



The Commonality between Automation and AI – A Perspective

How AI Is Transforming the Accounting Profession

Remove the Brakes to Unlock Your True Potential

Applying Artificial Intelligence in the Real World

How Evolving Payment Trends Influence the Management of Cryptocurrencies in  
Business

Purpose, Accountability and Value Creation: Paradigm Shifts in the Future of  
Corporate Reporting

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Submissions for the magazine are invited from people with an in-depth knowledge of accounting or finance.

Submissions can be made by email attachment to [info@ThinkTWENTY20.com](mailto:info@ThinkTWENTY20.com). Articles should be in Microsoft Word in 12 pt Calibri Font. They should be 2000 to 3000 words and be well researched as evidenced by the inclusion of references, which should be numbered and included at the end of the article. Bibliographies are also encouraged. Academic papers with extensive mathematical analyses will not be accepted.

#### FOUNDING PARTNER



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## Editorial



*Gerald Trites,  
Editor in Chief*

There are few issues in the world today more important than climate change. We have been slow to react, despite persistent warnings from scientists and growing numbers of extreme weather events.

Governments have been hampered by politicization of the issue, leading to much talk and little real action. But hope springs from an unexpected source – companies reacting to pressure from investors and other stakeholders to take concrete steps to help with climate control. They are becoming increasingly accountable to those stakeholders for their actions in this regard. This has turned the spotlight to Environmental, Sustainability and Governance (ESG) reporting.

ESG reporting has been a part of corporate reporting for several years, but there has been a confusing variety of standards and other guidance. Properly developed, maintained and generally accepted ESG standards by the accounting profession have been largely absent, until recently. The establishment of the Sustainability Accounting Standards Board and the Value Reporting Foundation should change all that.

In this issue, Alan Willis writes an extensive paper describing the standards and guidance that have evolved over recent years. It is essential reading for anyone interested in this area.

Another important issue for today's financial professions is the implementation of Artificial Intelligence. For this issue, Gundi Jeffrey interviewed the MNP LLP about their progress to date. And Jaydeep Shah offers up a penetrating explanation of AI and its relationship with RPA. Also, Ed Hall provides a practical example of an AI based system being used to negotiate debt settlements.

Among the other articles, David Wray, author of the Amazon best-selling book *The Power of Potential: A Straightforward Method for Mastering Skills from Personal to Professional* gives us a compelling approach to improving our skills, a topic that is so important in this age of skill enhancement and re-skilling.

Eric Cohen provides valuable insight into the workings of cryptocurrencies, an area that continues to influence thinking on monetary control and management. And Jonathan Andrews



provides a comprehensive review of Mark Carney's book *Values*, which challenges the meaning of monetary as well as societal values.

As always, we strive to delve deeply into current issues and, we hope, help our readers reach a greater understanding of them. Your feedback is always welcome and can be sent to [info@thinktwenty20.com](mailto:info@thinktwenty20.com).

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## The Commonality between Automation and AI – A Perspective

By Jaideep Shah



Jaideep is a software engineer turned Product Manager with a passion for problem solving and minimizing waste. Jaideep brings a unique blend of breadth and depth across technologies and industries based on his over 3 decades of involvement with building software. Over the years, Jaideep has been at the cusp of new technologies from BPM to XBRL to IOT to RPA, building solutions primarily for the financial and healthcare verticals. When he is not at work, Jaideep is busy planning surprises and family trips, taking photographs or playing cricket.

“Automation” is something that we hear about all the time and we don’t even bat an eyelid. But, when we hear “Artificial Intelligence” (AI), it turns heads. The interesting thing is that the two concepts are, in fact, one and the same. Through this article, I would like to present you my perspective and explain my rationale.

### Automation Is Integral to Our Lives

When we hear “automation,” what comes to mind? A machine of some kind? Maybe a software program? Maybe a combination of the two? Well, all of them are correct. Every machine, every program, every combination of the two came into existence to automate some aspect of our life. While some of the automations are more direct and readily aligned with some aspect of human effort, others are indirect. For example, if we talk about an airplane, we can’t say it is directly related since, as humans, we can’t fly. But, if you change the lens of evaluation and think about going from one place to another over a large enough distance, the airplane automates the bulk of our locomotion effort. Without that machine, we would be walking for hours and days on end to achieve what we can cover in a matter of hours in a plane. So, the plane is an automation. Another example of automation, a mixer or blender, is a much more direct form of automation in that it chops and grinds at the push of a button.

Software takes on many forms – sometimes visible in our daily use of computers and many times invisible in all of the machine-based automation we use.

Automation takes on a much more impressive impact when software is brought into the picture. Software takes on many forms – sometimes visible in our daily use of computers and many times invisible in all of the machine-based automation we use. The most powerful example of software working invisibly for us is the latest wave of automobiles pioneered by Tesla. The amount of software used in the cars is an innovation over and above the change-over from gas to fully electric. Software in the Tesla motors is not completely hidden, given the large monitor that serves as the interface with the car besides the steering wheel. From GPS navigation to watching live TV while you drive, to checking the status of your battery or the security camera footage, everything is driven by

software. Not to mention that the new “features,” such as extended battery charging or the updates to the automatic driving modules, are all enabled by software.

