

# Taming the data demons: leveraging information in the age of risk



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## Introduction

Innovative companies understand that risk is essential to growing a business. Every initiative that has the potential to break new ground, open up new markets or extend a competitive advantage also has a potential downside. The key is to

identify these downside risks ahead of time, accurately evaluating their effect on the business, and putting processes and safeguards in place to mitigate them. This is true of every type of risk an organization faces—business-driven, event-driven and, especially, data-driven risk.

With data being the new world currency, and the cost of maintaining and protecting that data running exponentially higher than the cost to capture it in the first place, data risk management is assuming a new importance among IT and line-of-business executives alike.

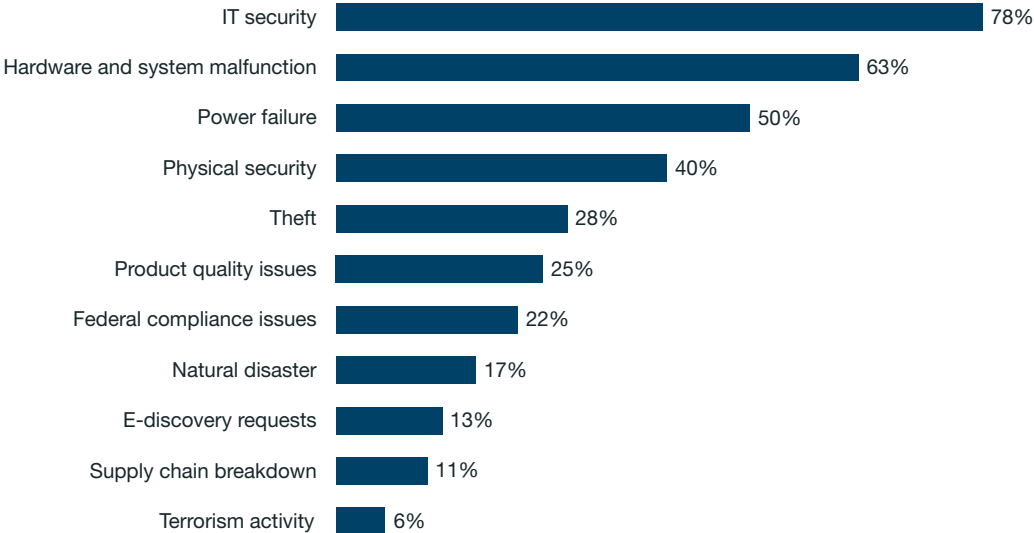
It may not be enough, however, to simply assign data risk management a new level of importance. A new point-of-view may be required, as well. A holistic point-of-view that makes data risk management an integral part of both enterprise-wide data polices and business strategies. A point-of-view that has the potential to deliver lower cost, faster return on investment, better compliance and a more flexible and resilient organization.

This white paper explores the framework and advantages of a holistic approach to data risk management, and provides both IT and line-of-business executives with the “why” and “how” to begin putting a holistic data risk management program to work in organizations large and small.

**Data risk management defined**

There is no getting around it, if a business today loses access to its data, it is soon out of business. There are many reasons why an organization could find its access to reliable, secure data compromised—everything from a missing laptop to a corporate merger to a hurricane (see Figure 1). Then there are the legal and compliance requirements. In fact, many

organizations that never previously considered themselves to be potential targets for hackers, or maintainers of sensitive customer data, now find themselves every bit as responsible for compliance as banks, hospitals and other traditional subjects of compliance regulations.



Source: 2010 IBM Global IT Risk Study

Figure 1: Today's organizations face a wide range of risk issues, almost all of which have an impact on that organization's data.

*It is more important than ever that data risk management processes be part of an integrated whole.*

Data risk management provides the methodology by which all data risks—internal and external, IT- and business-related—are identified, qualified, avoided, accepted, mitigated or transferred out. In today's global marketplace, where multiple locations and a blend of in-house and vendor solutions must work together instantly and seamlessly, it is more important than ever that an organization's data risk management processes and procedures be part of a coordinated and well-thought-out whole. In this way, the complete risk picture of every type of data an organization possesses can be accurately assessed over its entire lifespan; negative risks can be mitigated and positive risks can be leveraged for business gain.

### **Meeting the unrealized need**

Data is not just growing, it is exploding. According to IDC, organizations are facing, on average, 50 to 60 percent average data growth.<sup>1</sup> And for every \$1 spent creating data, another \$10 to \$12 may be required to manage that data. With all this data, and all this money being spent on creating and maintaining it, it only makes smart business sense to strive for maximum return for that money. Not to mention reducing the cost wherever possible.

