IMPROVING DATA QUALITY: PEOPLE, PROCESS, AND TECHNOLOGY

BY BRAD J. MONTERIO

Three components are critical for **creating quality, reliable data:** the people involved, the processes used, and the technology that enables them.

Strong data governance is essential—some would argue a *must-have*—in order for management, investors, analysts, regulators, and the public to believe in and rely on the data they will use to make decisions and take action. Management accountants have an opportunity to play a central role in data governance given their roles and position within an organization.

They sit at the nexus of the three primary components related to data governance and quality: the professionals involved (People); the processes and procedures followed or used by the professionals (Process), including guidance, standards, frameworks, and methodologies; and the technologies used to enable, protect, control, and support the people and the processes (Technology). Combined, these three components represent the People-Process-Technology (PPT) model.

Management accountants (as part of the People component) manage internal controls, monitor performance, assess risk, budget, forecast, and provide various types of measurement and reporting. They are centrally involved in reporting (both financial and non-financial) and have a responsibility to ensure the integrity of the information disclosed. Much of their work encompasses aspects of the Process component, such as the reporting processes, accounting standards, internal control frameworks, risk management methodologies, data governance policies, and quality control.

Regulatory authorities increasingly require companies to produce digital external compliance reports using XBRL (eXtensible Business Reporting Language), which encodes (or tags) financial and business facts so that the information can be read automatically and more easily sorted, compared, and discovered by software. XBRL is one of the components of Technology in the PPT model, along with other software, hardware, and technology solutions.

In 2009, the U.S. Securities & Exchange Commission (SEC) mandated that companies use XBRL within their digitally filed financial statements and reports as a way to enable the SEC—as well as stakeholders such as investors, analysts, and the public—to aggregate, consume, compare, and analyze large volumes of information in a commonly defined format. This standard set of tags (i.e., taxonomy) is intended to enhance the comparability and improve the quality of that information. Within this framework, if People (those who gather, validate, and tag the data: report preparers, accountants, attorneys, compliance professionals) follow proper Process (SEC XBRL filing rules, XBRL technical guidance, relevant accounting standards) using Technology (XBRL-enabled software tools, internal ERP/reporting systems, SEC's EDGAR filing system) the way it was

intended, data quality should theoretically be at an acceptable level.

In the United States, however, data quality concerns plague this arena. In 2012, Columbia Business School's Center for Excellence in Accounting and Security Analysis (CEASA) issued a report, *An Evaluation of the Current State and Future of XBRL and Interactive Data for Investors and Analysts*, highlighting problems with data quality in SEC filings. A key focus of the report was the use of custom XBRL tags (also called extensions) created by some companies to identify additional information that they wanted the market to receive as part of the filing but that wasn't included in the core set of data definitions in the U.S. Generally Accepted Accounting Principles (GAAP) taxonomy. Both custom XBRL tags within a given organization and the human and software potential for tagging errors present serious challenges to data integrity.

In September 2013, Rep. Darrell Issa (R.–Calif.), then chairman of the House Oversight Committee, sent a comment letter to SEC Chair Mary Jo White (see **http://1.usa.gov/1ZsslH7**) in which he referenced 1.4 million errors in XBRL filings to the SEC that "lead to skepticism about the usability of the data." The letter suggested users lost faith in the entire data set, calling into question the usability of the data for analysis.

There are some bright spots. In September 2014, Mark J. Flannery, SEC chief economist and director, addressed the Data Transparency Coalition's Fall Policy Conference attendees in Washington, D.C., on the improvements in XBRL data quality. Flannery said, "Our staff analysis shows that there continues to be significant innovation in the XBRL-related services industry—there are currently more than 30 third-party XBRL providers compared to 11 in 2009. Moreover, the creation of tagged data output has resulted in greater automation within the internal reporting process at companies who now can use new vendor products that integrate XBRL tagging into their financial reporting tools."

XBRL International, Inc. (XII), the creator and manager of the global XBRL standard, also has a series of initiatives designed to enhance data quality. Its XBRL Best Practices Board (BPB), for which I am the current vice chair, is responsible for developing guidance and resources to help the market better understand, adopt, and use XBRL for internal and external disclosures. Current efforts include the development of the XBRL implementation life cycle to help organizations design and develop their own reporting programs. Task forces have been formed to study best practices surrounding the use of extensions as well as taxonomy architecture—these are designed to enhance the People and Process parts of the PPT model. XII's XBRL Standards Board has also recently established an Open Information Model working group to develop a framework for XBRL to work with other current technologies such as JSON (JavaScript Object Nation)—this will enhance the Technology component of the model.

In June 2015, XBRL US formed the Center for Data Quality to "address public concerns about XBRL and improve the quality and usability of XBRL-tagged financial data filed with the SEC." The Center's goals are to:

- Develop standardized guidance on the consistent tagging of data;
- Put guidance from the Financial Accounting Standards Board (FASB) and the SEC into computer code, thereby automating its availability; and
- Give public companies new tools to facilitate high-quality XBRL filings.

Currently, the Center is "developing guidance and validation rules for XBRL tagging with the goal of helping companies file consistently accurate XBRL disclosures" with the SEC. The initial focus is on rules that test for input errors and verify compliance with current SEC and FASB guidance. The next step will be to look at guidance for uniform, consistent tagging. The Center's efforts to develop additional guidance (i.e., to better the Process) and to bring together several members of the Technology component of the PPT model are intended to help eliminate sources of data quality errors.

But enhancements are needed to the People component as well, such as better training and education of the company professionals involved in creating and communicating information for stakeholders. This is where management accountants can truly be part of the solution to data quality concerns. Not only are they part of the People component, but they can help organizations overcome challenges in People, Process, and Technology in order to maintain effective data governance and quality. **SF**

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