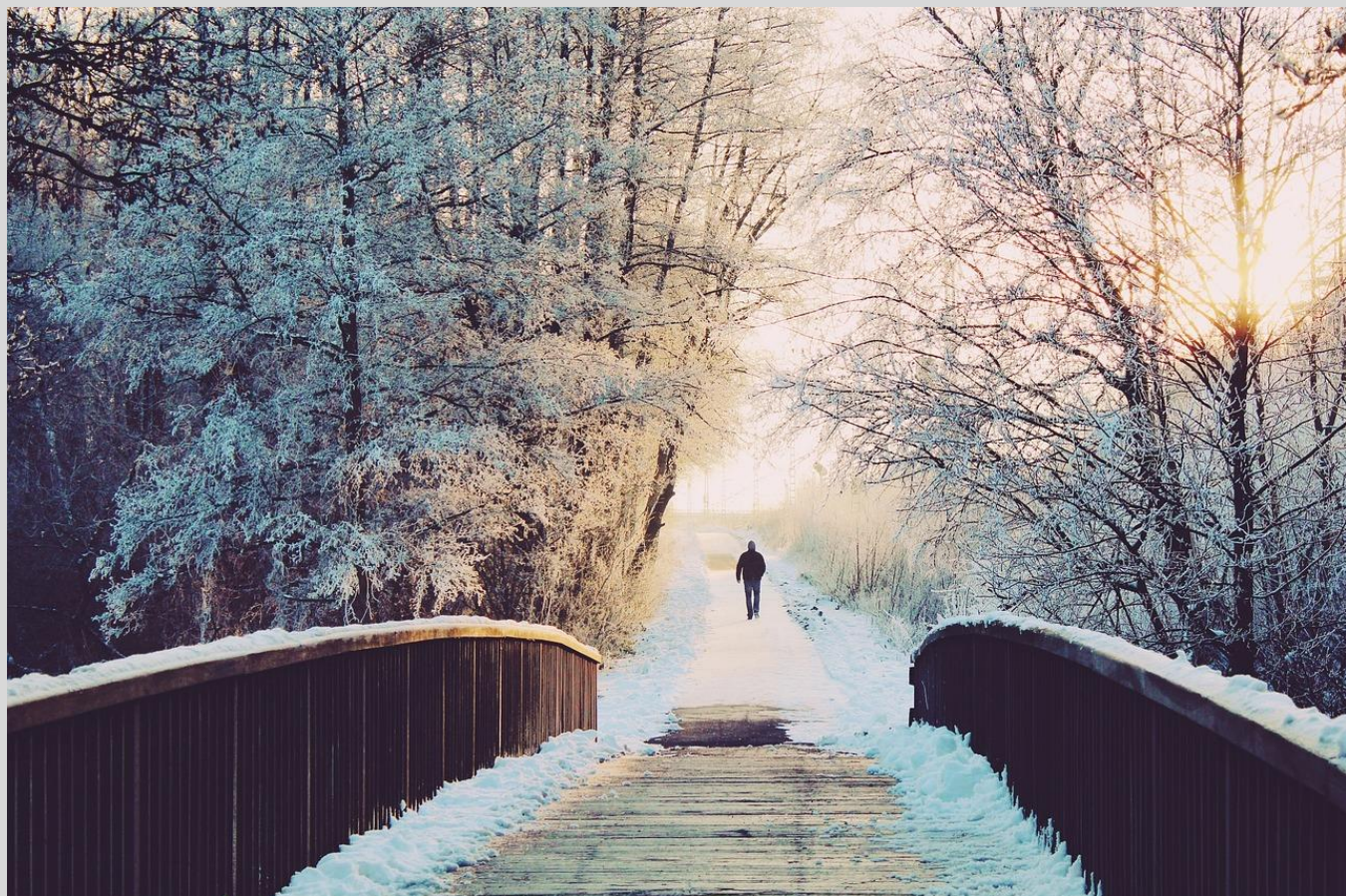


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*Think***TWENTY20**

The Magazine for Financial Professionals



**AI Accelerates Inclusion of E, S and G into Strategic Operations
Structured Data Program at the U.S. Securities and Exchange Commission
How to Safeguard the Currently Controversial Uses of Crypto Assets
Defining Desirable Results from a GenAI Tool
Inside Out or Outside In? Two Sides of (Nearly) the Same Coin
Book Review of "The Big Con"**



Number 19, Winter 2024

Editor in Chief: Gerald Trites, Managing Editor: Gundi Jeffrey, Contributing Editor: Eric E Cohen

Email: info@thinktwenty30.com Telephone: (416) 602-3931

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Editorial



Gerald Trites, FCPA, FCA, CISA
Editor-in-Chief

While there has been a growing focus on ESG or sustainability in recent years, (despite the backlash from certain quarters), much of the emphasis in the accounting world – understandably – has been on disclosure standards. Nevertheless, for many companies around the globe, there is a deeper issue – inclusion of ESG into their corporate strategies. True, there has been some emphasis on integrated thinking, which ventures into corporate strategy, but by far the greater part of the conversation has been on disclosure as opposed to strategy,

David Wrey’s innovative and groundbreaking article takes on the issue of techniques to include ESG into strategy by considering the possibility of using AI, in particular Causal AI, for addressing this issue. Causal AI is a form of AI that is ideally suited to addressing complex problems by using cause and effect analyses. (The article itself explains this much more clearly.)

The Causal AI approach does show how the word continues to become more complex, and how “basic” AI needs oversight by humans and human reasoning. Eric Cohen’s article on AI in this issue, also points to this issue and how taking a human-centric approach will help, along with adoption of ISO standards which are designed to improve the quality of AI systems for human use and consumption.

The growing usage of complex technologies, along with combinations of those technologies shows just how much accounting and finance are changing.

/GDT

AI Accelerates Inclusion of E, S and G into Strategic Operations

By David Wray, ACA, CPA



David Wray, ACA, CPA, CGA, MBA, BFP, has held finance executive roles in the technology industry for 25 years, is the President of the DFCG International Group and Board Member & ESG Chair of the International CFO Alliance. He is a transformation expert, sharing his views on sustainability, accounting governance, digitization, large-scale transformation, and change management. He writes and speaks internationally about finance, sustainability, and transformative technologies. David recently published his Amazon best-selling book The Power of Potential: A Straightforward Method for Mastering Skills from Personal to Professional.

We begin 2024, and companies continue to face international headwinds and difficulties that require out-of-the-box business problem solving skills. These challenges include volatile interest rates, uncertain economies, tight labour markets, artificial intelligence, and growing stakeholder pressures in ESG matters. We find ourselves within a business environment ill-suited for the faint of heart!

Navigating the road to success will require companies to prioritize and invest their limited resources wisely. One area of future promise continues to be artificial intelligence (AI). Business and industry leaders are actively evaluating how technology may help address a plethora of challenges within supply chains, finance, or human resources, for example.

The topic begs two important questions. Does AI offer a genuine case for catalytic change or is it merely over-hyped? If artificial intelligence is a bona fide option, how does this journey begin?

A Starting Point for Change

Before embarking on any initiative, identifying the fundamental issue to be solved is a critical first step. Swiftly followed by an understanding of the organization's data availability and readiness, and finally an understanding of the technology types that may aid in problem resolution.

The age-old finance question of "should we buy, or should we lease?" in a digital era becomes "should we build a solution, or should we out-source?" Artificial intelligence introduces new concepts: learning optimization, false positives (aka hallucinations) and biases. All of which need consideration in solution development and acquisition decisions.

These opening questions inevitably spark more questions around rightsholders (aka stakeholders), purpose, outcomes, decision usefulness and organizational readiness.

Before we get too far ahead of ourselves, let's rewind a little to contextualize these elements through a very human-based public interest rights project actively underway. The project consists of a consortium of technology, human behaviour specialists, data science, NGO, industry, legal, financial and human rights investigators.

The Human Rights Backstory

In late 2022 the *International Labour Organization (ILO)*, *International Organization for Migration (IOM)* and international human rights group *Walk Free* [published a report](#) revealing that approximately 50 million people live in modern slavery, of which 28 million are in forced labour conditions. To put that in context: the number of individuals affected by modern slavery is greater than [the populations](#) of Canada, Switzerland and New Zealand combined!

The work done by the [Finance Against Slavery & Trafficking \(FAST\)](#) initiative under the United Nations University Centre for Policy Research found that to “bring this figure close to zero by 2030 – to meet the UN Sustainable Development Goals Target 8.7 – we would need to reduce the number of people affected by around 10,000 individuals per day,” became the public interest project catalyst. The weight of this statistical fact motivated the formation of an independent public interest consortium. A group motivated and committed to bring their collective expertise to bear to develop innovative technology solutions which aid in solving human rights issues. The vision is simple: act now to support NGOs, human rights groups, survivor organizations and enterprises in eradicating oppressive forced labour practices.

Contributing towards resolution of issues requires a clarity of focus. So, following identification of the chosen focus area – forced labour within international supply chains – the focus turns to development and deployment of a scalable proof-of-concept (POC) solution. Identification of the selected POC focus area, given the sheer magnitude of human rights topics, emerged following multi-stakeholder engagement.

Understanding Causal AI Technology

The artificial intelligence technology decision was next. Causal AI is a technology that can “reason” and evaluate choices as a human does, a technology ideally suited to highly complex problems such as identifying, solving and eradicating forced labour (aligned with the [CCLA initiative](#)). Effectively, causal AI is designed to understand, and illustrate, the cause and effect behind an outcome, the insights of which subsequently support human-led resolution and prevention.

In other words, Causal AI allows us to take information and make sense of it, this is known as causal discovery (Figure 1).

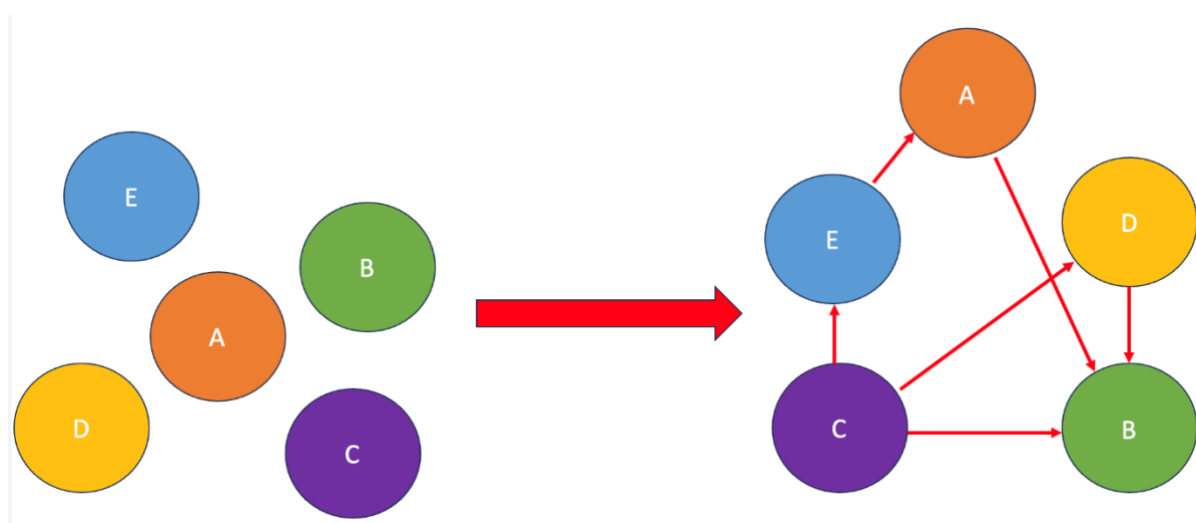


Figure 1: An illustration of causal discovery

The Causal AI training (Figure 2) begins with ingestion of domain knowledge, which gave rise to the principle causal model (PCM). It consisted of general background derived from legislative data, world facts (i.e., demographics, economic data, infrastructure facts, and other statistical information), terms, definitions and other topical relevant data or information. Domain knowledge is effectively the foundational library upon which learning evolves, akin to human learning built on an academic baseline of subjects!

