Public Risk Harbor

FIRST PRINCIPLES

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OUTLINE

Stop

First Principles Thinking

"First principles thinking" concerns deconstruction of concepts down to their fundamental core or foundation in the given arena, then reasoning up and asking which ones are relevant to the question at hand. This kind of thinking also includes selecting conclusions based on chosen assumptions and making sure conclusions do not violate any established logical or legal precepts.

Thriving With Risk Intelligence in Today's Turbulence

The concept of risk intelligence has gained significant traction in both professional and academic circles over the past few decades. It is important to maintain a clear understanding of the origins, sources, and the evolving role of risk intelligence in decision-making across various fields. Understanding the origins and sources of risk intelligence, can lead to greater appreciation of its value. Developing the vital skills, mindset, and related resources helps produce better decisions, mitigate potential threats, and seize opportunities in an increasingly complex operating environment. What more is there to now about risk intelligence? Why is this increasingly important today? The following paragraphs are offered to answer these questions.

Defining Risk Intelligence

Risk intelligence generally refers to the ability to assess, understand, and respond to risk in a way that balances the potential for gain with the potential for loss. It involves the capacity to make informed decisions in uncertain situations, to evaluate probabilities, and to act with a clear understanding of both the risks and rewards involved. Several prominent sources have created more specific definitions. Some emphasize the historic "probabilities side of risk" perspective and others underscore the "people side of risk."

Unlike general intelligence, which encompasses a broad range of cognitive abilities, risk intelligence is specifically focused on how individuals and organizations perceive and handle risk. It's not just about being cautious; it's about being smart with risk—knowing when to take it, when to avoid it, and how to manage it effectively.

The Origins of Risk Intelligence

The concept of risk intelligence, as understood today, is relatively modern, but its roots can be traced back to several intellectual traditions and disciplines. Understanding these origins helps one appreciate the multidisciplinary nature of risk intelligence and its relevance across different areas of work.

1. **The Historical Context of Risk:** The notion of risk itself has ancient origins, closely tied to the development of probability theory and the insurance industry. Historically, risk was often associated with uncertainty and danger, especially in contexts like maritime trade, where merchants faced significant risks due to weather, piracy, and other unpredictable factors. The development of early insurance models in the 17th century allowed for the quantification of risk, laying the groundwork for modern financial and risk management practices.

2. **Probability Theory and Statistics:** The formal study of risk began with the advent of probability theory in the 17th century, largely credited to mathematicians like Blaise Pascal and Pierre de Fermat. Their work laid the foundation for understanding and quantifying uncertainty, which is central to the concept of risk intelligence. Probability theory allowed people to move from a purely intuitive understanding of risk to one that could be measured and analyzed, leading to more informed decision-making.

3. **Decision Theory and Behavioral Economics:** The development of decision theory and later behavioral economics in the 20th century further shaped our understanding of risk intelligence. Decision theory, particularly the work of John von Neumann and Oskar Morgenstern in the 1940s, introduced the concept of expected utility, which became a key tool for evaluating risky decisions. Behavioral economics, pioneered by scholars like Daniel Kahneman and Amos Tversky, introduced the idea that humans are not always rational actors and that cognitive biases can significantly affect how we perceive and respond to risk.

4. **Psychology and Cognitive Science:** Psychology and cognitive science have also played crucial roles in shaping the concept of risk intelligence. Research into how people perceive risk, the role of emotions in decision-making, and the impact of cognitive biases has all contributed to a deeper understanding of what it means to be "risk intelligent." Psychologists have identified various heuristics—mental shortcuts—that people use when assessing risk, often leading to systematic errors or biases in judgment. Understanding these biases is key to improving risk intelligence.

5. **Business and Risk Management:** In the business world, the concept of risk management has been evolving for decades, particularly in sectors like finance, insurance, and corporate governance. The idea of enterprise risk management (ERM), which emerged in the late 20th century, brought a more integrated approach to managing risk across organizations. This holistic view of risk management laid the groundwork for the development of risk intelligence as a distinct competency within organizations, emphasizing the need to align risk-taking with strategic objectives.

