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Review Article

Constructing a Risk Management Framework to Protect the Organization

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ABSTRACT

Risk management is a critical activity for every organisation. It is important to consider risk in all operations and balancing risk with reward is an essential component of strategy for most companies, in the context of their environment and the current volatile conditions. This paper discusses the formulation of a risk management framework in order to address this important area, in a comprehensive, structured, planned method. A process for the construction of such a framework is proposed, based on practice. The requirement to scan the organisation's horizon, discerning the 'Risk Universe', possibly using external consultants, is noted. A map of risk coverage should be formulated to ensure adequate protection and remove excessive risk provision. Risk champions can be recruited to disseminate good practice, creating a culture of risk awareness. The organisation's appetite for risk must be ascertained and a positive contribution made, in respect of environmental issues. A review of the literature was performed and the key themes extracted. A semi-structured interview with a director of an international company was enacted. The main themes were selected, via an inductive approach. The research results were analysed and then utilised to form a proposed procedure for constructing a risk management framework.

Keyword: risk management framework, risk universe, risk appetite, risk map, horizon scanning, sustainability

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Introduction

Every organisation needs to consider risk management, especially in the prevailing volatile environment. The requirement for a planned response is paramount, in order to counter the potential threats.

Several Key Definitions can be provided, Risk Management is "the activity of calculating and reducing risk, so that an organization does not fail or lose money". (Cambridge Dictionary, 2024)

Framework is, "the ideas, information and principles that form the structure of an organization or plan". (Cambridge Dictionary, 2024)

A robust risk management framework is essential for organizations across various sectors, not just in construction. According to Sousa, Almeida, and Alves Dias (2012), a risk management framework should be integrated into the organization's overall strategic and operational policies. This framework encompasses a set of components that provide the foundation for designing, implementing, monitoring, reviewing, and continuously improving risk management throughout the organization (Sousa et al., 2012).

In the construction industry, risk management frameworks have been extensively studied and developed, with specific guidelines provided by standards such as ISO 31000:2009. These frameworks emphasize the importance of understanding both the internal and external contexts of the organization, which is critical for identifying and managing risks effectively (Sousa et al., 2012). However, the principles underlying these frameworks are applicable to all organizations, regardless of their industry.

For instance, Mishra and Mallik (2017) highlight that effective risk management practices significantly contribute to the success of construction projects, suggesting that similar strategies can enhance organizational resilience in various fields. Furthermore, Aithal and Mishra (2021) emphasize the necessity of operational risk analysis, which can be beneficial for organizations aiming to mitigate risks associated with their specific activities.

By implementing a structured risk management framework and fostering a risk-aware culture, organizations can better navigate potential challenges and ensure project success. Regular monitoring, adaptation, and learning from past experiences are crucial for continuous improvement in risk management practices (Adhikari, & Mishra, 2020; Shakya, & Mishra, 2019; Mishra, 2018; Gain, Mishra, & Aithal, 2022; Mishra, Sudarsan, & Nithiyanantham, (2023). The construction industry has developed comprehensive risk management frameworks, the principles and strategies derived from these frameworks can and should be adapted for use in all organizations. By embedding risk management into their strategic operations, organizations can enhance their ability to navigate uncertainties and achieve their objectives effectively.

Organisations experience a large number of threats in their environment, due to a range of factors that have increased the level of uncertainty and the potential for risk events. Allianz (2024) cites the likelihood of categories of risks occurring in 2024, utilising a global survey of businesses, as: 36% for cyber security incidents; 31% for business interruption; 26% for natural catastrophes; as well as 18% for climate change; and 14% for political risks, for example. This indicates a need for organisations to address potentially damaging incidents in volatile, uncertain operating conditions. The area of risk can, thus, be addressed using a structured plan.

Objective

The aim of this paper is to provide a recommended method for constructing a risk management framework in order to assist organisations in practice. This paper provides a contribution to management and change management, in that it focuses on the protection of organisations against risks from their environment.