The Rational Causal Model (RCM) builds upon the PCM, but what value does it bring? It captures and identifies the specific cause and effect understanding of the domain, such as “X” causes “Y” causes “A” causes “C” and so on. It effectively creates a web of connected understanding, at scale, which humans can more readily comprehend.

The third layer, the Structural Causal Model (SCM), extends the connected understanding to establish relationships using historical data, meaning it takes the connections and determines which ones are *bona fide* and which constitute noise. Noise, of course, being a significant risk for hallucinations.

The combined early insights from the principle and rational causal models allows users to automate the creation of proposed hypotheses, the latter of which require human subject matter expert (SME) validation.

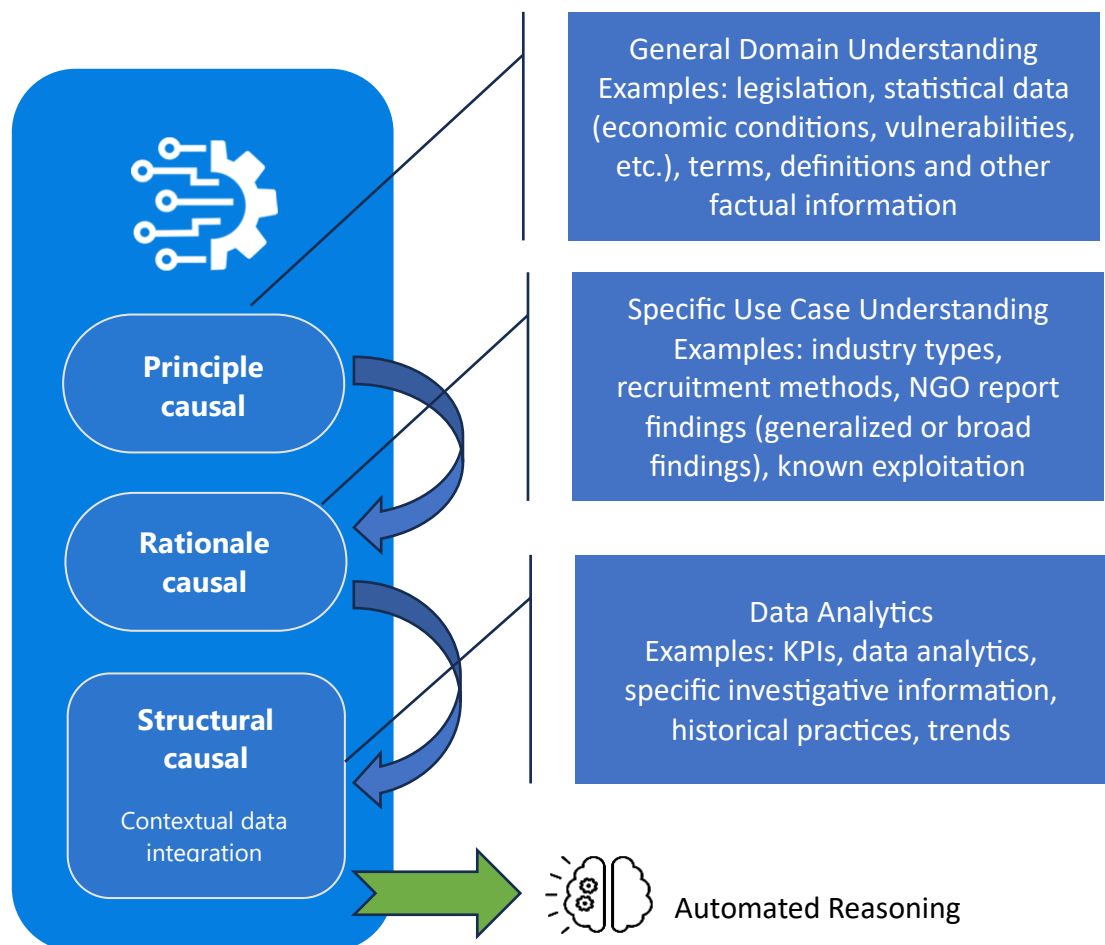


Figure 2 – Causal AI Approach to cause-and-effect learning

The combination of the three causal model layers coupled with specific SME knowledge produces the final causal model which serves as the basis for subsequent dataset ingestion and validation. In this context, validation is a process that tests the dependent and independent variables using the dataset of “interest” against the final causal model previously built. When a hypothesis is validated in this manner, it becomes a statement of fact (or truth) within a specific domain or organization (as the case may be) – should it not prove factual, then that specific hypothesis statement is rejected. Following the hypothesis validations, factual statements are carried forth where they are used to predict outcomes using real-time data. As with all AI predictions, they are human reviewed and embedded into decision making processes.

This sequence of iterative validations is done whenever events or circumstances evolve such that new reasoning would naturally occur. To explain this using a relatable example: You start a new job and meet several people during your first day, including Bobby. Bobby is a funny, articulate, personable and very polite young functional leader – your first impression is likely favourable. Several days later you find yourself in a meeting with Bobby and witness him laying into a member of the team. Bobby belittles the individual and leaves him visibly shaken after this public outburst. This additional information about Bobby would naturally cause you to reassess the kind of person you believe he is – in other words, the additional information could well result in a change to your hypothesis about Bobby being funny, articulate, personable and polite.

Applying Causal AI to a Public Interest Initiative

Like any successful technology project, artificial intelligence outcomes depend on a rigorous methodology, method, and program management (see Figure 3).



Figure 3 – Methodological Overview of the POC Approach

Returning to our topical use case, causal AI’s “pattern thinking” allows us to illustrate the totality of causes behind a given behaviour (such as the behaviours or characteristics of perpetrators using forced labour practices, or the social and environmental circumstances that lead to a person being vulnerable to forced labour conditions).

As previously illustrated, causal AI develops its learning from domain knowledge, specific knowledge, and extracts insights from historical data that generic predictive AI often fails to recognize. In effect, Causal Modelling Capabilities offer comprehensive scientific modelling and analytical tooling with coarse-level services, such as causal hypothesis, root cause analysis and what-if scenario simulations. It is this human-like approach to complex problem solving that makes this technology approach interesting in this experiment.

Because Causal AI embeds expert specific knowledge within the modelling process, insights from experts highlight specific and generalized relationships that the technology must respect. For instance, forced labour always has an underlying economic motivation for the perpetrator – this relationship becomes a given that Causal AI cannot override in its analysis. This combination of the human and the data elements ensure the Causal models blend the best of both! In technical terms, for example, this might be expressed as a survivor group expert knows that economic benefits have a linear positive relationship with forced labour in

vulnerable communities. This knowledge is embedded into the model to ensure it always respects this cause-and-effect relationship.

A Collaborative Approach for Solving Highly Complex Issues

Supporting the vision of developing a meaningful tool that supports all community actors in eradicating specific human rights issues requires a collaborative approach, one that includes cross functional, cross discipline and cross organization input. A structured methodology and iterative development cycle that includes human input throughout to validate the assumptions, inputs, and outcomes at each stage of data input, learning, testing, iteration and outcome validation (see Figure 4).

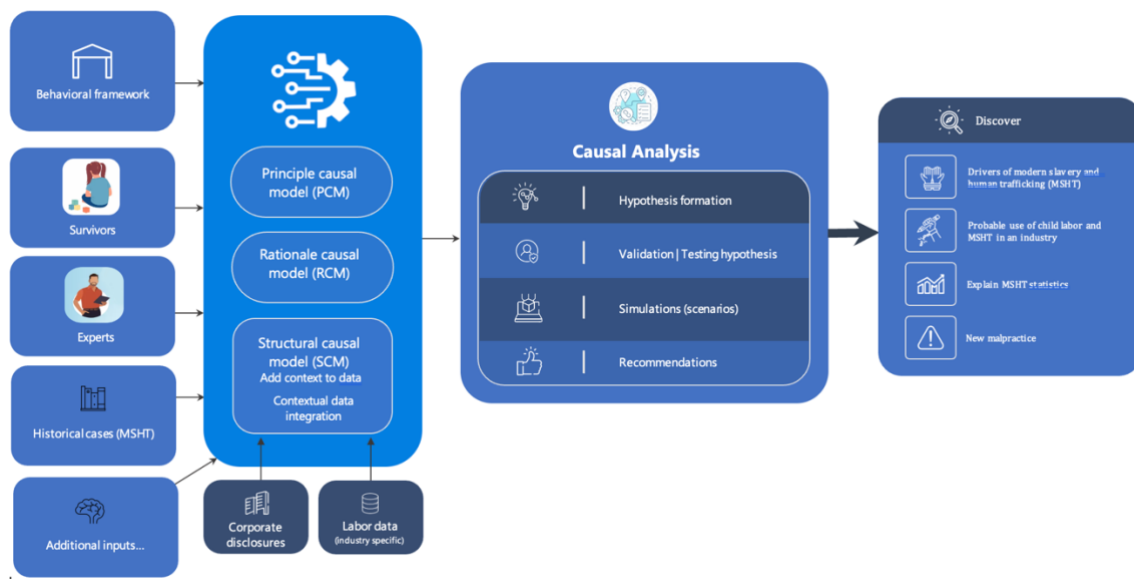


Figure 4: Collaborative POC Approach, reprinted with permission from Parable.ai, 2024.

The methodology begins with hypotheses statements, aligned with the datasets or data elements needed, establishing the specific questions to answer. Hypotheses in this use-case context is effectively an exercise in identifying an ecosystem of all possible reasons (i.e., causes) relating to an issue of interest (i.e., an effect) within a defined setting (i.e., context). An example of the hypothesis exercise approach used in the POC, showing one of the hundreds created, is reflected in Figure 5.

Dataset	Cause	Effect	Condition	Text Hypothesis
Raw Data C1 and C2	Have you ever witnessed, or been the victim of, physical or sexual violence? Yes	Do you feel safe in your workplace? No	Are you able to move freely at all times? (No curfew) No	Witnessing or being the victim of violence causes workers to feel unsafe in the workplace especially when they are unable to move freely at all times.