Sources of Risk Intelligence

Risk intelligence draws from a variety of sources, each contributing to a comprehensive understanding of how to manage and navigate risk effectively. Some of these key sources are:

1. **Data and Analytics:** One of the most critical sources of risk intelligence is data. Big data and advanced analytics allow organizations to identify patterns, predict outcomes, and assess risks with greater accuracy than ever before. In finance, algorithms analyze vast amounts of market data to assess investment risks and opportunities. Similarly, in

healthcare, data analytics helps predict patient outcomes and manage risks associated with treatments.

2. **Experience and Expertise:** Experience is another vital source of risk intelligence. Individuals and organizations that have successfully navigated risks in the past develop a kind of "risk intuition" or expertise that can guide future decisions. This experiential knowledge is often industry-specific and is accumulated over time, providing valuable insights that are not easily replicated through data alone. Experienced professionals in finance, insurance, or project management often develop a finely tuned sense of risk, honed by years of practice and exposure to different scenarios.

3. **Cognitive Bias Awareness:** An important aspect of risk intelligence involves understanding and mitigating cognitive biases. These biases, such as overconfidence, anchoring, and confirmation bias, can distort our perception of risk and lead to poor decision-making. Risk-intelligent individuals and organizations strive to recognize these biases in themselves and others, employing strategies like diverse team perspectives, structured decision-making processes, and seeking external feedback to counteract these biases.

4. **Scenario Planning and Simulation:** Scenario planning and simulation exercises are critical tools in developing risk intelligence. By imagining different future scenarios—both positive and negative—and planning responses, individuals and organizations can prepare for a range of possible outcomes. This practice not only helps in identifying potential risks but also in developing strategies to mitigate them. Military organizations, disaster response teams, and corporations all use scenario planning to anticipate and prepare for various risks.

5. **Learning from Failures:** One of the most powerful sources of risk intelligence is the ability to learn from failures. Post-mortem analyses of projects that didn't go as planned, or reviewing financial decisions that led to losses, provide invaluable lessons. This learning process involves not just identifying what went wrong, but understanding why it went wrong and how to avoid similar mistakes in the future. Organizations that foster a culture of learning from failure often develop a more nuanced understanding of risk and are better equipped to handle uncertainties.

The Evolution of Risk Intelligence in Modern Contexts

The concept of risk intelligence has evolved significantly over time, particularly in response to changes in the global landscape. Let's look at how risk intelligence has adapted to modern challenges and opportunities.

1. **The Digital Revolution:** The rise of digital technologies has transformed how we assess and manage risk. With the advent of the internet, social media, and the Internet of Things (IoT), the volume and variety of data available for risk analysis have exploded. This has given rise to new forms of risk, such as cyber security threats and digital privacy concerns, while also providing more sophisticated tools for managing these risks. Risk intelligence now involves not only understanding traditional risks but also navigating the complexities of the digital world.

2. **Globalization:** Globalization has interconnected economies, making risk management more complex and interdependent. Events in one part of the world can have ripple effects across the globe, as seen in financial markets, supply chains, and even public health. Risk intelligence in a globalized world requires a deep understanding of international markets, geopolitical risks, and cross-cultural differences. This complexity has led to the development of more sophisticated models for assessing and mitigating global risks.

3. **Sustainability and Environmental Risks:** Environmental risks, particularly those related to climate change, have become a major focus for risk intelligence. Organizations and governments are increasingly recognizing the need to assess and mitigate environmental risks as part of their strategic planning. This includes understanding the long-term impacts of climate change, the risks associated with resource scarcity, and the potential for regulatory changes aimed at promoting sustainability. Risk intelligence in this context involves integrating environmental considerations into decision-making processes.

4. **Pandemics and Public Health:** The COVID-19 pandemic highlighted the importance of risk intelligence in public health and crisis management. It demonstrated the need for rapid, data-driven decision-making in the face of uncertainty and underscored the value of preparedness and resilience. Governments, businesses, and individuals had to quickly adapt to changing circumstances, often with incomplete information. The lessons learned from the pandemic are now being integrated into risk intelligence frameworks to better prepare for future public health emergencies.