By this time, the backdrop to our main point of discussion is complete. With the above few examples, I hope I have made the case for automation being an integral part of our daily, routine lives. A lot more examples can be provided as automation applies to manufacturing, packaging, surgery, testing, delivery, cooking, washing (clothes, cars, utensils, etc.), farming, gaming, etc. – the list goes on and on. But let’s switch gears to seeing the AI part in all of this.

### **The Role of AI in Enhancing Automation**

While there are many definitions of automation based on the different context and applications, the one that I believe is the most relevant to our discussion is the following “*Automation is the creation and application of technologies to produce and deliver goods and services with minimal human intervention,*” as described in *Techopedia* (Automation, 2021). In most cases of automation, what we are basically trying to achieve is to reduce and, in some cases, completely eliminate some aspect of human involvement. The reasons for that are manifold, but it is usually because the work is laborious, repetitive and mundane. Some other important aspect for utilizing automation is to increase accuracy and reduce errors or variability. And this is where Artificial Intelligence (AI) comes into play.

AI adds the ability for automations to perform more complex tasks, be more coordinated, more precise.

AI, as it is most commonly referred to these days, also has many definitions. Most of them mean pretty much the same thing and I am going to use the following, “*Artificial intelligence (AI), also known as machine intelligence, is a branch of computer science that aims to imbue software with the ability to analyze its environment using either predetermined rules and search algorithms, or pattern recognizing machine learning models, and then make decisions based on those analyses.*” This definition comes from *Techopedia* (Artificial Intelligence AI, 2020). In real simple terms, this is the ability of the software to make decisions based on its learnings. This is akin to how us humans learn the tricks of a trade – the skills and experience – in order to make decisions during our daily routine. AI adds the ability for automations to perform more complex tasks, be more coordinated, more precise. AI has come into the lime light in the last decade or so because of major innovations and advancements made in the field of computers – namely, the ability to get, store and process more data using fewer resources, less time and comparatively less cost.

AI, as the name indicates, is the semblance of human intelligence being added to automation. This process involves teaching a machine, largely through software, a specialized skill. The machine doing the learning is representational of our brain and is aptly called an Artificial Neural Network (Artificial Neural Network (ANN), 2021). The techniques used to make the ANN learn are jointly referred to as Machine Learning (Machine Learning (ML), 2021). The learnings are typically referred to as a model or an ML algorithm. It is this algorithm/model that is leveraged for the purpose of imparting intelligence to the automations.

The models are developed largely through three types of training, each relying on feeding data to the model through which the model develops the intelligence to recognize the concept of choice.

When the data are predefined to match the desired output (like pictures of cats, frequencies of a birds call when in distress, physical motion of a swimmer, etc.), the algorithm is set to learn through Supervised Learning (Supervised Learning (ML), 2018). Seeing the same type of data in large volumes, the algorithm learns to recognize the specific common characteristics and able to recognize the same very reliably and accurately.

Another popular mechanism to train the model is when a large quantity of data is provided without any special predefinition of what the data refer to. The model generates inferences from common patterns that exist in the provided data and generates its own definition of the concept. Once trained, the model is able to identify the same concept or pattern in the provided data. This technique is known as Unsupervised Learning (Unsupervised Learning (ML), 2018).



Both of the above learning mechanisms require some amount of prep work to be done at the model level to define the desired outcome, be it the recognition/classification of certain types of data or the detection of a pattern among the various data. To a large extent, the model is given the problem that it needs to learn to solve. A third approach to train the model does away with this restriction and is meant to allow the model to learn through constant feedback about its learning. As the model presents its learning, it is provided with a reward or punishment (basically reward when the decision was correct or punishment if it was incorrect). The model is trained to take this feedback into account when making the next decision. Over a period of time, the model's learning is reinforced through this feedback toward making a certain type of decision. This technique is referred to as Reinforcement

Learning (Reinforcement Learning (RL), 2021). This is modeled based on how babies typically learn and do new things.

While many of you might not have needed the above primer on AI, I wanted to make sure that at least the broad concepts were understood in order to appreciate the core theme of this discussion, which equates AI and automation. And here is the main point – for any automation to perform a task, it must be provided with the rules of how to perform the task. When the rules are known and well defined, they can be “hand” coded by an engineer into the automation. When the rules are not well defined, AI models/algorithms are utilized to define these rules. Both cases result in the development and execution of the task through the automation. What is different is the type of resources utilized and the completeness of the rules embodied by the automation.

### **Introducing Robotic Process Automation**

Let me illustrate the above using automations through Robotic Process Automation (RPA) (Robotic Process Automation (RPA), 2021). RPA is a software automation technique allowing human users to quickly and effectively use computer programs to perform the same actions they take when interacting with a computer. For example, let's say that I am a financial portfolio manager, and one of the tasks I perform during the course of my day involves me having to send to my respective customers the current stock prices of all the stocks in their portfolio. I might have a spreadsheet with all of my customers and their respective stock holdings. For me to send them an update, I



would take each stock symbol from the spreadsheet and go to, let's say, finance.yahoo.com, search for that stock and copy the current price from the web page into the spreadsheet. Once I had completed all of the price reads, I would send an email to each of my customers with a copy of their respective stocks and associated prices from the spreadsheet.