Figure 5: A Hypothesis Illustrative Example, reprinted with permission from BEworks Inc, 2024.

To better understand the hypotheses challenge, imagine that you are trying to identify the possible causes (motivators) for a person perpetuating a forced labour act, when you lack a contextual understanding or ability to recognize the environmental conditions within which it occurs. It is the quintessential example of “you don’t know what you don’t know,” the modern expression for Socrates’ “I only know that I know nothing.”

Filling this knowledge gap requires subject matter expertise to ensure the AI learns correctly, meaning it will not assert incorrect conclusions or develop erroneous patterns (aka hallucinations). Expertise emerges in different forms including survivor voices, labour or human rights organizations or employee-owned consultancies specializing in ethical trade and human rights, for example. Including this very human perspective within AI learning is critical to eliminate biases, assumptions that arise from a privileged life or the application of values and norms that lack universality.

Bringing hypothesis development to life through the survivor voice provided unique insights into the financial behaviours and indicators of modern slavery and human trafficking in a few specific contexts (e.g., sex work in Europe or human trafficking from certain African countries). From these discussions, the human behaviour specialists were able to generate a list of over 250, and counting, behaviours and indicators serving as data inputs for the Causal AI model as reflected in Figure 6.

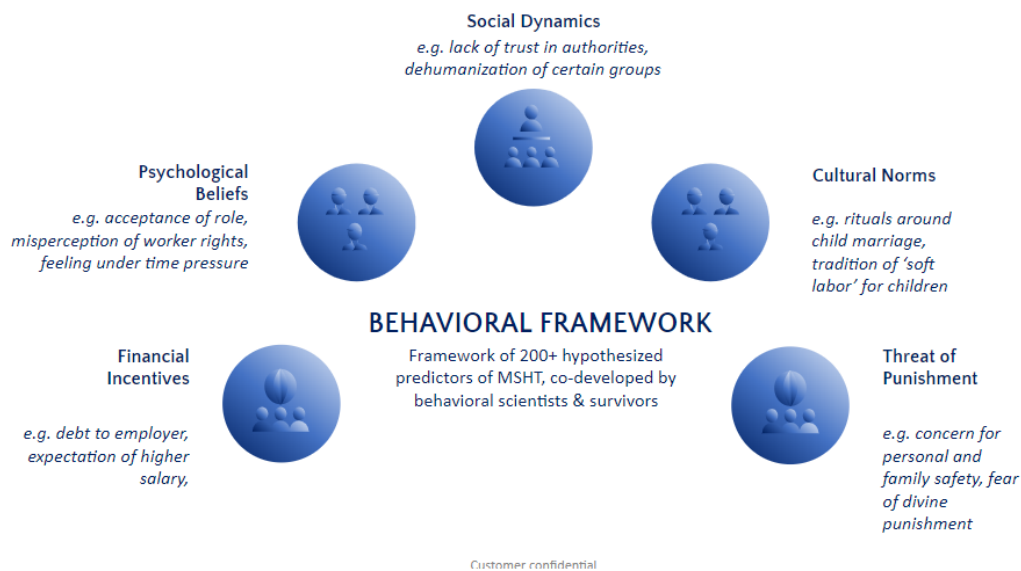


Figure 6: Behavioral Framework, reprinted with permission from BEworks Inc, 2024.

In addition to the human considerations, are the data privacy concerns and the ethical considerations of both the data usage and the technology application. On the data privacy element, using anonymized data from individuals and organizations was foundational – nothing could be used that may lead to identification of a specific person to protect both rights to privacy and security. On the technology application element, the team is evaluating safeguards to prevent the technology from being used either for social profiling or by perpetrators using it to develop new concealment practices.

The ultimate objective of the consortium project is to both support the public interest by empowering NGOs with evidence-based information to support and inform their work, and to support industry in managing its legal, reputational, and business risks.

The game changes when data is universally available to industry rightsholders (i.e., employees, investors, suppliers, customers, governments (local, national, and international) and regulators, for instance). So, what does this mean for companies?

Technology is Exciting...Reality Sets In

Beyond the technology itself, the consortium reflected on how the solution could be developed to be decision useful for industry in identifying, fixing, and preventing modern slavery¹ within international supply chains.

How might it improve the accuracy of cause-and-effect patterns, predictions, and what-if scenarios so information become more actionable, or decision useful? Exactly what types of business challenges could the solution help solve?

Classic challenges cited by business leaders, most often by the chief financial officer (CFO), include the need to improve an organization's supplier due diligence verifications (lowering legal and reputational risks), develop tailored plans to enable a company to improve its business critical supplier labour practices (lowering legal, regulatory and reputational risks, and increasing long-term cost benefits) or optimizing procurement decisions that balance a set of complex legislation, environmental and social considerations, company values, cost, time and quality (optimizing cost-benefit trade-offs). The idea being that every decision maker becomes empowered to make decisions for which they are more fully informed and therefore more accountable.

Corporate leaders want to do the right thing; the question is how to best do so. The build versus outsource decision in the context of most organizations will land on the side of "outsource" to the market – ideally a solution that is market trusted.

Generative AI, also known as GenAI (e.g., ChatGPT), may have democratized access to artificial intelligence through its simple to use query interface. GenAI is, however, only as good as the underlying learning development and algorithms from which it synthesizes its user-responses. The underlying machine learning is an [intensive and costly effort](#),² ChatGPT 4.0 cost U\$100M to develop according to [Sam Altman](#), and the full cost goes well beyond development to include implementation, maintenance and more. Notwithstanding OpenAI's investment, ChatGPT experiences hallucinations (e.g., the [court case that went horribly wrong in Manhattan](#)) and biases (e.g., in political discourse based on research by the [University of East Anglia, UK](#)) – it is not a unique phenomenon to OpenAI, it is a challenge for all AI development initiatives.

These economics suggest that, while self-developed proprietary AI will likely remain exclusively within the domain of wealthy entities or consortia, start-up technology innovations and public interest initiatives will rationalize around affordable solutions, in time, that are fit for purpose in levelling the playing field.

What Does This Mean in Practical Terms?

Companies may want to consider actively and ethically collaborating with technology innovators to pilot AI solutions and help improve them (thereby enjoying a first-mover advantage, and unique insight into their own organizations). It becomes a symbiotic relationship for both parties.

The Bottom Line

Stay tuned, this forced labour in international supply chains consortium collaboration is actively underway. You can get updates through the International Group of DFCG ([dfcg.fr](#)), Parable ([parable.ai](#)) and BEworks ([beworks.com](#)). A better and fairer future is being

¹ [CCLA Collaborative Initiative](#) (Find it, Fix it, Prevent it).

² "Chatbots lose money every time you use them. That is a problem" (Washington Post, 2023).

developed right now; one where you too can contribute your finance expertise towards public interest causes. The choice on what you do next is yours.



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Structured Data Program at the U.S. Securities and Exchange Commission

By Julie Marlowe



Julie Marlowe is the Assistant Director of the Office of Structured Disclosure ([OSD](#)) at the U.S. Securities and Exchange Commission (SEC or the Commission). Before joining OSD, Ms. Marlowe was a staff accountant in the Division of Corporation Finance and reviewed periodic filings and registration statements for filers' compliance with accounting disclosure and SEC requirements. Ms. Marlowe started her career at the SEC as an audit manager in the Office of Inspector General. Prior to joining the Commission in 2010, she was an audit manager at KPMG, LLP. She serves as an observer on the Financial Accounting Standards Board's (FASB) Taxonomy Advisory Group and the International Financial Reporting Standards (IFRS) Taxonomy Consultative Group.

Disclaimer: This article is provided in the author's official capacity as the Commission's Assistant Director of the Office of Structured Disclosure but does not necessarily reflect the views of the Commission, the Commissioners, or other members of the staff.

Given recently adopted SEC rules with structured data requirements and the Financial Data Transparency Act of 2022, the public's interest in the Commission's structured data program has increased. Before discussing the SEC's structured data program, an introduction on the role of the Office of Structure Disclosure will be useful.

Role of the Office of Structured Disclosure

OSD, within the [Division of Economic and Risk Analysis](#), supports the SEC's efforts to make data accessible and easy to use. OSD works closely with other SEC Divisions and Offices to design data structuring approaches for required disclosures and supports the SEC's data collections and data usage by designing taxonomies and validation rules. Further, OSD staff performs data quality assessments and develops enterprise-wide applications for conducting data analyses. OSD also works with investors, regulated entities, and the public to support the submission and use of structured data.

Evolution of XBRL Requirement by the SEC

The Commission began its Interactive Data Voluntary Program in 2005 allowing operating companies, and later mutual fund companies, to voluntarily submit eXtensible Business Reporting Language (XBRL) data as exhibits. In 2009, the SEC mandated operating companies to

structure financial statements and notes with a three-year implementation period based on the registrant's size. Additionally, the Commission required mutual funds to provide risk/return summary section of their prospectuses in XBRL. Further, in 2017, the Commission provided notice that the IFRS Taxonomy was available on the Commission's website and all foreign private issuers that prepare their financial statements in accordance with the IFRS must submit their financial statements in XBRL for fiscal periods ending on or after December 15, 2017. As the readers may know, 2018 was a significant year as the Commission adopted rules that required operating companies, on a phased-in basis, to submit financial statement information in Inline XBRL. Those rules also required mutual fund risk/return summary information to be Inline XBRL. Since then, the Commission has adopted numerous rules with machine-readable data requirements.

2018 was a significant year as the SEC adopted rules that required operating companies, on a phased-in basis, to submit financial statement information in Inline XBRL.

Example SEC Rules Requiring Machine-Readable Data

The SEC adopted the Insider Trading Arrangements and Related Disclosures rule in December 2022. Among other requirements, the rule requires new disclosures regarding issuers' insider trading policies and procedures and the adoption and termination of Rule 10b5-1 and certain other trading arrangements by directors and officers. The rule requires structuring various disclosures in Inline XBRL such as names of directors and officers, their titles, total number of securities to be purchased or sold under the trading agreement and narrative disclosure on insider trading policies and procedures.

In July 2023, the Commission adopted the Cybersecurity Risk Management, Strategy, Governance and Incident Disclosure rule. This rule requires disclosures about material cybersecurity incidents. Also, it requires periodic disclosures about a registrant's processes to assess, identify, and manage material cybersecurity risks, management's role in assessing and managing cybersecurity risks, and the board of directors' oversight of cybersecurity risks. The rule requires Inline XBRL for narrative disclosures in block tag and detail tag for quantitative disclosures.

Further, in October 2023, the Commission adopted the Modernization of Beneficial Ownership Reporting rule. This rule amends certain rules that govern beneficial ownership reporting. The amendments, among other requirements, generally shorten the filing deadlines for initial and amended beneficial ownership reports filed on Schedules 13D and 13G. Additionally, the amendments require that disclosures, including quantitative disclosures, textual narratives, and identification checkboxes, on Schedules 13D and 13G be filed in Extensible Markup Language also known as XML.

