

Data Governance Primer

Mastering and shaping a data-driven economy

February 2020

ABOUT CPA CANADA

Chartered Professional Accountants of Canada (CPA Canada) represents the Canadian accounting profession, both nationally and internationally. Operating in the highly complex and global accounting eco-system, CPA Canada is a convener, facilitator, contributor and disseminator of information that advances the profession. The organization works closely with the provincial, territorial and Bermudan CPA bodies to champion best practices that benefit business and society. With more than 217,000 members, CPA Canada is one of the largest national accounting bodies in the world. The organization supports the setting of accounting, auditing and assurance standards, advocates for economic and social development in the public interest, and develops leading-edge thought leadership, research, guidance and educational programs. cpacanada.ca

CPA Canada would like to thank the principal author of this document, Michael Lionais, CPA, CMA, Research Guidance and Support Group, CPA Canada.



“To prepare for tomorrow’s business landscape, Chartered Professional Accountants of Canada (CPA Canada) embarked on an ambitious multi-stakeholder consultation process that challenged the status quo and considered what implications arising from a rapidly changing environment could mean for the accounting profession.”¹ The project was conducted in two phases. Phase one laid the foundation, where phase two will include development of research agendas to support key workstreams that include:

1. **“Rethinking Value Creation**, both in terms of the development of new and evolving models of value creation and in reassessing how accountants add value.” Rethinking Value Creation is defined as the process by which an organization creates the potential for:
 - a) revenue and profits that can be realized in the future, and/or
 - b) future benefits for the organization’s stakeholders.

CPA Canada has initiated a Value Creation Decisions and Measurement Project² to explore ways in which the CPA Profession could transform itself to include a strong focus on value creation.

¹ cpacanada.ca/foresight-report

² Value Creation Primer can be found at foresight.cpacanada.ca/11452/documents/28020

2. **Mastering and shaping a data-driven economy.** Every CPA must ultimately become comfortable in a world that will be data-rich, data-intense and data driven. In concert with this, CPAs should play a role in the development of standards for data governance and data integrity.” This piece will focus on the area of mastering and shaping a data-driven economy.

Data governance is often defined as a collection of processes, roles, policies, standards and metrics that ensure the effective and efficient use of information in enabling an organization to achieve its goals. The accounting profession was created during the industrial revolution for this very reason; to protect society by ensuring relevant financial information was transparently disclosed against a common framework. However, the techniques of the past will not meet the demands of today or the future because a human cannot process the volume of data being gathered, nor at the speed necessary for competitiveness.

Today’s accountants are faced with an exponentially increasing amount of financial and non-financial data. The economy is now being referred to as the digital or transformative economy. Modern data governance is changing the workplace and competitiveness will be reliant on data. In 2017, there were 2.7 zettabytes³ of data worldwide. Projections are that the world’s data holding will increase to 175 zettabytes by 2025 – a mind boggling 6,500 per cent increase (it would take a user 1.8 billion years to download all this information).⁴

A 2019 United Nations report explains the digital economy is experiencing incredible growth in aggregable, machine-readable information that has been accompanied by an expansion of big data analytics, artificial intelligence (AI), cloud computing and new business models (digital platforms). More devices access the Internet, an ever-increasing number of people are using digital

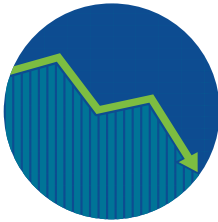
³ Nodegraph.se/big-data-facts (A zettabyte: A terabyte is equal to 1,024 gigabytes. A petabyte is equal to 1,024 terabytes. An exabyte is equal to 1,024 petabytes. A zettabyte is equal to 1,024 exabytes).

⁴ Bernard Marr, How Much Data is there in the World (Bernardmarr.com/default.asp?contentID=1846).



services, more value chains are being digitally connected and the role of digital technologies will expand further. As a result, access to data and the ability to transform data into digital intelligence have become crucial for the competitiveness of companies.⁵

There are evident successes in the digital economy, but is there an Achilles heel to data? NodeGraph and Deloitte have provided some disturbing worldwide statistics:



The average organization is losing **\$13.5 million** per year as a result of poor data quality (*Gartner, 2015*).



53% of companies are concerned with data quality. However, if there is no executive sponsorship of data governance functions, then 80% of companies surveyed are concerned with data quality (*Deloitte, 2015*).⁶



84% of CEOs worry about the quality of the data within their organizations (*KPMG, 2016*).

These statistics should be disturbing to professionals, institutions and the public who use financial statements. A key internal control certification in most financial reporting standards is that the key controls related to data holdings have been appropriately designed and are functioning as intended.

Organizations are made up of people who do their best, but in the frantic pace to get to market or make decisions, they may take the path of least resistance. Decisions may be made without an understanding of the quality of the evidence upon which the decision is based. Additionally, decisions which maximize the short-term may be made without consideration of the long-term impact, or the influence of those decisions on stakeholders or society.

