Arthur D Little

Viewpoint

Why risk management is failing

Embracing complexity and uncertainty with value-based risk management

In today's business environment of uncertainty, complexity and continuous change, conventional risk management approaches are all too often ineffective: they are poor at dealing with complexity, too slow to adapt, and focused on reporting outcomes rather than supporting decision-making. A different approach – "value-based risk management" – can help organizations strengthen their decision-making capabilities and ultimately achieve better alignment with the strategic needs of the business.

Introduction

Effective risk management requires businesses to manage uncertainty. Industry convergence, accelerating technological disruption and the wide public availability of information increase the potential sources of uncertainty, and so complicate risk management. Organizations typically respond by developing comprehensive risk management systems – often referred to as enterprise risk management (ERM). The great majority of larger organizations already have ERM systems with varying degrees of sophistication.

> 92% of responses to a 2015 survey indicated **Enterprise Risk Management** systems were already in place

However, despite the prevalence of ERM systems, significant unwanted events continue to occur and cause serious damage to organizations. Those deemed newsworthy are sometimes catastrophic in nature, leading to significant financial impact or loss of life. Recent examples include the highly publicized use of engine management software by Volkswagen to "cheat" on emissions tests and the 2015 record fine of USD 20.8 bn given to British Petroleum following catastrophic events at Deepwater Horizon (the "Macondo Incident").

As companies face a future of increasing uncertainty, disruption and complexity, there are questions as to whether conventional approaches – such as ERM – are up to the job. We believe there are several practical ways to improve the effectiveness of risk management and better align decision-making with the strategic needs of the business. Collectively, we call our enhancements value-based risk management (VBRM).

The limitations of conventional approaches

We classify conventional risk management approaches as either "accountant" or "assurance", explained below. Both are widely adopted and used to manage a very wide range of risks from safety through to operational, asset and reputational risks. Both, however, have limitations that may lead to unforeseen risks emerging to damage the business.

"Accountant" approach

This approach focuses on comprehensive risk screening, evaluation and reporting. Systems described as "ERM" (i.e. including a broad portfolio of different risks) are often synonymous with the "accountant" approach. The principal weakness of this approach is that the high-level nature of reported risks is difficult to assure. ("How do I know risk x has been mitigated effectively?") This assurance is further complicated by the often-comprehensive documentation and reporting of risk data, but not of information for decision-making, which can create a false sense of security that risks introduced by the strategy (what the organization wishes to achieve) are being properly managed ("blinded by numbers").

"Assurance" approach

This approach focuses on known key risks and their mitigation. It is popular in high-hazard industries such as oil and gas, in which the significant risks are well known, but can be limited in its ability to identify new risks as circumstances change, given its focus more on upfront mitigation and less on ongoing management over a prolonged period. This particularly applies to risks applying across more than one strategic dimension – for example, a safety and reputational risk. The "assurance" approach often fails to adequately deal with complex systems. These are systems in which the relationships between cause and effect are often unpredictable, even with the application of expert knowledge – not recognizing the inherent uncertainty that this brings to risk management.

The benefits of VBRM

VBRM is balanced enhancement of these conventional approaches that concentrates on decision-making as opposed to simply risk reporting.

> The defining characteristic of **value-based risk management** is a focus on decision-making rather than simply risk reporting

We describe this approach as "value-based", as it leads to healthy questioning of what is required to support decision-making. In our experience, these questions often lead to a significant reduction of effort expended on activities that do not prove to be core to agreed strategic priorities of the business.

A review of risks using such an approach addresses the weaknesses of both "accountant" and "assurance" approaches, focusing risk management efforts where they will deliver the most value to the business.

There are four main pillars of VBRM.

We have experience of applying a VBRM approach effectively in large organizations with existing ERM systems in situations in which unwanted events persisted, and in companies that were not getting the return they were expecting from their considerable ERM investments.