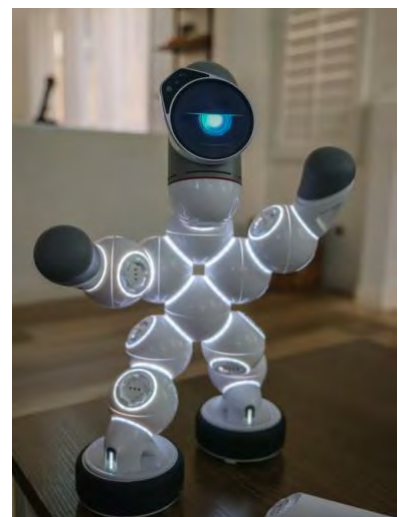
You can imagine how time consuming this could become. Not to mention that I might copy the wrong price against the wrong stock or misspell the symbol and get the wrong stock's price or send the wrong set of prices to a customer. Even if I am very methodical and diligent with my work, over a period of time, I could become complacent and end up with one or more of the above errors. Using RPA technology, I can quickly develop a software robot (called a bot) that would do all of the tasks required, from opening up the spreadsheet to downloading the prices and sending out the emails. This automation would never get tired and never get complacent. Additionally, the bot will complete the task in a fraction of the time it takes me to complete the task today.

**For any automation to perform a task, it must be provided with the rules of how to perform that task.**

RPA technology is at a point today where the task of creating the bot is as simple as me pushing a "record" button while performing the set of steps that I do. The recording captures all of the applications I am interacting with and understands the actions I am taking, like opening a file or clicking on the download button or selecting and copying the price from the website, etc. The recording is then able to replicate my steps instantaneously. This allows me, as a portfolio manager, to spend my time developing richer insights for my customers, researching other stocks to improve their ROI, etc.

Now, one might ask the question where is the AI in that? If I directed the bot to record my steps and the bot repeated my steps, where is the intelligence in that? I basically told the bot everything it needed to do. Of course, I knew you would think that. In fact, I wrote that section with the express intent for you to think about that question.

The AI in the bot automatically figures out the application you are using. It could have used the title from the application window, or the layout of the different menus and other application components or maybe the appearance of grids or the address bar, etc. The RPA tool provider would have embedded this level of intelligence so that you would be able to simply press the record button to get the automation created for you. Similar to how an AI model was trained by providing it with a significant amount of data with similar characteristics, the RPA tool might require you to provide more than one recording of the work that you perform. AI could be leveraged to understand and eliminate various behavioral differences for performing the same task. For example, opening the spreadsheet by first launching the Excel application and then navigating to the file through the "File > Open..." menu or by navigating to the file using Windows Explorer and then double clicking on the file or by right clicking on the file and selecting the Open option, etc. The AI could determine that the fastest or the most



reliable or the most commonly used mechanism to open the file across multiple users would be the “navigate and double click” option.

AI could be used to provide resiliency in the automation. Let’s say that the finance.yahoo.com website were to undergo a change and the stock price is now displayed to the left of the stock symbol when earlier it was shown in a table below the stock symbol. AI could then be used to leverage the bot failures in a reinforced learning mode to automatically capture the steps performed by the user to resolve the error condition. Through that learning, the next time the bot fails to execute as designed, it would have learned how the human resolved the issue and follow the same path. Over time, the AI will allow the bot to become self-correcting.

AI could also be used to look for patterns within the recordings to identify where additional automations could be leveraged. Similar to the unsupervised learning mode, multiple people could provide different recordings of the work that they are performing. The AI could automatically identify the most common patterns and either make recommendations for automating those steps, or generate the automation automatically.

As you can see from this very simplistic example, the aspect of automation is richly augmented and extended by the utilization of AI either directly or indirectly.

Take GPS-based navigation as another example. When GPS based navigation first came into existence, we all remember the small and bulky devices that provided this automation. It eliminated the need for us to carry paper maps and look for land marks to orient ourselves. When AI was applied to GPS navigation, just-in-time route changes became a reality. Today, the navigation application, driven by AI, almost always guarantees that we will reach our destination in the shortest amount of time. Before, finding the optimum route was considered an art and perfected over time through experience and was restricted to the routes that we most often traveled. AI has led to the enhancement of that automation to help you easily navigate unfamiliar roads, unforeseen circumstances and changing traffic patterns.



### **Reducing Human Effort and Eliminating Harm**

If you noticed a pattern in this article, it is obvious that, where automation was used to solve a particular problem, AI was used to extend the reach of that automation. AI is also very commonly used to predict future trends! There are models for predicting the movement of stocks, the way people might vote, the clothes that people might wear, the foods that people might eat, etc. In many areas, AI is used for predicting failures in systems that would otherwise be catastrophically large, for

example, an engine failure of plane in mid-air or a ship in mid-ocean, a deep-sea oil rig fire in the middle of the ocean, a controller failure in a nuclear reactor, etc. I completely agree that the AI used for such predictive aspects may not directly be related to an automation, but they all relate to avoiding failures in systems put in place to automate certain dimensions associated with reducing human effort or eliminating human harm.