Readers can see examples of the SEC rules with machine-readable data requirements on OSD's website at www.xbrl.sec.gov and by clicking on History and Rulemaking in the left panel.

Financial Data Transparency Act (FDTA)

The Financial Data Transparency Act was signed into law in December 2022 with new requirements for certain regulatory agencies including the SEC. Among several provisions, the FDTA requires the Commission, along with other agencies, to establish data standards that must

include common identifiers for the collections of information, including specifically a legal entity identifier, that meet specified criteria relating to openness, machine-readability, and data quality.

The FDTA also directs the Commission to establish a program to improve the quality of corporate financial data filed or furnished by issuers under the Securities Act of 1933, the Exchange Act of 1934, and the Investment Company Act of 1940.

The SEC's Division of Enforcement used risk-based data analytics to identify potential accounting-related disclosure irregularities caused by, among other things, earnings management practices.

Further, the Commission must submit a report to Congress beginning 180 days from the date of enactment and, thereafter, every 180 days regarding the public and internal use of machine-readable data for corporate disclosures for the next seven years. The Commission staff issued the first report to Congress in [June 2023](#), which covers how the Commission staff use machine-readable data among other topics. The Commission staff issued the second report in [December 2023](#).

Use of Machine-Readable Data by the Commission Staff

Staff in various SEC divisions and offices uses machine-readable data. As noted in the Congressional reports, here are a few examples of how the Commission staff uses the data:

The Division Corporation Finance (CF) staff uses machine-readable data to help identify issuers that are subject to the disclosure and submission requirements of, and potentially subject to a trading prohibition under, the Holding Foreign Companies Accountable Act. Additionally, CF staff has reviewed machine-readable data that appear on the cover pages of registrants' annual reports to identify, count, sort, compare, and analyze registrants and their disclosures.

Both CF and the Division of Economic and Risk Analysis staff review machine-readable financial statement information contained in filings under Commission rules.

The Division of Investment Management oversees investment companies and advisers. Their staff utilizes machine-readable data for fund disclosures to readily detect errors and inconsistencies within filings and to identify funds with particular characteristics or disclosures, as well as funds with certain holdings, exposures or risk parameters.

The Office of the Chief Accountant engages in accounting consultation among other duties. Their staff uses output of certain Commission-wide analytical applications to conduct research for accounting consultations, information gathering relevant to accounting standard-setting projects and requests from other regulators, and the preparation of responses to specific data requests regarding registrants' accounting application.

The Division of Enforcement (Enforcement) used risk-based data analytics to identify potential accounting-related disclosure irregularities caused by, among other things, earnings management practices. Machine-readable data enabled the Enforcement staff to review the

financial data of thousands of public issuers to detect indicia of earnings management or other types of financial misconduct. Further, the Enforcement staff used and analyzed machine-readable data during the underlying investigation of an action brought in 2023 for violations of the federal securities laws and the Foreign Corrupt Practices Act.

These are just few examples of how the Commission staff use data and readers are encouraged to review the Congressional reports mentioned above to see other use cases.

Analytical Applications Developed and Used by Commission Staff

OSD has developed several analytical applications for the Commission staff, such as Filer Profile, Financial Statement Query Viewer (FSQV) and iView.

Filer Profile

Filer Profile is a new application that the SEC staff uses to analyze machine-readable and other types of data. Before diving into a filing, it provides an overview of what's going on with the filing or the operating company. It provides instant access to certain key data points such as financial data, audit-related information, and other data for operating companies. It highlights potentially high-risk data points or topic areas and facilitates further review via links to the sources of the data. In summary, Filer Profile enables users to quickly identify specific areas and topics of interest.

The Commission has acknowledged that the use of custom tags could potentially reduce the comparability of inter-company data.

Financial Statement Query Viewer

FSQV has an intuitive and easy-to-use web browser interface. With FSQV, SEC staff can search and review filings for operating companies and all facts across all filers. FSQV enables the SEC staff to:

- Search using various criteria (e.g., CIK, ticker, industry, filer status, country).
- Search by Fact (e.g., specific disclosure type and/or specific taxonomy element)
- Search by Text (e.g., any text within a narrative disclosure)
- Compare footnote narrative text differences between periods (i.e., 'red line' changes).
- Save all results and searches locally for further analysis and reuse.

FSQV allows users to group results by sector, filer size and other categories. Further, it allows staff to share their search queries and results with other SEC staff.

iView

iView leverages the open-source, freely and publicly available Inline XBRL Viewer. It includes various filters and query capabilities, including an ability to identify disclosures with custom tags (i.e., filers creating tags instead of using standard tags) and the sorting of machine-readable data by scale (e.g., amounts in thousands, millions, or billions). iView also offers time-series charting and benchmark analyses for numeric values and tracking changes in narrative disclosures.

Other SEC Efforts on XBRL Data

Efforts by Division of Corporation Finance (CF)

As the readers may know, CF reviews periodic filings of operating companies. CF, at times, has provided comments to companies regarding their disclosure obligations as they relate to XBRL and Inline XBRL through the Division's selective reviews of filings made under the Securities Act and the Exchange Act.

The [sample letter](#) that CF posted to the SEC website in September 2023 has sample comments that, depending on the particular facts and circumstances, and type of filing under review, CF may issue to certain companies. The sample comments do not constitute an exhaustive list of the issues that companies should consider as they prepare their XBRL and Inline XBRL disclosures. CF urges companies to consider these sample comments and additional guidance in this area as they prepare their disclosure documents.

The sample letter points to various issues such as:

- Filings that do not include the required Inline XBRL presentation in accordance with Item 405 of Regulation S-T.
- Filings with materially different tagged values for common shares outstanding reported on the cover page and on the balance sheets.
- Filings without appropriate Inline XBRL tagging for all the required Item 402(v) data points under the Pay Versus Performance rule.
- Filings with a custom tag rather than a standard tag in the U.S. Generally Accepted Accounting Principles Financial Reporting taxonomy for an income statement line item.

CF staff has also issued several comment letters on XBRL topics over the years and some examples include:

- Reminding a filer to file Inline XBRL.
- Instructing a filer to use the correct XBRL definition of income before equity method investments.
- Informing a filer of their incorrect use of a tag for a disclosure.

An example of a validation error is if the current fiscal year end date for a filing is missing. An example of a validation warning is using deprecated, in other words, outdated tags.

Data Quality Reminders and Analyses by OSD

OSD staff has issued data quality reminders, staff observations and guidance on data quality on OSD's [website](#).

For example, we have issued a data quality [reminder](#) on changing labels that we issued in November 2023. OSD staff has observed that some filers are using different labels for the same element used to tag the same reported item on the income statement from one period to the next, even when the description of the reported item did not change. In some cases, filers used one label in a particular form (e.g., Form 10-Q) while using a different label for the same element

in a different form (e.g., Form 10-K). For example, the element “Revenue from Contract with Customer, Excluding Assessed Tax” should not use the label “Operating revenue” on Form 10-Q while using the label “Total operating revenue” on Form 10-K.

In addition, in June 2023, we issued a data quality reminder on tagging issues we observed for operating activities disclosures in cashflow statements. In particular, OSD staff has observed in some Forms 10-K and 10-Q that filers are using tags related to accrual items associated with operating activities as presentation child elements of the following parent elements:

- [NetCashProvidedByUsedInInvestingActivities](#)
- [NetCashProvidedByUsedInFinancingActivities](#)
- [NetCashProvidedByUsedInInvestingActivitiesContinuingOperations](#)
- [NetCashProvidedByUsedInFinancingActivitiesContinuingOperations](#)

We reminded filers that they should review their Statement of Cash Flows to ensure each accrual item related to operating activities is appropriately classified as a presentation child element

of [NetCashProvidedByUsedInOperatingActivities](#) or [NetCashProvidedByUsedInOperatingActivitiesContinuingOperations](#).

OSD staff also performs analyses on average custom tags annually. As the readers can see on OSD’s [website](#), we do two analyses: one for domestic filers and another for foreign private issuers that reports in accordance with IFRS. The Commission's rules allow filers to create custom tags when the standard taxonomy does not provide an appropriate element to tag the data. While this customization accommodates unique circumstances in a filer's particular disclosure, the Commission has acknowledged that the use of custom tags could potentially reduce the comparability of inter-company data. Thus, the Commission's rules specify the limited circumstances under which a filer may create custom tags.

Electronic Data Gathering Analysis and Retrieval (EDGAR) Checks

One of the effective approaches to addressing data quality is to include validations at the intake process. As the readers may know, SEC registrants use the EDGAR system to submit their filings.

There are two types of validation checks at intake: 1) validation [errors](#) and 2) validation [warnings](#). EDGAR will provide the list of error messages for the validation and the filer must correct the errors before the filer can submit. Validation warnings indicate that facts found in the instance are in some way incomplete, inconsistent with each other, misleading, ambiguous or unreliable, and this will have undesirable downstream consequences for users of the data. Filers should avoid XBRL warnings by correcting the data prior to submission.

An example of a validation error is if the current fiscal year end date for a filing is missing. An example of a validation warning is using deprecated, in other words, outdated tags.

Effect of Data Quality Errors on Financial Reporting Process

These data quality errors are fairly easy to address and filers should consider utilizing data quality validation checks as part of their financial reporting process. For example, filers should review validation warnings that EDGAR issues and fix them before submitting their forms. They could also utilize freely available data quality validation rules that XBRL US publishes on their website.

OSD staff has observed some filings with scaling issues, such as extra three zeros for public float on the cover page of Form 10-K or a non-accelerated filer with a trillion in public float which is clearly an error.

- If pervasive issues exist in the quality of XBRL data, a filer should consider whether it has effective financial reporting controls in place and whether its financial reporting process includes quality checks on XBRL data before submitting it through EDGAR. Financial statements and notes are tagged in XBRL and filers should remember that they are responsible to report complete and it is useful to start the education process with Inline XBRL as it is both human and machine-readable and it enables new features directly within a filing.
- Company specific extensions (i.e., custom tags) are difficult for machines to consume as they lack context or relationships.
- In order to encourage use of machine-readable data, enabling analytical capabilities for each consumption by the user is critical.
- It is important to make the as reported data easily and freely accessible for various purposes including research.
- Coordination with accounting standards bodies such as FASB on taxonomy and reporting matters is critical.

Resources

XBRL US is an external organization that consists of filers, data aggregators, tagging vendors and others and provides data quality validation [rules](#) that filers can voluntarily use before submitting the filings to the Commission. Further, it publishes a list of filings with errors against their data quality validation rules on their [website](#).

Readers are welcome to check out various data sets published by OSD staff at [SEC.gov | DERA Data Library](#). These data sets are free and open source. Further, readers can get filings through EDGAR API at [SEC.gov | EDGAR Application Programming Interfaces](#).