Methodology

A review of several major journals was undertaken and articles on risk and risk management were identified and analysed. An inductive approach was employed to analyse this data into themes, without using a predefined coding structure. A semi-structured interview with a practitioner was conducted. This discussion was also scrutinised for key themes without using a predefined coding structure (Easterby-Smith et al, 1991 and Blair and Pagano, 2021a). The principal question for the research was to consider the construction of a risk management framework or plan that will address the potential risks in the environment (as per Blair, Pagano and Burns, 2019).

Literature Review

A review of key journals was conducted and current articles extracted, focused on risk management. The main themes were identified from an analysis of these articles, in respect of creating a risk management framework.

Political Risk

The global free trade economy has been replaced by 'the new national security economy', according to an article by Lee and Glosserman (2022). Political tension between nations has affected companies.

The 'silo approach' to risk in organisations, that is every function performing its own risk management, is problematic because it can cause a failure to have a comprehensive perspective of risk. There is a need to adopt a more holistic approach because of the global nature of risk, also to have broader disciplines for recruits to understand global risks. Supply chains, location of production facilities and sensitive commercial information, especially technology, are key factors in managing risk. Horizon Scanning, thus covering the global environment and considering national politics, is a critical activity for a risk management strategy.

Astvansh et al (2022) enacted a study of geopolitical risk effects on innovation. This article used statistical data on US companies, gathered over a long period. This showed a reduction in innovation, based on the number and value of patents registered, if geopolitical risk increased. This affected companies more if they had a greater percentage of revenues from foreign countries. The threat of geopolitical action had greater impact than actual action, perhaps because it is harder to quantify these effects. The solution could be to reduce exposure in respect of revenue from foreign countries, especially where there is a threat of geopolitical action. The ultimate solution is for the private sector and politicians to collaborate in order to reduce the threat of global conflict, according to these authors.

Environmental Risk

A study of US business by Herrington (2023) states that there is a need to treat physical risk as per cyber security threats.

Extreme weather, violence, political tensions and public health disasters mean a more uncertain environment. The prevailing threats to supply chains, assets and staff must be considered. Businesses need to have contingency plans for disruption, which should consider the availability of finance, premises, equipment and staff. These must include communications and responsibilities, according to this author. Planned responses should be prepared, incorporating a clear delegation of authority, so leaders are nominated to deal with the crisis. A proactive approach should be employed that is 'agile', in that the business must ensure that the risk plan is regularly updated and contingencies are identified and checked.

Research into small business losses in one area of the United States after a climate disaster, comprising a severe hurricane, demonstrated the value of proactive risk management (Collier and Ragin, 2022). The suggestion was made that climate change will cause severe losses in future. Small businesses will have limited resources to cope with the aftermath and can provide a good indicator of the necessity of measures to manage risk in this area. This article states that around 90% of the businesses studied in the region suffered losses due to the climate event and approximately 40% experienced property damage, which generated much greater losses as this caused businesses to close for periods, in some cases.

The problem of a primarily short-term

approach to finance was highlighted, leading to a lack of financial reserves to help these businesses recover from the disaster.

Many relied on personal finance to maintain operations after the hurricane, such as loans from the business owner, family members and friends. Insurance policies were not always adequate, as many businesses could not afford the premiums. Loss of trade and flooding, for example, may have been excluded from such policies. Destruction of stock, premises, supply chain disruption, power failure, damage to reputation, loss of customers and staff comprise further costs on the businesses, caused by these events, which are often not considered in terms of recovery. Many businesses were not in a position take advantage of post disaster loans to aid recovery, as their poor financial state prohibited further debt and repayments. The need for robust risk management measures was stated, including planning and financial contingency, in order to facilitate business survival and disaster recovery.

An article by Macomber (2022) considers that climate change has led to some areas being exposed to higher levels of risk in respect of natural destructive events. This research considers how businesses, as well as individuals, should address the increased risk environment.