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## How AI Is Transforming the Accounting Profession

By Gundi Jeffrey, Managing Editor



*Gundi Jeffrey is an award-winning business journalist specializing in writing about the accounting profession for various publications in Canada. In 1985, she co-founded The Bottom Line, which was Canada's only independent publication for the accounting and financial professions for more than 30 years.*

Artificial intelligence (AI) and machine learning (ML) is turning up everywhere – in our devices, most of the machines we use – both at home and in the office – cars, trucks and buses, our various business processes and much of what accounting professionals do to earn their keep.

*ThinkTWENTY20* talked to MNP about AI for our first issue more than two years ago. Since then, AI, along with machine learning, has taken over a lot more work that accountants used to do, and is being used in new and innovative ways. Now that we are two years further ahead, and having coped with the many changes Covid-19 has also brought about, MNP is revisiting the AI theme for our current issue, Fall 2021. This time, David Danziger, Senior Vice President, Assurance & National Leader, Public Companies at MNP, is providing the answers.

***ThinkTWENTY20:*** *On which of your services is AI having its biggest impact? How has this new technology transformed even more the way you conduct audits these days?*



***Danziger:*** The commercially available AI/ML audit tools are still relatively immature, can be difficult to scale and, for the most part, assume that client data is properly formatted to suit the tools when, most often, it is not.

In essence, we are still in the early days of where we expect AI to evolve, but we are quickly finding the areas where AI and automation techniques are a fit. Some of the positive changes that MNP sees occurring as a result of these tools include:

- The way we view client data:
  - The scope of client data that we can request for an engagement has expanded, which enriches the information available for our audits and reduces the need for sampling.
  - We have accelerated our adoption of cloud-enabled technologies, allowing us to put new tools into the hands of our practitioners sooner.
- We can be more targeted in our approach to identifying where audit risk exists through the use of AI through:
  - Pattern recognition.
  - Outlier detection.
  - Flow analysis.





**ThinkTWENTY20:** People say that, ultimately, AI and machine learning will make auditors obsolete. What do you think? Won't their type of work simply shift to something in the audit that needs human input?

**Danziger:** In essence you are correct. Judgment and interpretation will continue to be advanced skillsets required by auditors. I do think the auditor's job will evolve. Teams will need to become much more data literate and their skill

sets will need to change over time as the level, quality and volume of information changes. Likewise, our work with our clients will change as they start to make use of new processes and systems such as Robotic Process Automation (RPA) and AI.

We are still in the early days of where and how we expect AI to evolve, but we are quickly finding the areas where AI and automation techniques are a fit for us.

At MNP, we have taken a “human in the loop” approach to AI/ML adoption. The professional judgment of auditors will always be needed to bring all the insights together. We believe AI will augment the work being done by our teams, much like any other tool. We believe that auditors will be able to dig much deeper into their clients' data and process much higher volumes of data with AI as a part of the execution of an engagement – allowing them to ask much better questions and develop new audit methodologies.

**ThinkTWENTY20:** What about accounting and consulting services? How are AI and machine learning making their presence felt in that arena?

**Danziger:** Similar comments around the maturity of the tools but we are seeing what we would call a quiet AI/ML revolution. Most of the development is coming from cloud technology providers who have embedded AI and ML within their applications to solve very specific challenges. These point solutions haven't necessarily transformed the way we work entirely; they are making the work we were already doing more efficient and more insightful. Manual data entry is being eliminated. Deterministic processes are becoming much more efficient. Our team members are shifting from managing everything, to managing the exception.

**ThinkTWENTY20:** What challenges do these new transformative ways of operating pose to the accounting profession?

**Danziger:** At MNP, we've been talking for the past few years about how important it will be to bolster and develop the skills for staff (Change Management). For example, staff don't necessarily need to

know exactly how an algorithm does what it does, but they should be able to have an educated conversation about approach, what it is doing and why things were approached in a certain way, etc.

Likewise, university-level education needs to mature along with industry. You could probably argue that new students and CPAs will be better positioned than existing staff to tackle these areas as these topics become more ingrained in the syllabus.



Training of new CPA candidates will change; the areas where new students trained and learned the nuts and bolts of client's operations will fundamentally change as areas such as inventory counts, detailed tests, etc., are automated.

Similarly, training requirements for firms will have to change to accommodate teaching more of those detailed areas. As the manual and repetitive tasks of an audit are reduced through AI and machine learning, staff will be able to focus more time on intimately learning their client's business.

**As the manual and repetitive tasks of an audit are reduced through AI and machine learning, staff will be able to focus more time on intimately learning their client's business.**

Another challenge will be that the expectations of AI in Audit Data Analytics would vary greatly. A lack of understanding of what AI can and cannot do has the risk of leading to inconsistent expectations of AI ranging from: "AI will replace my job" and "AI will just do all the work for me" to "AI cannot possibly be trusted" or "My clients are too unique for AI to be helpful." The truth lies somewhere between these extremes and is solely dependent on professionals informing AI with clean data and applying it to definable problems in service to the audit.

**ThinkTWENTY20:** *What are the risks of using AI and machine learning?*

**Danziger:** There is a risk of overreliance by engagement teams and not applying professional judgment on the inputs or outputs. There is also a risk in firms not appropriately vetting or understanding the technology that they are deploying.

It is essential to ensure that relevant personnel understand AI technology, its capabilities and, most importantly, its limitations.

