

Risk Management in the Age of Big Data¹

Marconi Fábio Vieira, PMP

The Risk Doctor Partnership

There's no doubt that we're living in the age of Big Data. The numbers tell the story:

- 2.5 quintillion bytes of data are created each day.
- 90% of all data in the world was created in the last two years.
- 50 billion connected devices and sensors are expected by 2020.
- 82% of executives say their organizations are increasingly using data to drive critical and automated decision-making, on an unprecedented scale.
- 89% of companies believe that Big Data will revolutionize business operations in the same way that the internet did.

Of course, there are many risks associated with managing an organization and its projects in the age of Big Data. Risk is inherent in all human endeavour, and we need to identify and understand Big Data risks and know how to manage them effectively. Two risks currently appear to be the most critical, and these demand focused attention from any organization that is serious about surviving and thriving in the age of Big Data:

1) **Data Governance.** Today's organizations recognize that managing data is central to their success. They recognize the value of their data and seek to leverage that value. As the human capacity to create and exploit data has increased, so too has the need for reliable data management practices. This makes data governance really essential. There is a major risk if we are trying to exploit the benefits of Big Data without having data governance that is aligned with business strategy. If your organization currently doesn't have data governance in place, then now is a good time to start. Data governance:

- **Defines a set of guiding principles** for data management and describes how these principles can be applied within data management functional areas.
- **Provides a functional framework** for the implementation of enterprise data management, including widely adopted practices, methods and techniques, functions, roles, deliverables and metrics.
- **Establishes a common vocabulary** for data management concepts and serves as the basis for best practices for data management professionals.

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DAMA International (<https://dama.org/>) has developed *The DAMA Guide to the Data Management Body of Knowledge* (DAMA-DMBOK, see <https://dama.org/content/body-knowledge>), which can help your company in establishing excellent data governance.

- 2) **Talent.** To manipulate, analyse, and leverage the insights available from Big Data, companies must hire people with skills and knowledge in data science, mathematics, statistics, artificial intelligence (machine learning and deep learning), and storytelling. The demand for data scientists, data engineers and programmers can only grow stronger. It will not be possible to exploit the value that Big Data can generate for your business without having these professionals working in your company. Some businesses are forming talent teams, investing in courses to develop the skills that are needed.

Smart companies are already reaping the benefits of guiding their business from the valuable insights available from Big Data. They are investing now in business intelligence to analyse historical data, and also developing advanced Artificial Intelligence algorithms to enable predictive analysis. Companies without a data-driven culture in this age of Big Data will be increasingly exposed to the two risks of inadequate data governance and lack of available talent, making them less likely to survive and thrive than their competitors.

To provide feedback on this Briefing Note, or for more details on how to develop effective risk management, [contact the Risk Doctor \(info@risk-doctor.com\)](mailto:info@risk-doctor.com), or [visit the Risk Doctor website \(www.risk-doctor.com\)](http://www.risk-doctor.com).

About the Author



Marconi Fábio Vieira, PMP

Minas Gerais, Brazil



Marconi Fábio Vieira, PMP is CEO of InfoChoice. He has been working in the IT field since 1985 and in the Project Management field since 2000. He also holds a Bachelor's degree in Translation and a formation in Data Science. Marconi currently provides online course in Big Data Project Management and IT project management services and risk analysis to multinational companies, and speaks at global and national congresses. Marconi holds a wide range of certifications (PRINCE2 Foundation and Agile, ASF, SFC, CUA, CUE, CACP Storage Specialist, CNS, MCP, MCT), and is a member of PMI® and IIBA. His book "Gerenciamento de Projetos de Tecnologia da Informação" was published by Grupo GEN. For more, go to: <https://www.grupogen.com.br/gerenciamento-de-projetos-de-tecnologia-da-informacao-2-edicao>

Marconi is based in Belo Horizonte, Minas Gerais state, Brazil and can be contacted at mv.joao3.16@gmail.com or marconi.vieira@infochoice.com.br.