Readers can also sign up for email updates from us by visiting OSD's website [SEC.gov | Office of Structured Disclosure](#). As well, they can send questions on the SEC's data structuring for required disclosures (including taxonomies, validation rules, XBRL, structured data feeds) to structureddata@sec.gov.



In Their Own Words: How to Safeguard the Currently Controversial Uses of Crypto Assets

By Gundi Jeffrey



Gundi Jeffrey is an award-winning business journalist specializing in writing about the accounting profession for various publications in Canada and England. In 1985, she co-founded The Bottom Line, then Canada's only independent publication for the accounting and financial professions, serving as its executive editor. In this article, she interviews Vinod Kashyap, FCA, DISA (ICAI), who is a UN/CEFACT Expert and the Co-Founder of NexGen Knowledge Solutions Private Ltd and a prominent international speaker.

A recent US survey found that more than half of Americans (53%) agreed that “cryptocurrencies are the future of finance.” But, while cryptocurrency is an issue that is growing in importance, respondents also agreed on the need for appropriate regulation.

Cryptocurrency exchanges are online exchanges that allow investors to buy and sell cryptocurrencies. Purchases and sales of cryptocurrencies can be made using either fiat currency (e.g., buying bitcoin using CAD or USD) or cryptocurrency (e.g., buying bitcoin using another cryptocurrency such as ether). In addition to cryptocurrencies, such as bitcoin and ether, cryptocurrency exchanges may also offer coins/tokens that have been sold pursuant to ICOs/ITOs.

Cryptocurrency exchanges operate across the world, in many cases without government oversight or regulation. Prices for cryptocurrencies may differ significantly among exchanges, allowing for arbitrage opportunities. While arbitrage opportunities may not exist for extended periods in efficient markets, they can persist in inefficient ones. Investment funds that purchase cryptocurrencies from these exchanges for their portfolios should be aware that standards among exchanges can vary significantly.

In the survey cited above, nearly four in five Americans consulted (79%) feel there needs to be clearer regulation of cryptocurrency. The survey also found that over half of adults (56%) say that innovations in finance that rely less on banks/financial intermediaries (e.g., cryptocurrencies) will create a more equitable economy by allowing more people to access the global financial system.

Different research shows that, of the households who use crypto in the US, half are Millennials and one third are Gen X. Gen Z and Boomers crypto households both number under 1 million. Millennials, Gen X consumers are 5 to 7 times more likely to use crypto than Boomers. Men (11%) are twice as likely as women (5%) to use crypto. Although some crypto users cite

traditional currencies being unreliable as their reason for using crypto, 7 in 10 say a reason is “high volatility creates opportunities to make money trading.”

SEC Chair Gary Gensler recently issued a stark warning about the risks associated with cryptocurrency investments, highlighting the potential for fraud and regulatory non-compliance.

But using cryptocurrencies is not without its dangers. SEC Chair Gary Gensler recently issued a stark warning about the risks associated with cryptocurrency investments, highlighting the potential for fraud and regulatory non-compliance. Gensler said many entities offering crypto assets and services might not be adhering to applicable laws, including federal securities laws.

In his Statement, Gensler emphasized the high risk and volatility of crypto investments, noting the insolvency and value loss of major platforms and assets. His most significant concern: the exploitation of crypto assets' popularity by fraudsters, leading to scams like bogus coin offerings, Ponzi schemes and outright theft.

ThinkTWENTY20 decided it is time to call in an expert to lay out the issues – pro and con – for our audience. We spoke with Vinod Kashyap, FCA, DISA (ICAI), who is a UN/CEFACT Expert and the Co-Founder of NexGen Knowledge Solutions Private Ltd. He has more than 32 years of quantifiable experience in Industrial and professional accounting, internal audit, information systems audit and digital financial reporting. Cryptocurrencies are one of his areas of expertise.



ThinkTWENTY20: *Why has the use of cryptocurrencies become so controversial?*

Kashyap: There are several reasons as to why cryptocurrencies have become so controversial. They are gaining popularity because of lower transaction costs, faster payments, no intermediation and anonymity, but can cause financial stability risks in traditional financial markets. Due to pseudonymous nature of cryptocurrency transactions, it has potential of use in illegal activities such as money laundering and terror financing. The use of anonymity enhancer tools (crypto mixers and tumblers) in cryptocurrency transactions also makes it a popular choice for illegal activities. Being a digital asset, they are subject to cyber security risks.

Wherever money is involved, scams follow. The same is true with cryptocurrencies also. Thieves use innovative schemes to steal money. They experience huge price fluctuations in their valuation, which is influenced by demand and supply, investor sentiments, regulations and media hype, etc. Due to high price fluctuations, they are considered as highly speculative in nature. Lack of adequate regulations to govern the business of cryptocurrencies make them prone to market manipulations and there is not enough protection to the investors under the existing laws.

The environmental cost of cryptocurrencies is also an issue. High energy consumption cryptocurrencies that use proof of work consume high electricity, e.g., Bitcoin. They are considered as a significant contributor to global air pollution. As per media reports, the US government has just signed off an emergency probe into how much power cryptocurrency miners are drawing from America's electricity grid.

Lack of regulatory compliance, transparency and avoiding a full financial audit also adds another layer of controversy to cryptocurrencies.

Cryptocurrencies are gaining popularity because of lower transaction costs, faster payments, no intermediation and anonymity, but can cause financial stability risks in traditional financial markets.

ThinkTWENTY20: *Who is most likely to use crypto, and is the use of crypto increasing?*

Kashyap: Younger generation and individuals who are tech-savvy, traders and speculators who look to gain from price volatility in markets, people living in countries with high inflation rate, currency devaluation risks and inadequate banking services are most likely to use cryptocurrencies.

And, yes, the use of crypto has been increasing every year and the pace of adoption of crypto is expected to increase further after the recent SEC approval of Bitcoin ETF.



ThinkTWENTY20: *What are the most common cryptocurrency frauds?*

Kashyap: The most common cryptocurrency frauds include ICO scams, Investment scams, Ponzi schemes, Fake crypto exchanges, Pump and dump scams, Crypto-rom, Air drop scams etc.

ThinkTWENTY20: *Which are most costly to victims?*

Kashyap: *OneCoin* – Promoted as a cryptocurrency using Multi-Level Marketing Scheme by Ruja Ignatova (popularly known as the Crypto Queen), Bulgaria, who was accused of defrauding investors about \$4 Bn.

BitConnect – Cryptocurrency exchange and lending platform promoted by Satish Kumbhani, India, which defrauded investors to the tune of about \$2.4 Bn.

PlusToken – Cryptocurrency wallet and an investment scheme promoted by six Chinese nationals, which defrauded investors of over \$2 Bn.

ThinkTWENTY20: *How do they affect automated trading platforms? Is there recourse for victims?*

Kashyap: Automated trading platforms can be used in market manipulation due to their ability to execute large orders in a short time, which results in sudden price spikes and drops.

Unlike traditional stock exchanges, which have rules and regulations for automated algorithmic trading of shares, there are no rules and regulations for use of automated algorithmic trading in cryptocurrencies. The existing laws don't provide enough protection to the victims of market manipulations conducted through use of algorithmic automated trading platforms.

ThinkTWENTY20: *Are companies aware of the real issues and are they taking the proper precautions?*

Kashyap: Companies involved in the business of cryptocurrencies are mostly aware of the issues but take precautions only when required under any regulation.

ThinkTWENTY20: *Are there specific tools or strategies to help companies protect themselves?*

Kashyap: The companies can protect themselves from cryptocurrency frauds by:

- Keeping their crypto assets in secure wallets.
- Using Two-Factor Authentication.
- Ensuring safety of their Private Keys.
- Using recognized exchanges and reputed crypto assets service providers.
- Conducting third-party security audits.
- Strict implementation of KYC/AML of customers.
- Employee awareness and training programs.

The existing laws don't provide enough protection to the victims of market manipulations conducted through use of algorithmic automated trading platforms.

ThinkTWENTY20: *What effective internal controls can be put into place?*

Kashyap: Companies can implement various internal controls to protect themselves against cryptocurrency frauds:

- Writing down policies and procedures to be followed for crypto assets and ensuring that the same are followed.
- Segregation of duties among staff for identification, authorization, conducting transaction, safe custody, accounting, etc.
- Monitoring of transactions on real-time basis.
- Audit of cryptocurrency transaction process for risks identification, internal controls, security, etc.

ThinkTWENTY20: *Is there a difference among countries?*

Kashyap: Yes, there can be a difference in the nature and presence of cryptocurrency frauds among various countries because of many reasons. Countries with well-defined regulations and regulatory bodies to grant licenses and monitor the business of crypto assets are likely to have less crypto frauds as compared to the countries with no regulation and regulatory body. Countries with a high adoption rate of cryptocurrencies may see frauds that are designed to take advantage of investment habits, e.g., investment frauds, Ponzi schemes, etc.

ThinkTWENTY20: How do you see this this developing – both positively and negatively – in the next few years?

Kashyap: The future of cryptocurrencies will depend upon several factors, both positive and negative.

Positive developments:

- SEC approval of Bitcoin ETF and launch of stablecoin by Société Generale, crypto withdrawal through Visa Debit Card in several countries and the proposed launch of a trading platform in 2024 by DZ Bank, Germany, are an indication of cryptocurrencies coming into mainstream.
- Innovation in blockchain technology could lead to more sophisticated and efficient platforms, which could lead to financial inclusion and also address the drawbacks of a traditional financial system.
- More and more countries are establishing regulatory framework for crypto assets, which will not only provide legality to the crypto industry but will also support the wider adoption of crypto assets.

Countries with a high adoption rate of cryptocurrencies may see frauds that are designed to take advantage of investment habits.

Negative developments:

- Regulatory uncertainty in many countries can slow down the adoption of cryptocurrencies.
- Cryptocurrencies will continue to be vulnerable to various cyber security risks like hacking, phishing attacks, crypto exchange/bridge hacking etc., which directly affect investors.
- High energy consumption in crypto mining raises environmental issues globally.



Defining Desirable Results from a GenAI Tool: Hallucinations, Undesirable Results, and ISO/IEC AI Quality Standards

By Eric E Cohen, CPA



Eric E. Cohen, CPA, is a technologist with a passion for collaboration toward the goal that “a piece of business information, once entered into any system, anywhere, never needs to be retyped as it moved through the business reporting supply chain.” He’s also a prolific author, engaged in virtually every effort to standardize accounting and audit data, a national expert to a wide variety of standards efforts, and co-founder of XBRL.

The Fall 2023 *ThinkTwenty20* included an article I wrote called *Generative Artificial Intelligence and Undesirable Output: Developing a Taxonomy for Undesirable Output with a Focus on Hallucination*. It spoke of my ongoing and personal campaign to move beyond the word “hallucination” when blaming GenAI for the problems of undesirable results. “Hallucinations” is such an easy term, but it is an oversimplification, and it masks the real problems, which are often not a quality issue with the AI at all.