Another key risk is what I call separating "fact from fiction." This is especially true when sourcing solutions because many vendors are not mature enough to be used at scale, or only work on a very narrow set of problems.

Finally, it goes without saying that there is a risk of the overall quality of the data that clients provide – the “garbage-in-garbage-out” scenario. Not all clients will be good candidates for using advanced data analytics or AI. Additional processes may be required to properly “wrangle” the data into a format that AI can recognize and properly process.

***ThinkTWENTY20:*** *And what new opportunities do they offer?*

***Danziger:*** We believe that introducing AI to the audit approach will remove or reduce low value and redundant tasks, allowing teams to focus on what matters most for their clients’ businesses. AI can also identify or unlock insights that would have previously proven very difficult, particularly at scale. Finally, AI can assist in better measuring the quality of an audit year-over-year and lend towards continuous improvement. As mentioned earlier, this provides more time for staff to focus on high-value tasks and insight generation that will help clients successfully run their businesses.

***ThinkTWENTY20:*** *Will auditing and accounting standards have to change, or new ones created, to accommodate these changes taking place?*

***Danziger:*** Accounting standards are not going to change as a result of anything the auditor does. They will progress as new businesses trying new ideas require new standards to account for new types of transactions not seen before (i.e., cryptocurrency and blockchain). Auditing standards will necessarily need to incorporate these tools as they mature.

**Audit teams will need to become much more data literate and their skill sets will need to change over time as the level, quality and volume of information changes.**

At MNP, we would not advocate for evolving standards to be too prescriptive such that firms cannot innovate and find better ways of doing things. Standard setters, so far, have not gone with this approach and have been open in their language, allowing more advanced techniques and technologies to be applied. We believe that, in the long run, this approach will lead to the greatest outcomes in the application of AI to the audit – all with the lens of helping our clients run their businesses with confidence.

***ThinkTWENTY20:*** *Do you have a service area that now focusses on the questions that come with the use of AI and machine learning? Are a good number of clients seeking help with such issues?*

***Danziger:*** Our Assurance Innovation team works with our Standards Group to make sure that the AI and machine learning we adopt aligns with professional standards and regulatory expectations. Also, our technology consulting services at MNP have complementary expertise and assist accordingly.

**ThinkTWENTY20:** Can you give an interesting example of such projects?



**Danziger:** We make use of Audit analytics for Risk Assessment and other audit processes through a commercial AI tool called MindBridge. We have been working closely with MindBridge for years and continue to expand the use of that tool within our audits.

**ThinkTWENTY20:** Where do you see this heading in, say, five years or so? What does your future look like?

**Danziger:** The easiest way to describe where we see AI heading in the short term is that it will allow auditors to stitch together a higher volume of data that will provide additional insights into the audit process, while at the same time unlocking additional insights that will help clients run their business.

In the future, AI has the potential to help auditors move toward more real-time, intelligent and continuous auditing.

OO



**“Do you accept payment  
in Galacticcoin?”**



## Remove the Brakes to Unlock Your True Potential

By David Wray, ACA, CPA, CGA



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It is hardly a secret that the finance and accounting (F&A) profession is undergoing a profound change, growing well beyond simply accounting, auditing and financial reporting. But this was a radical and bold idea expressed five short years ago by the World Bank's Director of Global Practice Governance, Samia Msadek. Evolution is inevitable, however the last two-years have turbo-charged the profession's change through technology, geopolitics, climate change and, of course, the global pandemic. These forces are reimagining traditional career paths, which is in turn demanding more proficient F&A leadership skills.

Naturally, this leads us to wonder if existing learning and development (L&D) mechanisms are fit for purpose. We've all been through the paces of traditional approaches, including on-demand learning, classroom learning, group workshops or job-based learning.

### How effective are existing learning and development approaches in building business-critical employee skills?

In turn, this prompts us to ask: How effective are existing L&D approaches in developing business-critical employee skills?

A [Harvard Business Review](#) study concluded that the US\$357.7 billion spent annually (in 2020) on L&D did not achieve the desired return on investment (ROI), as it turns out that only 1 in 10 use the learned skills and 1 in 4 believe training improved their performance. These results are hard to ignore; clearly, L&D spending fails to yield sustained value. Something is broken in existing approaches, leading us to wonder: Is there a better way to learn the critical personal and business skills we need?

In a word: yes!

#### A New Learning Method: The Inside-Out Approach

The traditional learning approaches favour what I refer to as an outside-in learning style. This means that we learn about a skill from someone else's perspective – what works for them, their visible tips and tricks or, perhaps, the tactical mechanics of the skill. How many of you remember trying speed reading thinking, great, I will be able to read more, recall it when I need it and do so faster? Only to disappointingly realize that the speed-reading techniques are variations on skimming, producing inconsistent outcomes that are often viewed with skepticism.

The main limitations of existing L&D strategies are that they are ill-adapted to individual learners; they're designed for mass production. Mass production undoubtedly has a useful place, but that merit diminishes rapidly as the skills needed become more nuanced, specialized or, in fact, some individuals have learning difficulties.

Let's look at a typical example: public speaking.

You are set to deliver your first public speech to a medical conference, talking about the benefits of your company's breakthrough drug in treating diabetes. Your nerves have the upper hand, words are mumbled, forgotten or mispronounced. Stage nerves set in and you're not coping with them well.