We describe each further:

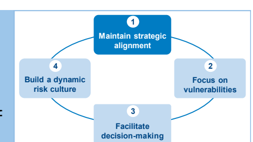
Maintain strategic alignment

At its simplest, strategy is a high-level plan to achieve one or more goals under conditions of uncertainty. Strategies can be developed and changed rapidly, but the supporting management systems and processes that implement the strategy have much greater inertia. The root causes of poor risk management are often found in this disconnect between the strategy and the management systems and processes that are required to deliver it, when the former have changed but the latter have not kept pace. This is increasingly important in today's uncertain business environment, in which agility and the ability to flex strategies rapidly is a key success factor in staying ahead.

Maintaining alignment means avoiding making decisions that do not support strategy, and communicating priorities clearly to business units. This requires companies to "let go" and simplify, focusing on areas in which expert systems can provide meaningful results that support decision-making.

Maintaining alignment also means allocating clear risk ownership, defining responsibilities and determining suitable empowerment for adapting systems and processes to respond to changing risk profiles. Some major risk areas will naturally align with business and functional units, and ownership will be clear. Others may not – requiring governance to be specifically agreed.

Case study: aligning business cases to strategy



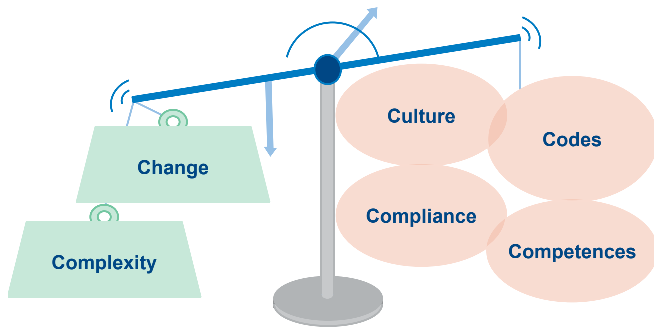
A multinational automotive manufacturer critically needed to improve the likelihood of project success on time and with expected quality. We developed new risk metrics that indicated the timing of emergence of key risks during the project lifecycle. The metrics were used to develop business cases showing why some projects should be stopped at the earliest opportunity, and others selected based on likelihood of success. This enabled the manufacturer to focus its effort on projects with much higher likelihood of success, and avoid wasted resources on projects which were less likely to succeed and not aligned with strategic business priorities.

Focus on vulnerabilities

One of the drawbacks of the "assurance" and "accountant" approaches is that they are often poor at indicating where to focus effort to make risk controls effective. This is important, because different hierarchies within the business often implement risk controls. Failure to understand why those hierarchies may be poor at implementing the controls prevents effective risk management implementation. This could be, for

example, the absence of appropriate competencies within business units to understand a required risk-control measure.

There are few pragmatic diagnostic models available to the risk manager for assessing vulnerabilities across all risk dimensions. An approach developed by Arthur D Little to help in this process is the so-called 6C model (illustrated below).



The 6Cs are Codes, Compliance, Competency, Complexity, Change and Culture. A 6C assessment considers the suitability and completeness of rules, standards or practices (Codes), followed by the degree of Compliance with them. In many existing approaches this is as far as the assessment goes. However, the 6C approach goes on to consider two other important factors that can greatly escalate risk: Competence (the degree to which staff have the necessary skills and experience) and Culture, which refers to how supportive and mature the culture is for delivering risk controls. Set against this is the impact of Change on risk management, based on the degree to which the business environment is changing, and Complexity, the inherent intricacy of the business and its environment.

Our experience shows that pragmatic review against these six categories reveals a good understanding of vulnerabilities without detailed and time-consuming quantification.

Case study: identifying cultural vulnerabilities

A national utilities operator had struggled to implement ERM effectively. We completed a 6C assessment of the operator's risk management arrangements and pinpointed cultural "risk denial" in reporting risks to the board, as it was viewed as a management failure to allow those risks to occur. We helped the operator introduce organizational incentives, championed by the CEO, which made risk a topic of conversation with the board and rewarded decision-making based on awareness of risk.