Case in point: yet another attorney is under fire for submitting court documents with case citations provided by GenAI. To the prior, highly visible, cases (coincidentally, both involving attorneys named Schwartz: Stephen in May 2023 and David in December 2023), we now add Attorney Jae Lee. Blamed on hallucinations, you don't get hot soup from a jewelry store, and you don't use a GPT for legal citations. One blogger who follows these cases reports this is the thirteenth such case they have found as of 1/30/2024.¹

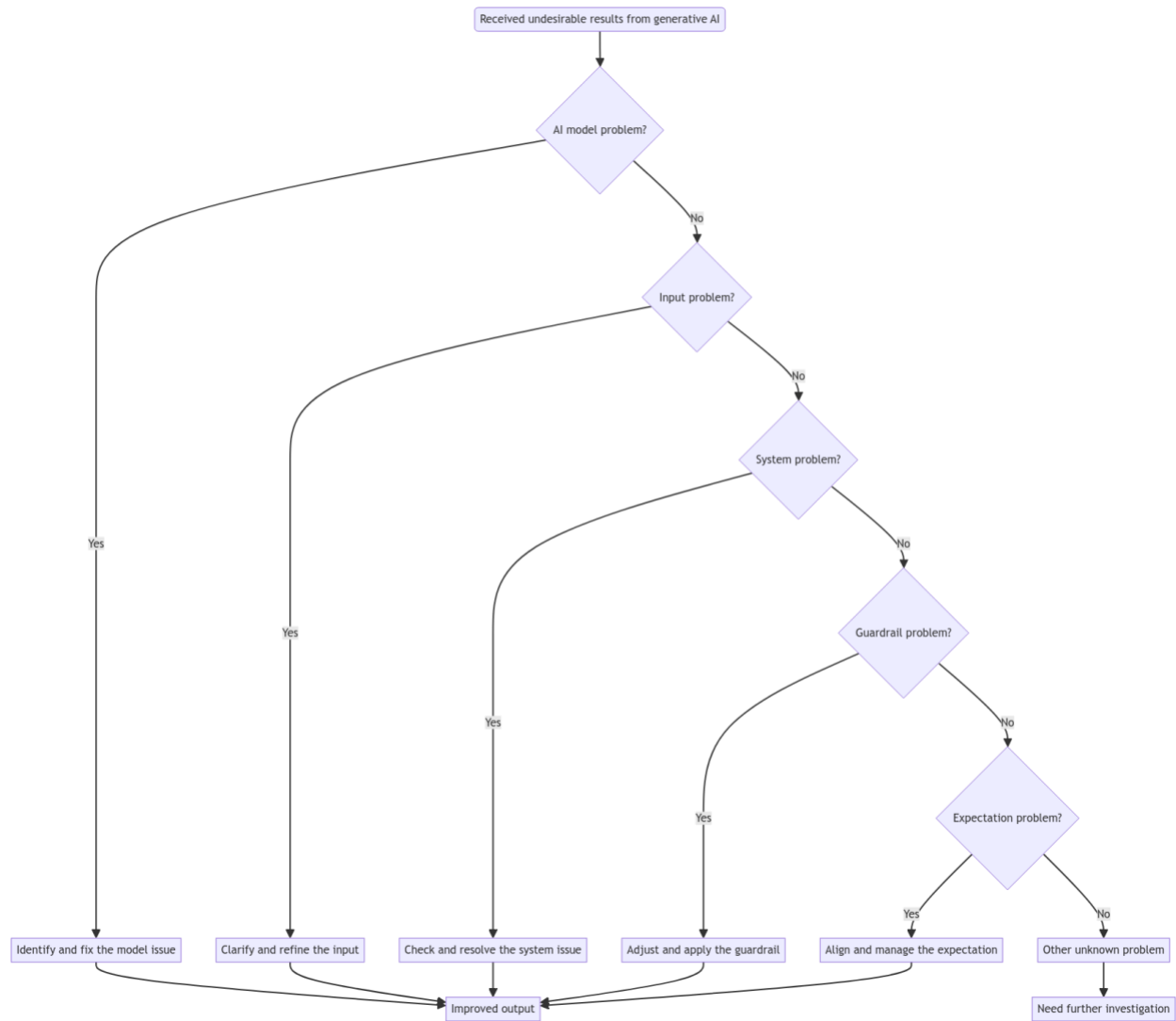


One thing these cases make very clear is that there is an immediate dichotomy when it comes to “undesirable results” from a GenAI: there may be faults in some component of the AI implementation, or it may be factors external to the AI, such as user issues or external influences.

There may be “undesirable results” from a GenAI, such as faults in some component of the AI implementation, or it may be factors external to the AI, such as user issues or external influences.

A table summarizing some of those issues, and a related decision tree follow. Of all of these issues, few of them can be categorized as “hallucinations”.

Caused by User	Caused by AI Model and Solution	Caused by External Influences
<ul style="list-style-type: none"> • Improper expectations of AI • Poor prompting techniques (initial, follow up) 	<ul style="list-style-type: none"> • Training data • Training • Guardrails • Speed • Too much or too little information in response • Too superficial or complex response • Too formal or informal in communication style • Inappropriate information in response (e.g., profanity) 	<ul style="list-style-type: none"> • Network issues • Security issues



Can ISO Standards Help with AI Quality Design?

A new technical specification has been published (publication date January 2024) by the International Organization for Standardization (ISO) on the topic of "Guidance for quality evaluation of artificial intelligence (AI) systems". Identified as ISO/IEC TS 25058:2024, "the purpose of this document is to guide AI developers performing a quality evaluation of their AI systems" and "specifies comprehensive guidance that covers the relevant facets of an AI system's quality for successful quality evaluation."

Deciphering "ISO/IEC TS 25058:2024"

What does that string of letters and numbers mean? Many business people are aware of certain ISO standards; in particular, financial professionals have probably heard of the ISO 9000 series ("quality" in business processes), 14000 series (sustainability and the environment), and 27000 series (security). Where does this fit in?

"ISO/IEC": a joint effort of the ISO and the International Electrotechnical Commission. IEC experts focus on sector-specific needs (vertical standards, like health care) and conformity assessment, while the joint technical committee created with ISO develops generic and foundational standards (horizontal standards), such as this one.

"TS": Technical Specification. A TS is an authoritative document (a Technical Report, or TR, is not), but indicates there is more work to be done before reaching ultimate republication as an International Standard (IS).²

"25058": The ISO/IEC 25000 series of standards, also known as "SQuaRE (System and Software Quality Requirements and Evaluation)", is a framework for evaluating the quality of software products.

- This is not the 58th standard under the 25000 series; there is a suborganization where 250nx, where n = 1 to 4, are specific divisions of quality, and n = 5 to 9 are application domains.
- It is not even the eighth standard published in the 2505x series; 25059 came out in 2023.
- It is only a coincidence that the ISO has published more than 25,000 standards at this point.³

"2024": The publication year



Other Related ISO Efforts and Deliverables

With that backgrounder, you can interpret that ISO/IEC 25059:2023 is a prior joint work of the ISO and IEC, is a full standard (no TR or TS designation), as we find it sets out a “Quality model for AI systems”.

Both 25058 and 25059 are helpful to the cause;

- 25059 to build quality AI systems
- 25058 to evaluate the quality of AI systems you already have

And both works are from the ISO subcommittee known as ISO/IEC JTC 1/SC 42; that is subcommittee 42 under the joint work of ISO/IEC’s joint technical committee 1 (there are two such joint technical committees active: JTC 1 is *Information technology*, JTC 3 is *Quantum technologies*. JTC 2, related to energy efficiency, is no more.) Subcommittee 42 has already published 25 works and has 31 under development.

From the titles, it appears many other deliverables and works-in-process may be relevant, from agreements on terminology (ISO/IEC 22989) to risk management guidance (ISO/IEC 23894:2023) to an overview on trustworthiness (a non-authoritative Technical Report, ISO/IEC TR 24028:2020) to guidance on human oversight (just getting underway, ISO/IEC AWI 42105).

Quality Measures from the Standards

I do not have a copy of the final ISO/IEC TS 25058:2024 standard yet. I do have a copy of the final draft (FDIS). The document’s outline⁴ speaks to a number of system-oriented issues, but two sections in particular seem relevant to the discussion of undesirable results.

First, there is a section on “Satisfaction”. This covers usefulness, trust, pleasure, comfort, and transparency. Many of these attributes point to the fact that desirable and undesirable results are subjective.

Secondly, there is a section on “Freedom from Risk”. This covers economic, health and safety, environmental, and societal and ethical risks. In isolation, few results will lead to compromise or loss. However, if the response is relied upon for decision making or actions taken on the results, it could lead to problems.

Let’s dig in a little deeper:

Satisfaction:

Usefulness: Does the generated output fulfill the user's intended purpose? We can consider different contexts, such as factual accuracy, relevance, creativity, and completion of tasks.

Trust: Does the user believe the output is reliable and accurate? We can explore aspects like factual consistency, alignment with user expectations, and transparency about limitations.

Pleasure: Does the output evoke positive emotions in the user? This could involve aesthetics, humor, surprise, or engagement with the user's interests.

Comfort: Does the output avoid causing offense or distress to the user? We have to consider sensitivity to cultural norms, avoidance of harmful stereotypes, and alignment with the user's values. Speaking of subjective desirability, what may be completely appropriate or desirable by one audience may be completely inappropriate for another for a myriad of reasons. Societal, cultural, and individual differences all shape our perceptions of quality and desirability of results.

Transparency: Does the user understand how the output was generated and its potential limitations? While most users will not have the background to understand the model's training data, biases, and potential for errors, opaqueness will thwart the ability to understand the processes behind the output's generation, and that can be problematic.

Freedom from Risk:

Economic: Could the output lead to financial loss or unfair treatment? Examples include generating misleading financial advice, perpetuating economic biases, or creating counterfeit content. In recent news, Bard now permits the creation of images integrated with the normal chat interface. As users can create new images, the question of IP related to their commercial use is up in the air.

Health and Safety: Could the output cause physical or psychological harm? We need to consider the risks of misinformation in healthcare, promoting dangerous activities, or inciting emotional distress. From the earliest days of ELIZA, when Joseph Weizenbaum's ground-setting chatbot first enthralled its users at MIT, it was clear users heavily invested their emotions in their relationship with the pre-artificial intelligence program. Weizenbaum wrote about his concerns soon after.⁵

Environmental: Does the output have negative environmental impact? I find this one less intuitive at the output level, including aspects of energy consumption during generation, potential for environmental harm caused by the output (e.g., generating content promoting unsustainable practices), and the environmental footprint of training data. I suppose that if I thought getting a new stanza to a song I am writing resulted in the pollution equivalent of a 787 from London to Kennedy, it might be less satisfying.

Societal and Ethical: Could the output have negative societal or ethical implications? There are always risks of discrimination, manipulation, privacy violations, social unrest, or even undermining democratic processes.

None of the attributes listed above point to a failing by its very nature being a "hallucination". The AI can be operating exactly as designed and yet provide responses that are untrustworthy, provide no pleasure, and are simply unsatisfying. "Desire" is subjective; providing a result inconsistent with design is objective.

