with single vendors as they already adjusted and understand clients' work ethics, culture, and business strategy.	Limited skills	Employees might become experts in a specific vendor's technology, which would limit their ability to adapt to different solutions. It will create resistance to change.

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