**The main limitations of existing L&D strategies are that they are ill-adapted to individual learners; they're designed for mass production.**

Speaking in a public setting requires a learning experience that helps you understand how experts consistently overcome their pre-speaking nerves. Traditional public speaking training courses, for example, focus on visible aspects, such as physical movements (hands, arms and head), voice projection, pitch, tone, attire, venue, speech content, technologies and the like. These elements are important, but they are only a part of the skill story.

What about the invisible elements that are not readily observable?

Unless you get an inside look at the expert's inner workings, how will you know the importance of frame of mind, self-confidence, energy management, motivation or harnessing your nerves to mastering the skill of presenting effectively? And, consequently, if you don't know about these needs, how can you realistically master the skill?

This is where *The Power of Potential* comes to life. It shows how skill breakthroughs happen when the visible and invisible are combined into iterative learning. Effectively, we then enjoy more effortless lifelong personal and professional growth. I refer to this concept as an **inside-out learning** process – a diametrically opposed and transformative break from traditional learning model.

### Unlocking the Secret to Mastery

So, how does replicating any skill we admire in others – by understanding both the visible and invisible workings that an expert utilizes when doing their thing – help us learn? When we can identify the invisible processing through which an individual's worldview influences their actions, we start to unlock our own ability to master skills by understanding what elements are essential and what is idiosyncratic.

What do I mean by this?

Applying a skill follows a process that starts from the outside, then follows an internal invisible series of steps to manifest again through visible behaviours (Figure 1). Every behaviour we exhibit starts after we receive information (an “external event”). These externalities occur daily and range from benign (something as simple as being cut off in traffic) to life changing (such as hearing a terminal medical diagnosis). We each react differently to the same event. Why?

The difference is in how we process things considering our view of the world. We each filter information as we process it; for example, some individuals may choose to ignore information or may generalize by associating it to a past experience. Each filter is influenced by how we see ourselves, what we believe, what we value, powerful memories (positive or negative) and how we speak to ourselves (for example, is our inner chatter self-critical or self-supporting).

## Talent is a combination of what is visible on the outside *and* what’s going on *inside*.

As if all this rapid processing wasn’t enough, our current state of mind also affects outcomes. If we are cut off in traffic on a day when we’ve just heard great news, the other driver’s lack of consideration will probably roll off like water from a duck’s back. If we’ve just received news of a layoff, that relatively minor traffic slight could become a trigger to an uncharacteristically angry outburst.

These rapid information-processing systems result in the behaviours we exhibit which, in turn, influences how others perceive us. Knowing this about ourselves, and others, allows us to learn in a purpose-driven and efficient way.

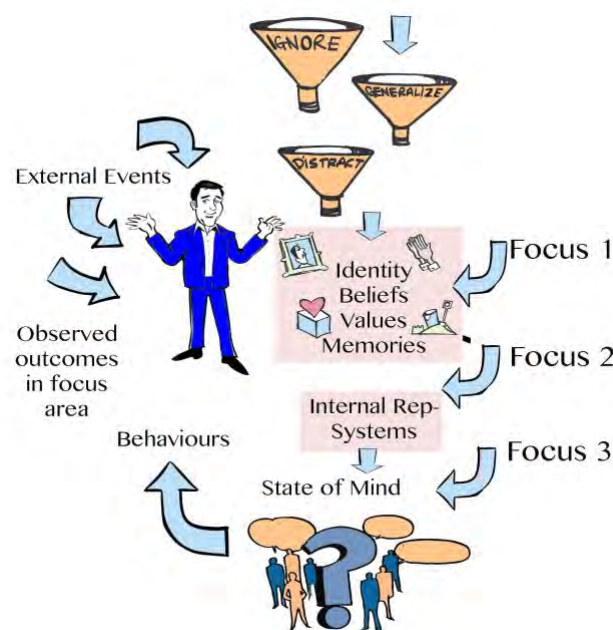


Figure 1: Understanding the invisible internal information processing system, reproduced with permission, D. Wray, 2021.

The classic two examples that showcase visible behaviours, which may or may not be relevant in our own ability to master a skill, are those of the chef and the sprinter. Some skills involve unconscious body movements – such as how a chef’s shoulder rolls when whipping up ingredients. We need to determine if this unconscious movement is a meaningful difference affecting skill aptitude. Or consider a professional athlete’s routine with a lucky pair of socks that the athlete believes influences ability at the 400-meter hurdles. Clearly, this is a genuine belief for the athlete concerned, but it’s equally clear that it has no impact on the beliefs and, therefore, skill of any other person. (Sadly, I’m not going to become an elite hurdler simply by borrowing a top hurdler’s “lucky” socks!) We uncover the relevance of these elements by adopting a curious mindset and asking relevant questions.