Next Steps

As AI capabilities advance and usage continues to expand, we must move beyond overly simplistic notions of "hallucination" and continue developing thoughtful quality frameworks. Initiatives like ISO/IEC TS 25058 highlight key practical and ethical dimensions for AI systems. When applied diligently by financial professionals, managers, the profession, and AI practitioners, such guidance can help reduce risks and harm.

By taking a human-centric approach focused on usefulness, trustworthiness and societal benefit, we can nurture AI's incredible potential while avoiding pitfalls.

More broadly, by taking a human-centric approach focused on usefulness, trustworthiness and societal benefit, we can nurture AI's incredible potential while avoiding pitfalls. The path ahead requires cross-disciplinary collaboration and unwavering commitment to human values. With care and wisdom, our machine creations may someday live up to our highest hopes rather than our worst fears.

¹ <https://reason.com/category/ai-in-court/>

² <https://www.iso.org/deliverables-all.html>

³ <https://www.iso.org/standards-catalogue/browse-by-ics.html>

⁴ <https://www.iso.org/obp/ui#iso:std:iso-iec:ts:25058:ed-1:v1:en>

⁵ *Computer Power and Human Reason, From Judgment to Calculation*, Joseph Weizenbaum, 1976, W H Freeman and Company, ISBN: 978-0716704645

Inside Out or Outside In? Two Sides of (Nearly) the Same Coin: Be Smart, Be Prepared!

By Alan Willis, FCPA, FCA



Alan Willis, FCPA, FCA is an independent researcher, writer and advisor on corporate reporting and performance measurement outside the scope of financial statements, and the implications of such reporting for corporate governance and assurance. Since 1991, he has pioneered concepts, standards and practical guidance for sustainability accounting and reporting, and lately for integrated reporting – in short, the transformation of corporate reporting.

In recent months, the sustainability reporting landscape,¹ which for four years has shown promising signs of convergence among a smorgasbord of reporting frameworks and standards, has become very “busy,” noisy and potentially confusing to preparers and users alike – as well as to professional followers and advisors in the disclosure standards space. For example:

- Since the June 2023 publication of the first two ISSB Standards, various jurisdictions around the globe are gradually taking the steps necessary to make them mandatory for public companies reporting in regulated capital markets. In Canada, this won’t happen any time soon under the CSA’s agenda, because its earlier draft instrument on climate-related disclosures is on hold while they are (presumably?) waiting first for recommendations from the Canadian Sustainability Standards Board (CSSB) as to their suitability for application in Canada and, secondly, for the final release of the long-awaited SEC rule on climate-related disclosures – now expected in April 2024. The CSSB, announced in 2022 and operational since mid-2023, has finally indicated its intention to launch in March 2024 drafts of Canadianized versions of the first two ISSB standards for public consultation, as well as documents on its operations and governance.²
- The ISSB has completed its summer 2023 consultation on agenda priorities for further topic-related standards and a possible project on integration in reporting. In cooperation with the IASB, the ISSB will be deliberating on the future of the IIRC integrated reporting framework, taking into account considerable overlap with the IASB’s draft of a revised Management Commentary Practice Statement.
- The IAASB has stirred widespread interest in its exposure draft for a new sustainability assurance standard, distinct from its earlier pronouncements about assurance on “extended external reporting.” This standard proposes to be “profession agnostic,” i.e., suitable for use by any type of assurance provider, not just financial professionals. There are serious technical issues and stakeholder concerns to be overcome, however, in advancing this draft standard for use, especially by non-financial providers, in assurance of sustainability disclosures, mandatory or otherwise.

¹ <https://www.accountingforsustainability.org/en/knowledge-hub/guides/navigating-the-reporting-landscape.html>.

² <https://www.frascanada.ca/en/cssb/news-listings/cssb-public-consultation>.

- The European Union has also been making waves with its release and approval of its Due Diligence Directive and the European Sustainability Reporting Standards under its CSR Directive. These pose significant compliance obligations and challenges for non-European companies with EU-based operations.
- Most recently, the GRI has just published its Biodiversity Standard (GRI 101), and has been in dialogue with the ISSB about interoperability between its standards and the ISSB's, as well as with the EU on the same practical issue.
- Meanwhile, in the US in particular, the political backlash about ESG disclosures by investors, as well as companies, continues unabated, linked to concerns about greenwash in investment products. The effect of all this on the finalization and enactment of the SEC's climate-related disclosure in a US election year has yet to be seen.

A Lot of Work Still Ahead

So, despite the promising convergence in disclosure frameworks and standards over the last four years, there's still a lot of work needed to achieve globally accepted sustainability-related disclosure standards, whether for "outside-in" or "inside-out" reporting. These colloquial terms denote, respectively, reporting about sustainability-related impacts (such as those arising from the entity's own business as well as those originating externally, e.g., climate change-related ones) on an entity's present and future cash flows and value, and reporting about an entity's present and future impacts on the environment, society (including human rights) and the economy, and how the entity manages them.

The former – outside-in reporting – is of special interest to investors and will be guided by the ISSB standards, calling for identification and consideration of all sustainability-related issues, impacts and risks, including climate change, that sooner or later are likely to materially affect an entity's financial value to investors. The ISSB standards set out the sustainability-related (including climate-related) disclosures that are to accompany an entity's IFRS-based financial statements in providing information material to investors' decision making. Such disclosures by public companies are expected to eventually become mandatory in all capital market jurisdictions worldwide (except the US, where SEC rules will no doubt prevail).

Despite the promising convergence in disclosure frameworks and standards over the last four years, there's still a lot of work needed to achieve globally accepted sustainability-related disclosure standards.

The latter – inside-out reporting – is guided by the globally recognized GRI standards, currently not mandatory, but widely used voluntarily (and also by the less-well known Future Fit Business Benchmark). The GRI Sustainability Reporting Standards call for identification, consideration and disclosure of how an entity impacts the environment, society and the economy due to its operations and through its upstream and downstream value chain, and how it manages these impacts. This approach to reporting provides information useful to – indeed, expected by – a broad cross section of stakeholders besides investors who are primarily concerned about the future well-being (sustainability) of the environment and society. Environmental capacity

thresholds and the UN Sustainable Development Goals (SDGs), as well as GHG emissions limits, are very much on the global radar these days, both for governments and large businesses.

Clearly, therefore, inside-out reporting can itself be an important source of input to the outside-in reporting process and use of the ISSB standards, by assisting in an entity's identification of sustainability matters for consideration in the materiality assessment called for by the ISSB. In jurisdictions subject to the EU directives, whose disclosure standards adopt both outside-in and inside-out perspectives (double materiality as it is called), identification and disclosure of an entity's impacts on the environment, society and the economy is an essential feature of the sustainability reporting process.

So, even in the absence of mandatory reporting standards in the near term, are there any practical actions an entity can take during 2024 in anticipation of what they will eventually have to do for compliance with outside-in disclosure standards, whether ISSB, SEC or EU driven?

Be Prepared

First, under the banner of the Scouting Movement's motto "Be Prepared," early identification and inventorying of an entity's impacts on the environment, society and the economy is arguably a smart business practice, regardless of any present disclosure frameworks or possible future requirements. This exercise may reveal surprising risks, areas for enhanced operating efficiency, business model changes or other competitive opportunities that might otherwise be hidden.

Avoid getting caught up in all the current political noise about "ESG" and disclosure "what ifs" that can too easily be a distracting waste of time and obscure the bigger picture.

Second, "Be Prepared" is an even more persuasive watchword with the data demands of climate-related financial disclosures in mind, given their virtual inevitability in one form or another under future ISSB, SEC or CSA disclosure requirements, and the special challenges of obtaining reliable Scope 3 emissions data from suppliers, especially where their customers' procurement policies call for provision of such data – even from smaller companies.³ Design and implementation of reliable climate and sustainability-related data collection systems will be paramount. Again, this "Be Prepared" mindset and early action may reveal surprising opportunities for an entity to reduce its carbon footprint, make it more attractive and competitive as a supplier, or even modify its business model in anticipation of successful transition to operating in a net zero economy.⁴

Third, adoption by an entity's C-suite and board of directors of an "integrated thinking" mindset can provide a holistic approach to consideration of how sustainability issues can affect an entity's business model and strategy for long term value creation, both for investors and for other stakeholders, and of how these can best be managed in the long-term interests of both the entity and stakeholders on which it depends⁵. Integrated thinking in the boardroom and C-suite facilitates consideration of the interactions between the various "capitals" (i.e., not just

³ <https://www.cpaontario.ca/sustainability/sustainability-simplified/why-businesses-cant-ignore-sustainability>.

⁴ *Ibid.*

⁵ <https://www.saica.org.za/resources/102770>.

financial, but natural, social and human) on which business models depend for value creation, and the entity’s impacts on those capitals, as well as recognition of other risks and external conditions likely to affect an entity, today and tomorrow. Plus, it’s a great enabling mindset for robust scenario planning and risk identification!

Finally, avoid getting caught up in all the current political noise about “ESG” and disclosure “what ifs” that can too easily be a distracting waste of time and obscure the bigger picture, i.e., the need for entities to focus on developing successful, sustainable businesses – ones that will meet today’s human needs, while ensuring the future of the planet and society to support future generations.

It may be helpful, therefore, to think of outside-in and inside-out reporting as two sides of (nearly) the same coin. In 2024, there are sound business reasons to “Be Prepared” for whatever disclosure requirements and expectations emerge down the road. And take some time to check out “integrated thinking” and what the IIRC (now IFRS-owned) Integrated Reporting Framework offers – a fresh way of looking at and, if necessary, adapting business models to drive and support sustainable value creation – whether just for investors or for all stakeholders.

Whichever way you look at the coin, being prepared and disclosure-ready is a practical, smart, no-downside maxim for 2024!



Our Consultocracy Culture - A Review of *The Big Con: How the Consulting Industry Weakens Our Businesses, Infantilizes Our Governments, and Warps Our Economies*

By Robert Edison Sandiford



*Robert Edison Sandiford is the author of several books, among them the award-winning *The Tree of Youth & Other Stories*, *And Sometimes They Fly* (a novel) and *Sand for Snow* (memoir). He has also written graphic novels for NBM Publishing. In 2003, he and the poet Linda M. Deane founded the Barbadian cultural resource ArtsEtc Inc. He has worked as a publisher, teacher and, with Warm Water Productions, producer. His fiction and non-fiction have appeared in journals, magazines and anthologies. Currently working on another novel, his most recent book is *Fairfield* from DC Books.*

The Big Con: How the Consulting Industry Weakens Our Businesses, Infantilizes Our Governments, and Warps Our Economie by Mariana Mazzucato and Rosie Collington (Penguin Press, Hardcover, 978-0593492673, 352pp, 2023) is a book about the kind of complacency that leads to abuse so common we might miss its corruption. During the COVID-19 pandemic (2019-2023), big-name consultants like McKinsey and others identified by the authors were “in every [relevant] room.” By July 2020, “McKinsey had already secured over \$100 million from the federal government in the United States for pandemic-related tasks. In the United Kingdom, Deloitte received at least \$372.9 million from the central government in 2021” for the same. And so it went in a number of jurisdictions across the globe scrambling to deal with the health crisis.