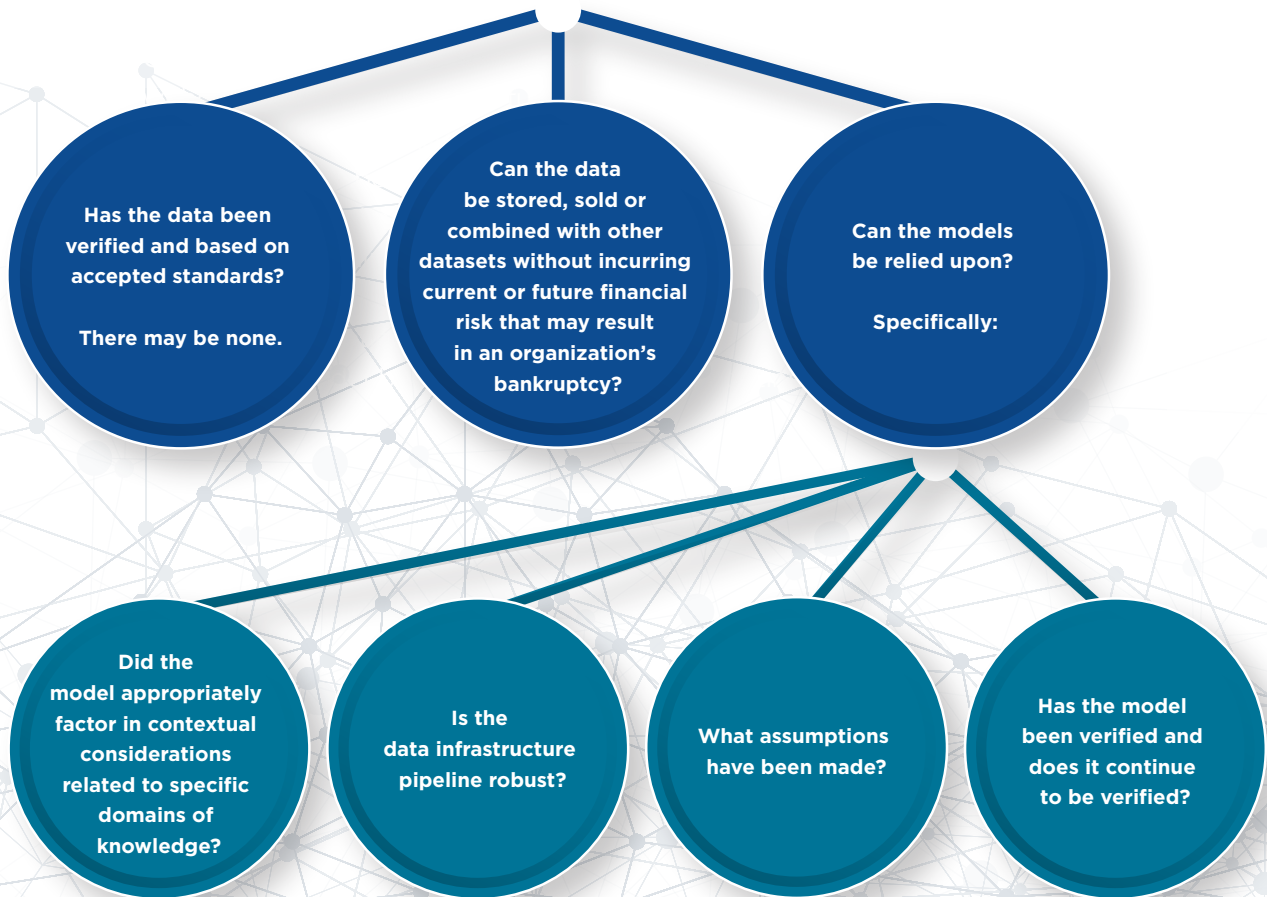
⁵ Supra note 3

⁶ Deloitte, "Developing Insightful Management Reporting, Opportunities and Challenges for CFOs," 2015.

Mainstream media has recently published articles that express concern with the practices of some 'big data' companies. Companies who may have undertaken unethical practices are now interested in establishing standards which will guide the development of verifiable evidence and may limit entry into their industries. The concerns raised by the media are being reinforced by trends in privacy legislation globally, open government approaches and the anti-trust activities of some countries. The global nature of data has created and will continue to create jurisdictional issues which may complicate the use of data in analytics and the operations of companies internationally.

Decision-makers at all levels in every sector of the economy are looking for help, and they expect data scientists to sift through reams of data to find the relevant information for decision-making. The role of the data scientist is to take a human problem and solve it using the processing power of a computer.

However, there are no professional rules guiding data scientists. They often use open source algorithms to facilitate the creation of complex models, which often leads to questions about reliability:



In society, accountants have professional standing grounded in trust. The profession has a history and an official mandate to develop frameworks and internal controls or reliable systems to gather financial information that guide financial reporting. Those frameworks have always been data dependent. To fulfil their current professional obligations and maintain their position of relevance though, accountants need to help frame the modern data governance environment.

The digital economy is not limited by the amount of data. It is limited by the quality of data and people with the skills to leverage this data. As such, steps need to be taken to improve the quality of the data being used in decision-making and develop the skills and context to assess the quality of data and create a robust data pipeline to inform models and other analytics.

The accounting profession uses transparency as the fundamental control to ensure that organizations respect financial frameworks and standards. This principle can be applied to modern data governance; especially since it is being described as a strategic resource – the oil of the digital economy. Current obligations related to financial data could be leveraged to develop new standards to guide the governance, collection, processing, analysis and valuation of data, in order to ensure that data can be verified to protect decision-makers, stakeholders and society. This would ensure the accounting profession plays a relevant, much needed and necessary role in the digital economy.

In society, accountants have professional standing grounded in trust.



CPA

CHARTERED
PROFESSIONAL
ACCOUNTANTS
CANADA

277 WELLINGTON STREET WEST
TORONTO, ON CANADA M5V 3H2
T. 416 977.3222 F. 416 977.8585
CPACANADA.CA