### Start By Asking the Right Questions

Let’s explore this process through a finance function strategy change opportunity in Acme Toys Company. A functional strategy review requires strong skill capabilities in communication, change management and critical thinking. This starts by asking the right questions – another skill. If leaders cannot ask the right questions, they will not identify the best development opportunities. We start with a few well-placed opening questions to unlock the outward assessment (Figure 2) of where Acme Toys Company sits today:

- What is the big picture? How can I help shape *strategic thinking*?
- What *mindset* is needed to shape and then deliver on the big picture?
- How do I need to frame conversations so that others hear what they need to hear (as opposed to what they want to hear)? What *communication* style works best in the organization? With my peers? With my team?
- How do we expand our team’s *industry knowledge* to effectively support the business? Where can we get this knowledge and insight?
- How can we accelerate digital and *intelligent analytical* capabilities within the team? Which additional tools could help us better inform or advise the business?
- How do we ensure that everything we do in this high-pressure environment is always guided by a strong *ethical compass*?

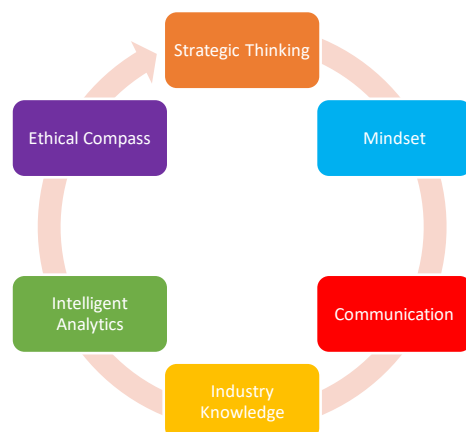


Figure 2: An Outward Assessment Strategy, reproduced with permission, D. Wray, 2021.



The outward assessment exercise allows us to identify the specific skill development needs.

It helps to understand the causal relationship between the desire to learn something and achievement. An [Anadolu University](#) (Turkey) study identified this link when research results demonstrated a direct connection between learning desire and style, and performance (achievement). Their findings confirm what most of us innately know: our success is tied to lifelong learning. So, it follows that organizations that align learning to the natural motivation and individual styles of employees reap the benefits of enhanced skills and capabilities in corporate performance.

### Exploring Mastery with an Expert

This brings us full circle to extend our understanding of the inside-out learning approach. *The Power of Potential* uses a Personality Map (Figure 3) to clearly illustrate the balance between the visible (mind) and invisible (heart) elements of skill mastery.



Figure 3: *Personality Map*, reproduced with permission, D. Wray, 2021.

Exploring heart level elements with an expert, of course, requires finesse and neutrality allowing us to develop an unbiased picture of the attributes necessary for the skill we desire.

Again using “managing stage nerves” as our go-to illustration, being a masterful public speaker involves far more than simply walking onstage and delivering a well-scripted message. Instead, it’s about walking onstage and delivering a well-scripted message with passion, conviction, energy, inspiration, integrity and humor, thereby providing something valuable and memorable to those in attendance.

To do so requires that you:

- Manage your own frame of mind and self-talk.
- Read your audience expertly throughout.
- Communicate your message with clarity and panache.
- Adapt to changing conditions.

These nuances matter because self-esteem, self-image and self-confidence all directly and powerfully have an impact on skill proficiency. In short, talent is a combination of what is visible on the outside *and* what's going on *inside*.

So, by understanding the attributes that are core to, as well as those that differentiate average from outstanding, experts in public speaking, we get a picture of the skill attributes we need to consider when mastering it ourselves. An excerpt from actual interviews exploring beliefs and values yielded interesting results (Figure 4).

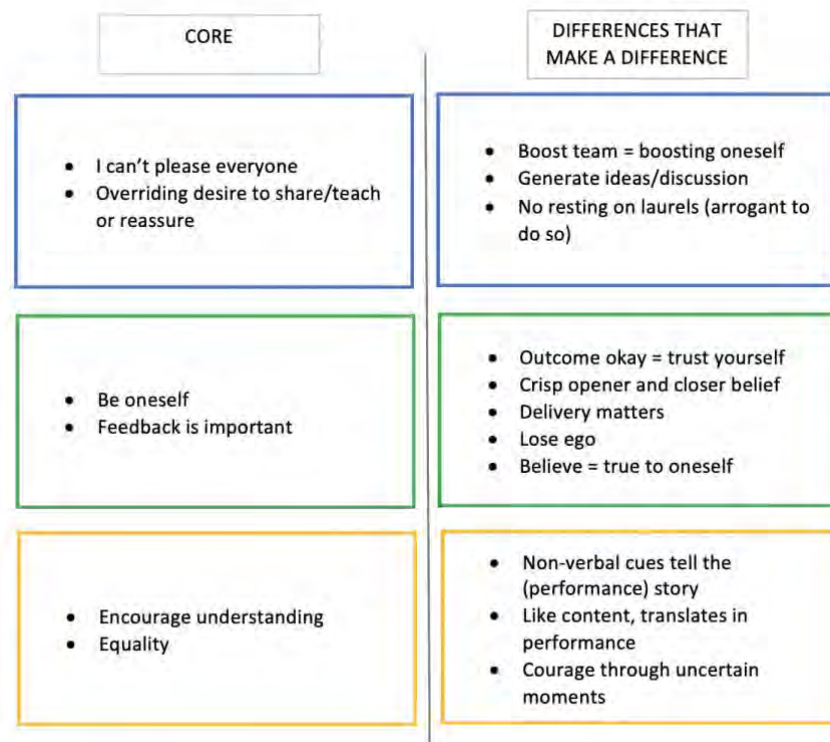


Figure 4: Beliefs & Identity – draft interview results, reproduced with permission D. Wray, 2021.