5. **Financial Market Volatility:** In finance, risk intelligence has become more critical than ever due to the increasing complexity and volatility of global markets. The 2008 financial crisis, for example, exposed significant gaps in risk management practices and led to the development of more robust regulatory frameworks and risk assessment tools. Today, risk intelligence in finance involves not only understanding market risks but also navigating the interplay between financial systems, geopolitical events, and technological advancements.

Risk intelligence is a concept that has evolved from a rich tapestry of intellectual traditions, encompassing everything from probability theory and decision science to modern data analytics

and behavioral economics. It draws on diverse sources, including data, experience, cognitive science, and scenario planning, to provide a comprehensive framework for understanding and managing risk. As public entities face a world that becomes more interconnected, digital, and complex, the need for risk intelligence continues to grow. Becoming risk intelligent is not just an advantage—it's a necessity for thriving in the uncertainty.

Practical Risk Ownership

Practical risk ownership refers to the clear, active, and effective management of risks by specific individuals within an organization. Instead of being a theoretical or purely administrative task, practical risk ownership emphasizes concrete actions, accountability, and responsiveness. A risk owner is designated to oversee a specific risk, continuously assess its status, and take necessary steps to manage or mitigate it, ensuring that risk responses are aligned with organizational goals.

This concept is grounded in the idea that risk ownership is not merely about identifying risks or setting up policies; it involves engaging with real-world challenges that could affect the organization's performance, safety, or reputation. Practical risk ownership means the risk owner has a thorough understanding of the risk context, including its potential impacts, and is empowered to make decisions or mobilize resources to address it. For instance, in a school district, a facilities manager might take ownership of risks related to building safety, assessing potential hazards regularly, coordinating maintenance, and implementing safety protocols as needed.

By fostering practical risk ownership, organizations can ensure that risks are managed proactively rather than reactively, as risk owners are expected to monitor, report, and escalate issues in a timely manner. This approach encourages a culture of shared responsibility, where risk management is embedded in day-to-day operations and decision-making rather than isolated from them. Ultimately, practical risk ownership leads to a more resilient organization, where potential issues are managed at the source, thereby reducing the likelihood of escalation and contributing to the organization's long-term success and stability.

Complex Risk and Risk Financing Methods

The relationship between complex risk and risk financing methods is fundamental to an organization's ability to manage uncertainty and maintain financial stability. Complex risks, such as those involving natural disasters, cyber threats, or pandemics, are multifaceted and unpredictable. To address them, organizations need robust risk financing strategies that can absorb the financial impacts of such events.

Risk financing refers to the methods organizations use to cover losses from risks. These methods are typically divided into two categories: "retention" and "transfer."

1. Risk Retention: This occurs when an organization decides to absorb the financial consequences of a risk internally. Self-insurance, reserve funds, and deductibles are common forms of risk retention. For complex risks, an organization might choose retention when the potential impact is relatively low, predictable, or where risk control measures are strong. For example, a school district might set aside emergency funds for minor property damage, but retention becomes challenging when risks are highly uncertain or catastrophic.

2. Risk Sharing: In this case, the financial impact of a risk is shifted to a third party, often through insurance or contracts. Transferring complex risks, like cyber-attacks or large-scale natural disasters, to insurers allows organizations to protect their balance sheets from substantial losses. However, due to the high uncertainty associated with complex risks, premiums for such coverage can be costly and sometimes unaffordable.

There are inherent difficulties with identifying the best insurance coverage. Many policy forms are non-standard, with endorsements that often make it difficult to easily understand their application. Coverage is almost always broader in manuscript forms. Unintended risk assumptions are usually better controlled. Even when tightly drawn specifications are used, omissions of important provisions may still occur and most proposals contain exceptions. The lowest cost may not be evident from the upfront premium quoted. Deductible provisions may be at different levels and have different terms. There are hidden expenses that vary depending on the degree of support provided by each of the different service providers.

With many risk financing programs, the allocation of resources for risk control vary in proportion to the premium paid. Injury prevention may also be more effective under some programs. Commercial insurers tend to perform tasks that primarily serve satisfy underwriting/risk selection purposes. Without specific aims for a group, underwriters may be less likely to engage in collaborative efforts to address common needs. Sometimes self-interests lead to recommendations that run counter to the best advice generated by a community of policymakers, including associations that take into consideration broad stakeholder interests.