Several Steps are Suggested, in Order to Protect the Business, Namely

1. Prioritise the climate risk, compared with other events. Evaluate the business exposure to risk in respect of this factor;
2. Transfer the risk to another party, via financial means. This is usually in the form of insurance to compensate the business in the event of loss. The costs here may be prohibitive, though, especially in an area of historic risk;
3. Avoid the risk exposure, for example, by relocating the business or exposed portion. This may entail selling several shops or sites in the areas of maximum exposure and reinforcing the remaining premises to improve protection in order to withstand the climate effects;

Minimise the potential damage via better detection systems, movement of assets and reinforcing the remaining assets that are exposed to this climate threat. This may involve not dealing with certain customers who have high risk exposure, although there will be costs in adopting this approach. These measures can comprise a risk management plan that proactively addresses this form of risk.

Cyber Risk

An area of consideration is cyber risk (Zeijlemaker et al, 2023). This is identified as a significant and increasing threat to organisations, in this US-based study. The possibility of a cyber attack breaching security is given as 25% (in respect of Fortune 1000 companies that is the annual list of the leading US companies by revenues, as compiled by 'Fortune' magazine). The threat is to current and future operations, with costs of disruption, rectifying the situation, the effect on customers, including loss of business, reduction in the confidence of key stakeholders, such as investors, and loss of data, including confidential information, as well as the legal costs incurred.

This is also an area of increased regulation, with US law requiring companies to have policies to protect against cybercrime. The need for cyber security measures to be aligned with the objectives of the business is viewed as being critical to success in this area. The requirement to communicate the nature of such threats to executives, who may not be technically literate, is noted.

It is important to invest in preventative measures in this area and to ensure that they are updated. The significance of a proactive approach is mentioned, as reactive measures are more costly, due to the breaches in security. Appropriate arrangements should be implemented, such as improving systems design and collaborating with other parties, perhaps to pool risk (that is, share risk contingency with another party, for instance). The need to engage in horizon scanning is viewed as paramount. This should allow organisations the opportunity of early detection of potential threats.

Risk Planning

A study of risk management in SMEs (Small and Medium-sized Enterprises) by Chapelle (2023) noted that they do not have as many regulatory obligations as larger companies, however they are unlikely to have the resources to cope if there is a problem.

This paper states that a proportionate response is required. Excessive security software is costly and slows down processing, whereas too little protection can result in an organisation being closed by the occurrence of a major risk. Controls should be created to be appropriate to the risks generated by the tasks. The suggestion is to setup system of reporting, so all employees can communicate potential issues, which are then evaluated. A positive response to risk management is required. Success should be noted and understood, according to this research. Projects with ambitious objectives and delivery techniques will require matching risk management measures, in order to protect the organisation.

Risk Tactics

Piperca and Floricel (2023) conducted an empirical study of several international cases, considering resilience and responses to problems in projects. Four tactics were discerned to address issues in the projects under review. These were: increase effort and resources under the existing project arrangements; make an adjustment or correction to the existing arrangements; create a revised project plan with a new set of arrangements; terminate the project. These are all tactics to accommodate risk, requiring resilience and resources, such as contingency in respect of finance and personnel. Experience in the discipline of project management is also needed, in order to detect the risk and apply an appropriate solution, thus enabling the project to continue or be closed in order to save resources, as necessary. These tactics can be planned in advance or emergent, as the project progresses, and may be repeated several times during the project, as required. There is still a need for the appropriate resources to enact these tactics, irrespective of the approach. These tactics can be escalated, increasing the intervention in the project.

The use of interventions to reinforce and adjust the course of a project are mentioned by Bukoye et al. (2022). These authors utilise qualitative methods to research multinational companies' projects by interviewing project management personnel to consider 'nudges', that is, actions taken to correct or confirm the course of a project, thus ensuring progress towards the stated objectives. These actions can be used to reduce risk or to provide a response after a risk event has occurred. Their aim is to ensure the delivery of the project objectives within the required time, cost and quality parameters. The actions can be focused on the personnel in the project. They can be planned interventions, such as senior leaders sending reminders of critical deadlines to project staff. They can also be emergent, depending on the circumstances, such as the amendment of prototype products, based on feedback from a customer representative, as per agile project management. These 'nudges' should, thus, reduce project risk via their confirmatory or corrective actions.