Many organizations simply do not realize the positive role data risk management can play in their efforts to make cost- and business-effective use of their data. Efficient data risk management not only leverages IT's enterprise-wide view of the business and its data to create a more complete picture of the data, its value and its risk issues—it can bring to light new, more responsible, more profitable ways of capturing, storing and delivering that data for business advantage.

*Most organizations do not realize the positive role data risk management can play in their business strategies.*

### **Yesterday's data risk management—saying “no”**

Up to now, most organizations' approach to data risk management has been reactive. Focus has been on negative risks such as hacking, theft and data system failure. The response has been to say “no”—to severely limit access to data, build hefty firewalls and deal with each new threat as it is exposed, often at great expense to both the data systems and the business.

*No one in the organization may have an accurate picture of data's business value.*

Mitigating negative risk is important, but risk avoidance is only one half of robust data risk management. Unlocking the opportunity inherent in positive risk is the other half. Unfortunately, positive risk is hard to see behind the silos. Data risks have been traditionally compartmentalized into silo categories such as availability, access security and disaster recovery. The data itself is also often compartmentalized by department and data type. What this means is that no one in the organization has a complete picture of where the data is, how and when it is being used, and what its business value truly is. As a result, most organizations' data risk efforts are simply reactive cost centers rather than proactive value creators.

### **Today's data risk management— saying “yes”**

Truly effective, holistic data risk management is not primarily a data issue or a risk issue; it is a management issue. Holistic data risk management takes a business-oriented approach, looking first at the business processes, then at the related data—assigning positive and negative risk evaluations based on use of the data across the organization and between the organization and its customers, partners and vendors. Holistic data risk management is about saying a measured, protected and well-planned “yes” to new opportunities, new markets and new competitive postures.

*Holistic data risk management is about saying a protected and measured “yes.”*

### **It starts with governance**

Governance is where holistic data risk management begins, and what separates it from traditional, reactive risk management. Good governance builds the data risk policies and procedures into business systems and processes as they are created and implemented—making data risk management more robust while remaining virtually transparent to users inside and outside the organization.

*Robust governance helps assure that there is a proactive approach to current and future data risks.*

Data risk governance is like a guidebook everyone refers to in order to be sure they are all on the same page. It provides the policies, controls and operational guidelines that enable risk-responsible individuals throughout the organization to thoroughly and correctly assign risk type and severity to data and its related systems and processes and either leverage or mitigate that risk.

An effective data risk governance policy helps drive business value through its ability to:

- Increase compliance and regulatory adherence
- Enhance business intelligence capabilities
- Facilitate alignment of IT data initiatives and business strategies, including management of business and IT growth
- Improve ability to measure, monitor and improve business performance
- Reduce complexity to help improve business flexibility and accelerate strategic initiatives.

#### **The trouble with silos**

To drive up the value of data risk management initiatives, organizations have to drive out complexity—and that means silos. Getting rid of as many data silos as possible is a good first step. Some of those data silos are obvious, such as the data that is stored separately by each department and internal versus externally created data. Some silos are not so obvious, such as those that separate structured data such as order forms and inventory tracking from unstructured data such as e-mails and corporate correspondence.

*Data silos are not the only barriers that need to be eliminated in effective data risk management—consider business silos, even risk silos.*

Data silos are not the only ones that need to be addressed in a good data risk management plan. There are also risk silos, such as availability, data security, access security and disaster recovery. In the 2010 IBM Global IT Risk Study, 47 percent of the respondents reported that even risk planning itself happens in silos. These risk silos have traditionally been considered distinct disciplines but now need to be brought together to give a more accurate and complete risk picture.

By breaking down the barriers that have traditionally defined data use, not to mention business processes and strategic planning, holistic data risk management can serve as both a proving ground for more extensive organizational risk management changes and a source of new inspiration for everything from corporate structure to new products and services.

#### **The shortest distance between data and its safety**

A straight line is, of course, the shortest distance between two points. The more often the lines that connect data to other data, people and places can be straightened, the more efficiently data risk can be managed. One way to straighten out—and optimize—data lines is by eliminating redundancy. The more often the same data is repeated throughout an organization's systems, the greater the risk that it can become corrupted, accessed inappropriately or updated inconsistently.

*Accurate, ongoing prioritization of data is crucial to effective, efficient data risk management.*

Prioritization is another important optimization technique. Without it, an organization has no way of knowing how mission-critical any specific piece or type of data is. As a result, many organizations seek to protect all data as if it were mission-critical, resulting in much higher-than-necessary risk management costs. Other organizations pursue lower costs by assigning all data middle-of-the-road protection, leaving their truly critical data painfully exposed. When an organization assigns data a relative priority that is based on a thorough understanding of what the data is, how and where it is used and how it contributes to business goals and the organization's bottom line—such as happens within robust data risk governance—the organization can be assured that it has adequately protected all its data in the most cost- and resource-efficient manner.