This is all relatable. We were there, too; we lived through it, though we were hardly aware of every ongoing economic effort to manage and strategize in the face of COVID-19. We didn’t need to, were told we didn’t need to, or we had, legitimately, our own problems at the time. Yet there is so much we accept as is because of some belief the machinations in question are the way of the world, and they seem to be working for us. Are they? Did they?

Mariana Mazzucato, the founder of the Institute for Innovation and Public Purpose (IIPP) at the University College London, and Rosie Collington, who joined IIPP as Mazzucato’s PhD student a couple years after it was founded in 2018, offer in their book several similar cases of consultancies’ costs that, certainly now if not then, appear to exceed their actual value. True, the authors play on our skepticism regarding consultancies—but that’s not too hard to do. Apart from contracts being “eye-wateringly large,” when your business tends to view imparting knowledge as a transaction rather than a process, and it becomes too closely linked with phrases like “tax avoidance,” trust issues generally follow.

On to the big questions, then. “Why do so many governments outsource critical activities to consulting companies? Why has the market for consulting services grown so much in recent decades—and globally?... And what might this tell us about contemporary capitalism?” Part of the authors’ stated goals is “to unpack what happens to the brain of an organization when it is not learning by doing because someone else is doing the doing.” This prompts deeper enquiry into what happens to the heart and soul of an organization under these conditions, as well as to the government purse.

To find out more, Mazzucato and Collington “had conversations with government leaders, civil servants, business executives, employees on both sides of consulting contracts, and colleagues and friends who shared their stories with us.... Above all, they showed us that even within the most hollowed out of government departments and the most denigrated of workforces, visions of a better future endure—of more capable organizations, more responsive governance and more inclusive, sustainable and innovative economies.”

That’s the good news. First, *The Big Con* outlines for us one malfeasance after another involving the consulting industry, making it the study of a habit of complacency and about the need to kick that habit, if we are to collectively, as societies with functioning governments, do more for ourselves, do better.

Another big question that haunts me, those of my Gen X generation and possibly the authors is “Have we failed the next generation?” Mazzucato thanks her children and their friends, “who never stop pushing on the need for all of us to do better in fighting against inequities so visible across the entire globe and on our doorstep.” If there is a better way to govern ourselves, we have yet to find it and pass it on. The level of global conflicts and the increase in climate crises indicate as much. But the authors are not so despairing; their salute to civil servants—“notwithstanding what seems like a constant attack on their competencies, [they] continue to dedicate their lives to the common good”—is a gesture toward hope. After all, it is those in the public sector who have been most marginalized by the growth of consultancies.

The authors aren’t anti-consultants, only, perhaps, anti how such companies are presently engaged by our governments. They acknowledge all kinds of entities must “work together to meet our collective social, economic and environmental needs. And yet,” they suggest, or declare, “this does not describe the world we live in.” Their complaint is that too many businesses, private and conspicuously public sector, “have stopped investing in their own capacity and capabilities, and...do not take risks” that would lead to genuine problem-solving and growth. “Bad governance in...the state [alone] has over the last half century caused short-termism to overshadow investments needed for progress. These trends have depleted organizations of knowledge, skills and vision.” Those who have gained the most from “this form of capitalism,” the authors claim, are members of the consulting industry.

Principal among its multinational companies are the Big Three strategy firms of McKinsey, Boston Consulting Group (BCG) and Bain & Company, and the Big Four accountancies of PwC,

Deloitte, KPMG, and EY. Most are headquartered in North America and Europe, where there is a tradition of using consultants and where many of the companies originated. “In 2021, estimates of the global consulting services market ranged from between almost \$700 billion to over \$900 billion—though these figures do not give the full picture of consultancies’ activity.” During the last decade alone, the authors claim and amply demonstrate, “the Big Three and the Big Four have also been hired to help design smart cities, develop national net zero carbon strategies, propose education reforms, counsel armies, manage the construction of hospitals, draft medical ethics codes, write tax legislation....” Services offered can sound amorphous: “Intelligent Automation,” Transformation,” “Citizen Services,” “Justice.” Given the “scale and scope” of their business in the “Anglosphere,” it’s easy to agree: any “underlying conflicts of interest and...lack of transparency matter hugely” because of the “dysfunctions in government and business around the world” consultancies can generate. The Big Four accountancies, for instance, “derive over 40 percent of their revenue through management consulting contracts—more than they receive from audit and assurances services.” In climate consulting, “big consulting firms work simultaneously for governments whose populations would like to see lower emissions *and* for the fossil fuel companies that contribute most to the climate crisis.”

Are consultants motivated by their own agenda and avarice more so than the public good and bottom line they often claim to uphold? Have governments and other agencies largely given up their responsibility to do due diligence and *lead* the consultants they contract? If so, why? If so, why do voters, tax payers and even shareholders allow it? The authors answer, in part, somewhat disingenuously: “What we call the Big Con is not about criminal activity. It describes the confidence trick the consulting industry performs in contracts with hollowed-out and timid governments and shareholder value-maximizing firms.” (Consultancies also have a habit of luring clients with pro bono work or lowballed fees, only to come at a later date with a significantly heavier bill.)

“While consulting is an old profession, the Big Con grew from the 1980s and 1990s in the wake of reforms by both the ‘neoliberal’ right and ‘Third Way’ progressives—on both sides of the political spectrum,” note the authors. Throughout these decades—a time when greed was often said to be good—business models were foisted onto governments in North America and Europe, leading to, in many cases, a hobbled civil service. The blame game, “for any failure or mistake,” was inbuilt, with consultants as reliable, albeit costly, potential fall guys.

Not much has changed in practice since the grifters of America’s Golden Age of Capitalism (1945-1975). Today’s contracts “enable the consulting industry to earn incomes that far exceed the actual value it provides....” In the authors’ view, these incomes, or “economic rents,” “are not necessarily derived from the ownership of scarce valuable knowledge assets, but from the ability to create an impression of value.”

Mazzucota and Collington acknowledge not all consultancies are involved in the Big Con. What attracts people to the industry are decent pay, diversity of experience, meaningful work, continuing education. Not all candidates are concerned solely with continued expansion or greater profits, with market-driven forces or the novelty of the new. “Consulting advice and

capacity is [sic] productive when it comes from the sidelines, from capable actors with genuine knowledge that creates value.” It turns predatory when it takes centerstage and creates an, at best, codependent dynamic—one in which it is repeatedly or forever relied upon, not weaned off.

This reliance on, or addiction to, consultancies points to “wider and deeper structural problems in the ways we have organized our capitalist system,” and is hardly what Ronald Reagan as president of the US or Margaret Thatcher as prime minister of the UK had in mind when they expressed the view that government could not “create value” in the same way the private sector could; government could not be as efficient. During their research, the authors recorded almost “weekly” scandals involving consultancies (reminiscent, no doubt, of Enron’s 2001 bankruptcy and the 2008 projected cost overruns of Nya Karolinska Solna [NKS]). They studied the mass resignation of consultants that took place during the pandemic. The consulting industry’s expansion across governments often feels like the propagation of the worst features of big government by another name.

“The capabilities of organizations don’t simply exist but evolve over time,” the authors contend. Organizations learn and grow by doing, and doing well. Budgets, yes, may be reduced by a consultancy in the short term; in the long term, corporate or institutional knowledge atrophies or ceases to exist at even greater expense. Value isn’t necessarily created through cost-cutting, or serial acquisitions. “The more governments and businesses outsource, the less they know how to do.” The more they give up oversight, the greater the risks of a costly snafu that could have been avoided by wiser, more experienced heads. Only government can do government, observe the authors, because its mandate is generally the growth of its people over its own increase. The initial 2013 rollout and subsequent crash of Obama’s Healthcare.gov website fairly illustrates the point.

Some recapitulation in *The Big Con* feels like ungainly repetition. The language is a little laboured in spots, but jargon is kept to an essential minimum. Despite expressed challenges in acquiring hard, reliable, economic data on consultancies’ activities, Mazzucato and Collington do an able job of providing numbers on everything from estimated revenues to government spending on services, throwing in a few fun charts along the way.

“Rulers...have always had advisers,” they remind us. “Ultimately, this expertise must render those being advised stronger, not weaker.” Consulting companies made money off of the pandemic. Same as with Brexit (2016-2020). Same as with The Great Recession (2008-2009). Same as with our present “climate breakdown,” as the authors term it. Like Star Trek’s mercantile Ferengi, consultants see(k) economic opportunity in fortune and misfortune. Several countries relied on consultancies to get them through the pandemic—as they had always done, “enmeshed” as the consultancies were in aspects of government. While in the UK “the wider economy shrank, and millions of people lost work, the UK consulting industry actually grew by 2.5 percent in 2020, in no small part due to government contracts.”

The Big Four and Big Three “enjoy levels of opacity denied to many of their multinational corporation clients” by virtue of their structures and highly confidential contracts. That they “outpace biotech firms, insurance giants and entertainment titans” is not as shocking as it should be. The problem of the consulting industry’s power remains a shared one in that we’ve endorsed it. The IMF and World Bank have pushed consultancies at indebted countries to “develop and implement the market-driven economic reforms that are a condition of their loans.” We have to wonder if the role of the IMF and World Bank isn’t simply to keep so-called developing nations perpetually so. It’s scary to think these companies have “the final word” on policy in certain jurisdictions. And that their use, hence power, globally has been on the rise. The exceptions may be where there has been incompatibility between the consultancy and bureaucracy in question. Kenya and Indonesia—and Mumbai and Malaysia—provide examples of failure and overreach, respectively, on the part of consultants.

Since 2021, the middle of the COVID-19 pandemic, from Australia to the UK and South Africa, “[m]any citizens, politicians and media platforms” have begun to challenge “governments relying on the consulting industry,” or our culture of “consultocracy,” a term coined by academics Christopher Hood and Michael Jackson in 1991. Mazzucato and Collington close with “four proposals for liberating organizations in both the public and private sectors from an over-reliance on the consulting industry and fostering value-creating interactions across the economy.”

The interactions the authors outline are entrenched among the players; it’s hard to see either of them so losing the other. Such weaning off will take the kind of event that is earth-changing. “The next decade will decide the struggles that future generations will face—of extreme temperatures, calamitous weather events, the erosion of land....” If the actions of consultancies are making matters worse by, say, catalyzing carbonization instead of slowing down its production, then it is indeed our collective responsibility to reign them in. Our climate crisis, sadly and ironically, may yet provide the environment conducive to that happening.



Corporate Reporting: Quo Vadis?

Paradigm Shifts Shaping the Future of Corporate Reporting: Purpose, Accountability, Value and Sustainability

By Alan Willis, FCPA, FCA

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