Toukola et al (2023) consider the creation of value by partners, at the commencement of major public sector projects. The partnerships studied are between public and private sector organisations, via research into several major urban projects in Finland. Several phases were identified in the preliminary stage of these projects. The first phase is called 'zoning', where the initial project idea and scope are defined. The next phase is termed 'exploring', where initial contact between the project parties occurs and the possible remit and options are discussed. The next phase is 'procuring', when the project partners agree to work together, usually via a formal contract and, possibly, a tender process. The final phase of this initial stage is 'negotiating', when the partners further discuss the project, to attain a common view of the key elements and their roles in the delivery process. The implementation of the project can then commence. These phases should reduce the risks of the project, by selecting an appropriate partner and defining an agreement on their respective roles. The development of trust and assurance of a contract, giving a formal legal agreement for this enterprise, should help to reduce the risk inherent in this work. This preliminary stage is viewed as being critical to ensuring that the scope of the project is defined and parties have reached an understanding, possibly with legal guarantees underpinning the delivery of this work.

Paeleman et al (2023) consider the actions taken by smaller companies, namely private SMEs, in a financial recession. The definition of an SME, provided by the European Commission in 2020, is a business that has 250 employees or fewer, an annual turnover of 50 million euros or less and assets of 43 million euros or less, according to this article. Small and Medium-sized Enterprises (SMEs) comprise around 90 per cent of the firms in most economies, as per this research. This article utilised a quantitative analysis of data from Belgium. The financial records of a large sample of these companies were analysed. The original premise that companies adopting a more conservative approach to resourcing in the recession would have superior results, including enhanced survival prospects, was checked. The results of this research showed that the opposite was true, in that companies that invested resources during the recession generally had superior results and survival rates. This was particularly true of newer companies, which tended to invest more aggressively to exploit the prevailing opportunities in their markets. Companies that accumulated financial reserves and also acted to reduce their wage bills, generally had inferior results. These tended to be older companies, which may have had more resources and thus, more discretion in this area. Newer companies probably had a more agile perspective in respect of gaining new business, exploiting opportunities and less commitments to constrain their actions. The risk management aspect was illustrated in that companies experiencing a financial recession should not conserve resources but rather maintain and possibly increase their use of resources to keep and extend their market share, sales and revenue. The use of more aggressive tactics by the company management as a response to a financial crisis should, according to this research, increase the prospects of company survival and enhance financial stability, in contrast to the potentially inferior outcomes from more conservative tactics. This is an example of counterintuitive action, where the option with an apparently higher level of risk, namely not saving resources in a recession, actually improves the prospects of success and preservation of the company.

The article by Swärd et al. (2023) examines the relationships between parties to a project in a study of a major infrastructure development in Norway. This considers the aspects of trust and control, demonstrating that perceptions of these factors could vary between the partners, contingent on the events during the project. An empirical study analyses critical incidents, experienced during the course of the project. The views of trust and control are discussed, in respect of the parties. Imbalances were noted, as trust was eroded in the project partnerships. The measures enacted to rectify these situations were discussed. The link between control and trust was considered. A lack of trust between the project partners probably means higher levels of control, such as reference to contract terms, whereas a high degree of trust between the project partners probably means more relaxed controls, for example.

The potential implications for risk management are that having a good partnership with a high degree of trust is preferable but the situations in the project have to be managed, to maintain the status of mutual trust. The application of control may be required in order to obtain the desired result, if there are problems with the partnership, leading to a lack of trust.

The tactics to address asymmetry of trust and control between the partners can be viewed as a means of risk management. Confirming routine practices, reorganising these practices and joint problem solving were the tactics utilised in this case. These were used to adjust the relationship of trust with control via application of the required tactics to restore the balance to an acceptable equilibrium between the project partners.

Results and Discussion

An interview was conducted with a director of an international company, who has responsibility for risk and sustainability. The principal area of the questions was to discuss the formulation of a Risk Management Framework. The key themes from the interview were then related to the literature, in order to provide further analysis.