**Data on the move**

Data is defined as being in one of three states: 1) at rest in storage, 2) in motion in the network, 3) in use on the desktop, as illustrated in Figure 2. A good data risk management plan addresses the risks inherent in all three states. A holistic data risk management plan takes a new and expanded look at the

second state—data on the move—to add new access points that reflect the changing nature of the workplace and to protect those access points from exploitation.

*Holistic data risk management addresses the risk inherent in all data states—at rest, in motion and in use.*

Virtual private networks, remote access, smartphones, even iPods have now become mainstream business tools, and technologies such as cloud computing are coming on quickly. Traditional data risk management, with its emphasis on limiting access and locking down data, has simply locked these technologies out. The 2010 IBM Global IT Risk Study revealed that 64 percent of respondents viewed social networking tools as extremely risky/risky, for example. The problem with this approach is that as long as these technologies are being used, data is being created on them—data that is residing outside the enterprise and its security and risk management protocols. Now is the time to welcome that data, and the technologies that create and access it, into the organizational fold and take full advantage of the adaptability and flexibility the technologies provide. A holistically planned and implemented data risk management initiative can make this possible.

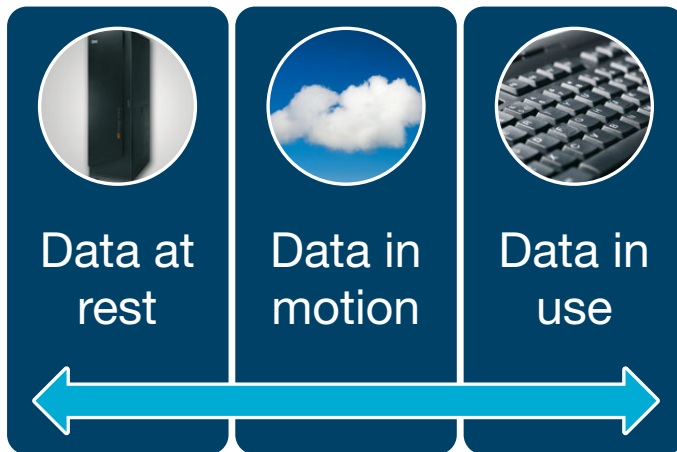


Figure 2: An organization's data exists in one of three states at any given time, with different risks inherent in each state.

### Setting the standards

No good initiative is complete without establishing the means to measure its success. The same is true for a good data risk management plan. The benchmark measurements have not changed: service level agreements (SLAs) for availability and access; recovery time objectives (RTOs) and recovery point objectives (RPOs) for disaster recovery; labor, systems and bandwidth costs for data access; application impact for security. But there are other standards and practices, applicable to IT risk management in general and data risk management in particular, that need to be part of a holistic data risk management plan.

### *Measurement of a successful holistic data risk management program can go far beyond standard metrics.*

Data risk management standards and practices should:

- *Define the scope of risk analysis.* Identify the business activities, initiatives and supporting technologies and infrastructure elements that will be included in the data risk management effort.
- *Identify and define risks.* Map each business activity to potential threats and the data that could be at risk.
- *Assess the likelihood of risk occurrence and level of impact.* Calculate the probability and severity of an actual breach from the scope of business activities, resulting in an overall view of risk.
- *Evaluate controls.* Assess the quality of existing controls used to prevent, detect and mitigate risks, factoring in cost versus value provided.
- *Assess risk and determine treatments and responses.* Review risks relative to risk appetite, then prioritize risk reduction activities and select investments based on cost/benefit analysis.
- *Implement risk reduction actions.* Develop, test and implement detailed plans for risk treatment.
- *Provide ongoing monitoring and feedback.* Continually collect data on threats, impacts and effectiveness of current risk management process and adjust risk action plans and processes accordingly.
- *Address the positive side of risk.* Provide a more complete risk picture by balancing the potential negative risk inherent in growth such as new offices, new servers and distributed data with the potential positives such as shortened time to market and improved customer acquisition, retention and service.

## Holistic has its benefits

The most immediate reasons to consider putting a holistic data risk management plan into action are the monetary ones. A holistic approach to data risk management can help transform an organization's risk-related activities from a cost center to a value center by:

- Delivering considerable savings over traditional data risk management efforts—sometimes as much as 20 to 30 percent
- Helping to avoid contractual, industry and regulatory penalties
- Creating and maintaining one set of processes, leading to reduced redundancies compared to traditional data risk management efforts
- Helping to enable new revenue streams
- Allowing for faster market rollout of new initiatives, products and services.