Facilitate decision-making

One of the most common shortfalls in ERM systems is that the mode of reporting to the executive or board does not lend itself well to making decisions. Risk reports often acquire a state of semi-permanence and end up as "wallpaper" behind more pressing top-management reporting information. This is a particular problem when situations are changing rapidly

One of the key features of the VBRM approach is therefore to ensure that top management has the right risk management reporting systems to enable rapid response and decision-making, in order to trigger actions that reduce risks before they materialize. This way, the links between strategy, execution and risk management controls remain close. This means designing reporting tools that are concise in how they summarize/aggregate risk data and tailored to organizational requirements. For example, the figure below links conventional rating of risk level (high/medium/low) with the time available to mitigate a risk before it materializes (in this case, during project execution).

Risk level	1 month	1 quarter	1 year
High	ACT NOW 5, 16, 28, 32, 38, 40	URGENT 21	PLAN 45
Medium	URGENT 2, 4	PLAN 1	MONITOR
Low	MONITOR	MONITOR	MONITOR

Time for action

A chart aggregating data across one or more dimensions can replace several charts – providing top management with a simplified means of rapid review of risk status.

Case study: board-level reporting of risks

A national rail infrastructure manager had a complex portfolio of risks, but no way of reporting these coherently to the board. Risks were presented in different formats with no ability to robustly prioritize investment decisions. We developed a method of translating different risks onto a single risk matrix, to better inform the board about the total risk profile and enable stronger risk-based investment decisions.

Build a dynamic risk culture

One of the most effective levers to ensure that a company's risk management approach is able to cope well with change and complexity is to focus on strengthening capabilities, culture and awareness. This provides the means to identify

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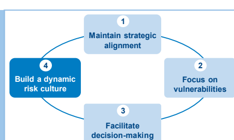
new and emerging risks, and to take the right actions to adapt management systems and processes rapidly in response.

Of course, culture change within any organization is difficult, and risk management culture change is no exception. However, the VBRM approach includes a number of measures, including providing a clear management path to excellence and engaging employees in pilot projects, to embed new practices.

Most importantly, a culture requires a key risk focus – such as a "burning platform" – as a key way to promote risk awareness and the importance of pragmatism and action-orientation.

Case study: improving incident investigation



A national infrastructure operator had an accident that revealed specific weaknesses in incident investigation. The operator publicized the accident as its "burning platform" and reissued its internal guidance. It identified resources across the business, who were given special training against the new guidance. The resources were released from normal duties for a period of time each week to run a pilot showcasing improved incident investigation techniques. The CEO released a webcast highlighting the recent accident as the reason for the initiative.

Insight for the Executive

This paper describes how conventional risk management approaches can be ineffective: they deal poorly with complexity, are slow to adapt to changing circumstances, and overemphasize reporting. In our work we have seen how these problems can be overcome with a more dynamic and focused approach to risk management. VBRM is such an approach, applied by companies irrespective of the ERM systems they already have. The essential elements of VBRM are:

- **Maintaining alignment of risk management with** changes in strategic direction. This requires establishing clear risk-based priorities and empowering risk owners to adapt management systems and processes as required.
- **Focusing risk management efforts on areas of vulnerability,** ensuring that risk management takes into account not only Compliance but also factors such as Competence, Culture, Complexity and Change (the 6Cs).
- **Designing risk-reporting systems that enable rapid top-management decision-making.** This should include specific risk data for key projects, provide concise summaries and include a ranking of urgency for action.
- **Building a dynamic risk culture through active involvement** in pilot projects, engaging the organization in progressive evolution towards excellence, and identifying a genuine burning platform that people understand and believe in.

The business world has moved on since ERM was first introduced. We think it is time for a change.

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Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

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