The respondent provided a definition, namely 'a risk management framework is a set of deliverables to provide structure to successfully manage and mitigate risks and look at opportunities for the business and ensure this area is managed in a cohesive way'. The critical activity of managing risk was identified, with the requirement to control this aspect in conjunction with exploiting opportunities for the business. The aim is to coordinate risk management with reward for business initiatives.

Political and Cyber Risk

'The Risk Universe can be defined by the PESTEL tool and comprises the environment as it applies to the company in terms of risk exposure. This can have positives and negatives.' The strategic view of risk is suggested, using an holistic approach to studying the environment (via PESTEL, that is regarding the political, economic, social, technological, environmental and legal aspects). This emphasised a broad consideration of the risks that the organisation may experience. There may be challenges in terms of covering these risks and positive aspects in respect of the potential rewards for accepting these risks, in the form of business opportunities. The technological aspect needs to be given priority, considering the heightened nature of risks in the prevailing environment and increased organisational dependence on technology, for instance.

The strategic dimension is studied in Blair, Barratt and Pagano (2021). The importance of marketing strategy is considered in Blair, Betts, Conway, Hyde and Pagano (2024). Managing global projects is investigated in Blair, Woodcock and Pagano (2023b). The technology aspect is addressed in Blair and Pagano (2023); Blair, Morris and Pagano (2023) and the life cycle (Blair, Grant and Woodcock, 2020), focused on implementing solutions. Risk reduction in technology changes is examined in Blair, Pagano and Burns (2019).

Environmental Risk

The function of checking the environment for risks is referenced by the respondent, 'Horizon scanning is carried out. This is carried out by external agencies, utilising the supply chain and internally. Issues arising from law and regulation are addressed. Consultants are used, for example to carry out the internal audit function.' The use of specialists from outside the organisation is mentioned. These add vital resources to the risk management framework, in order to enhance the analysis and response to the prevailing risk environment. The risk environment is addressed in Blair, Woodcock and Pagano (2021). The activity of outsourcing is considered in Blair, Woodcock and Pagano (2022).

'Environmental issues are a priority. The organisation looks at opportunities to improve in respect of their green impact. The overall aim is to achieve a mature risk level.' Consideration of the environment is, thus, emphasised with a commitment to improve in this area. Procedures should be clearly defined and documented with appropriate resources allocated to address environmental risk, in order to signify a mature level of provision. The environment is considered, in terms of sustainability, in Blair and Pagano (2021b). The use of working in a virtual environment, including on virtual teams, thus potentially reducing environmental impact, is discussed in Blair, Barratt and Pagano (2022).

Risk Planning

A comprehensive view of the risk coverage by the organisation is require. This is referred to by the respondent, 'Risk Wall is a map of all of the connected parts of risks for the company. This should reveal the overlaps, namely the concentrations of where risks occur.' An assessment of further action can then be enacted, where additional measures are required or coverage can be reduced.

'The main risk areas are managed to ensure the risk exposure does not increase and reduce the impact on the objectives of the organisation.' This statement focuses on monitoring mechanisms, which are vital to check the current status of risks and ensure the measures are appropriate.

A key artifact is mentioned in the following statement, 'A Risk Manual is a good set of guidelines to define scope and record how to assess, manage and monitor risk.' This should be the main document for the risk management activity in the organisation. It should be updated regularly to reflect changes in practice and be available to personnel, in respect of the appropriate levels.

Risk Tactics

The monitoring process was further referenced by the respondent, 'It is vital to monitor and review risk regularly, monthly and annually. This will include reporting of risk and understanding the potential impact on the business. Ensure executives are happy with risks.' Processes need to be setup to perform these regular reviews, together with assessing and implementing the required responses. Responsibility for this work should be clearly allocated.

The perspective of key stakeholders, organisational policy and circumstances determine the capacity for risk. This is mentioned in the interview as, 'Risk appetite is different depending on the area. There is zero tolerance for risks in respect of health and safety, as well as cyber security, for example, and high for strategy development, where potential loss is accepted in order to make gains.' The context is therefore paramount in considering the view of risk. Some organisations can be more cautious and others more entrepreneurial, assuming higher risk levels to potentially gain higher rewards. The critical role of leadership is highlighted in Blair and Pagano (2020) and Blair, Barratt and Pagano (2023).