*Potential benefits to holistic data risk management include faster time to market and a new responsiveness to customer requests.*

There are additional benefits to holistic data risk management that go beyond immediate cost savings. These can include:

- Smoother expansion into new markets
- The ability to take on new global partners safely and securely expand relationships with existing partners

- Heightened ability to win business and maintain existing contracts/customers
- New capabilities to innovate and drive competitive solutions
- Easier assimilation of acquisitions and mergers
- New responsiveness to customer requests and feedback
- New solutions to help grow market share.

## IBM can help

IBM's holistic view of data risk management—and the products and services that make that view a reality for our clients—is part of the IBM Security Framework, a combination of model and methodology that is optimized to allow organizations to understand core business processes, the threats and vulnerabilities associated with the processes and the ability to make viable recommendations for the whole.

The IBM Security Framework encompasses:

1. People and identity
2. Data and information
3. Application and process
4. Network, server and endpoint
5. Physical infrastructure.

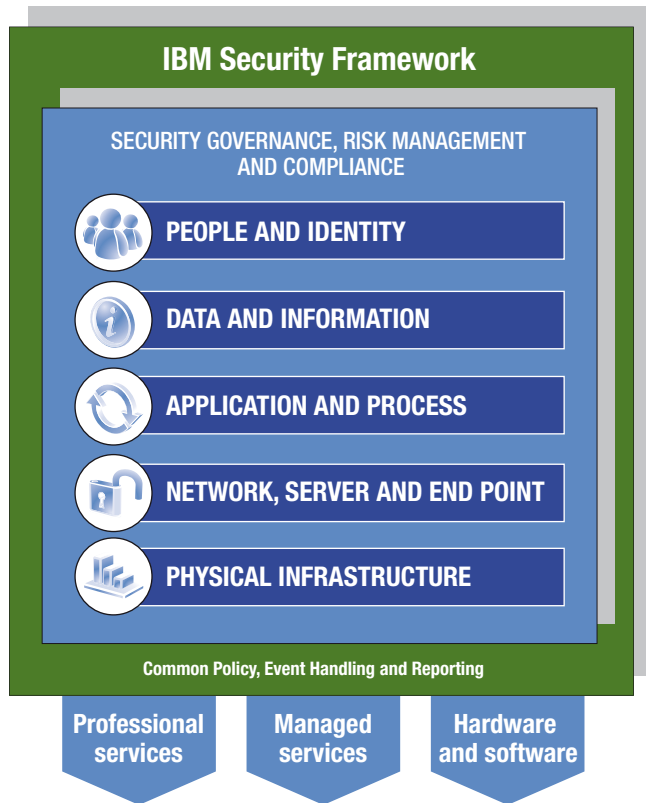


Figure 3: The IBM Security Framework provides a risk model, methodology and links to a robust portfolio of data risk management solutions.

By placing its data risk management solution within this framework, an organization can be assured that an extensive knowledge of best practices, proven expertise and global reach have been fully leveraged for its benefit. The organization will also know that its data risk management solution has the ability to fit together with other framework security solutions across the enterprise.

*Utilizing the IBM Security Framework, organizations can implement holistic data risk management at the speed and scope that matches their needs.*

Individual IBM data risk management solutions have been designed to help organizations qualify risk, forecast in a more proactive manner and establish controls to mitigate exposures. Using a highly modular approach, organizations can implement the process areas that can help generate the greatest value today and then add others as needs change.

IBM's holistic approach to data risk management also includes access to extensive industry knowledge and industry-specific solutions that cover important data risk areas such as PCI compliance and remote data protection.



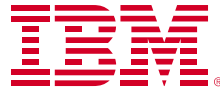
## For more information

If you and your organization would like to learn more about the holistic approach to data risk management, what this approach can do for your organization and how IBM can help you achieve its full benefits, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: [ibm.com/smarterplanet/security](http://ibm.com/smarterplanet/security)

To obtain a copy of the 2010 IBM Global IT Risk Study, visit: [ibm.com/services/riskstudy](http://ibm.com/services/riskstudy)

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September 2010  
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<sup>1</sup> MARKET ANALYSIS: *Worldwide Data Protection and Recovery Software 2010 – 2014 Forecast: Cloud, Deduplication, and Virtualization Stabilize Market*, Robert Amatruda, IDC, Doc. #24526, August 2010.



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