The requirement to cultivate an appropriate environment within the organisation for identifying and addressing risk is mentioned. The interviewee stated, 'The internal structure to manage risk relies on a risk culture, where personnel are confident to talk about risk, and risk champions to disseminate good practice to their teams.' Engaging the workforce to consider risk and address it via the use of ‘champions’ is viewed as a key activity. The importance of skills development is covered in Blair, Woodcock and Pagano (2023a), also the use of virtual training in Blair and Pagano (2021c).

Discussion

The research results were accessed to create a procedure for constructing a risk management framework. This comprises a plan to address potential internal and external risks in respect of organisations, based on the learning from the literature and practice (see Diagram 1 below), thus summarising the learning from the research.

The procedure for developing a risk management framework covers tasks that are focused on perspectives that are both internal and external to the organisation and comprise a potential guideline for practice. The objective is to understand and accommodate external and internal risks by leveraging the resources of the organisation to construct and operate a system of control.

The key actions for the organisation have been identified, along with the supporting tasks and the resulting documents to be generated.

Diagram 1

A Procedure for Constructing a Risk Management Framework

Number	Key Action	Supporting Tasks	Documents
1	Determine the Risk Environment	Process the data on political, conomic, technological and environmental risk to obtain an understanding of the risk universe.	Map of the Risk Universe
2	Horizon Scanning	Scan the environment for information on risks. Employ organisations to perform this task.	Contract / Agreement
3	Establish Risk Culture	Educate employees on risk awareness. Setup inclusive procedures for risk monitoring. Recruit and train champions to manage risk activities on teams.	Procedures / Champion Job Role
4	Determine Risk Appetite	Check views of major stakeholders as well as rganisation's requirements, such as from regulations. Use this information to determine risk appetite for key activities, for example investment in higher risk shares.	Document Stakeholder Agreement
5	Check Risk Coverage	Check the provisions for covering risk across all of the organisation. Appropriate tactics should be applied, such as detection, mitigation, avoidance and reduction. Contingencies should be determined. The risk coverage should be mapped, thus revealing areas of omission and duplication in provision. Adjustments can be made to the coverage, based on these results.	Risk Map / Tactics
6	Create Risk Manual and Procedures	Procedures for dealing with risks should be determined, for example the responsibilities, responses and personnel to act in a crisis event. These should all be documented and a Risk Manual compiled. The latter should be updated regularly and available to personnel at the required levels.	Risk Manual / Procedures

Conclusion

This paper has made a significant contribution to the field of organizational research by addressing the critical area of risk management in today's complex and ever-changing environment. As organizations face an increasing array of risks—ranging from cyber threats to economic fluctuations—the need for a robust risk management framework has never been more pressing.

In this study, we have proposed a comprehensive procedure for constructing an effective risk management framework. This framework is grounded in both practical recommendations and academic insights, ensuring that it is not only theoretically sound but also applicable in real-world settings. By integrating diverse perspectives from both practice and academia, we have aimed to provide a holistic approach that organizations can adopt to safeguard their interests and enhance their resilience.

However, the implications of this research extend beyond the immediate recommendations provided. There is a wealth of potential for further exploration in this field. Future research could broaden the scope of this study by examining a wider variety of organizations across different sectors and geographical regions. Such an extension would allow for a more nuanced understanding of how risk management practices can be tailored to meet the specific needs of diverse organizational contexts.

Moreover, investigating the effectiveness of the proposed framework in various cultural and regulatory environments could yield valuable insights into best practices in risk management. This could also help identify common challenges faced by organizations in different parts of the world, fostering a more collaborative approach to risk management strategies.

In closing note , while this paper lays a foundational understanding of risk management frameworks, it also opens the door for further inquiry. By encouraging ongoing research in this vital area, we can contribute to the development of more resilient organizations that are better equipped to navigate the uncertainties of the modern landscape. The journey toward effective risk management is ongoing, and it is imperative that scholars and practitioners alike continue to engage with this critical topic to foster organizational sustainability and success.

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