The most enlightening insight was the quality of self-talk and mindset of experts, a hidden key to skill mastery not considered or taught in traditional L&D programs.

When the expert interviews were completed, an initial summary of core (common) and differing attributes surrounding pre-stage nerves in public speaking emerged (Figure 5).

	Commonalities		Differences That Make a Difference	
	Visible	Hidden	Visible	Hidden
<b>Last few seconds before starting</b>	<p>Check technology, both visual and audio</p> <p>Wear attire appropriate to event and venue</p>	<p>Material is well understood and adequately rehearsed</p> <p>Openers are prepared and ready</p> <p>Some degree of confidence is present</p>	<p>Presenter visibly relaxed, talking or engaging in humorous banter</p> <p>Presenter quietly reflecting</p> <p>Material tailored to presenter's personal style</p>	<p>Presenter using positive self-talk, mind clear, focused, and ready for showtime</p> <p>Pre-presentation nerves starting to be harnessed (for energy)</p> <p>Visualization of the presentation done perfectly</p>
<b>First 120 seconds from the start of delivery</b>	<p>Presenter is making eye contact with attendees throughout the audience</p> <p>Voice speed and tonal variation are being monitored and moderated</p> <p>Body language is well-judged (hand, arm, or stage space movements) and appropriate</p> <p>Delivery is crisp and audible</p> <p>Nervous habits are not visible (e.g., rattling coins, or ums and ahs)</p>	<p>Initial presentation nerves are being managed</p> <p>Audience cues are being periodically evaluated and acted upon (e.g., moderated behavior, use of gestures, etc.)</p> <p>Transient moments of self-doubt are recognized and are being quietly worked through</p>	<p>Voice possesses good speed, variation, and tone throughout the presentation</p> <p>Presenter is actively exhibiting open and approachable nonverbal cues (e.g., smiling, open posture, easy manner)</p> <p>Presenter is varying delivery style based on real-time audience cues to build rapport with the audience</p>	<p>Presenter is adroitly reading and adapting effortlessly to audience cues (nonverbal in this 2-minute micro-moment)</p> <p>Initial presentation nerves (adrenaline) are being positively deployed as energy to "be on fire" in the moment</p> <p>Presenter is being true to authentic self</p> <p>Mind is systematically pacing through the process steps</p> <p>Presenter is experiencing positive alignment of self-image and experience</p>

Figure 5: Draft Interview Results in Tabular Form, reproduced with permission, D. Wray, 2021.

Clarity of purpose became the differentiating element in those that master public speaking skills and those that simply get by. This insight allows us to make conscious choices about the extent to which we want the skill. Excuses quickly fall away as we make, and own, personal learning choices, once equipped with this information.

### Embedding the Skill We Seek

Not so fast! You may be thinking that it is one thing to develop a model of what mastery in each skill looks like but is quite another to embed it oneself. While there is some truth in this statement, embedding it is simply an extension of the learning process.

Embedding it requires a few more techniques:

1. Leverage your motivation and change styles, igniting a fire for self-change.
2. Establish and execute a winning game plan.
3. Surround yourself with the best support system.

I'll touch on the first aspect here, motivation and change style. Understanding these two aspects about yourself is critical to create fully achievable milestones that are much less likely to be abandoned.

**Being a masterful public speaker involves far more than simply walking onstage and delivering a well-scripted message.**

### Motivation As a Positive Driver

Motivation moves in two basic directions: toward something (seekers) or away from something (avoiders). As you may guess, a toward motivation is a positive frame, whereas an away-from motivation is a negative (or avoidance) frame. An away-from motivator is most effective when it relates to a need (or value) that matters to you, such as a need for financial security or personal wellbeing.

If we use our public speaking example to illustrate the motivational styles (and corresponding thought processes), we get good examples of a motivator that includes both a toward and away from element (these are particularly effective):

Goal: To be a sought-after charismatic and inspiring public speaker who is helping others elevate themselves, thereby avoiding any period of unemployment. In this case, the toward motivator is the *charismatic and inspiring public speaker helping others*. The away-from motivator is *avoiding any period of unemployment*.

It is important to remind yourself of the consequences of not making your change now. Once this is clear in your mind and you can see no reasonable alternative but to be committed, the motivation to perfect your desired skill is where it needs to be.

Goal: To be a sought-after charismatic and inspiring public speaker who is helping others elevate themselves. This centers on a toward motivational style, though the goal objective could be augmented by including the double motivation approach (incorporating both toward and away-from motivators).

Double Motivation Goal: To be a sought-after charismatic and inspiring public speaker who is helping others elevate themselves, thereby achieving thought-leader recognition and avoiding the industry-prevalent risk of obscurity and subsequent financial hardship. The key



in our context is using this to align milestone objectives with the individual's natural preference (otherwise it may serve as a de-motivator).

### Change Style, A Hidden Asset

Let me explain why understanding your preferred style is helpful in this journey. Learning is simply an exercise in self-initiated change. There is a continuum of change preference styles (Figure 6), from individuals favouring an incremental change approach through to those preferring a pragmatic approach to those who thrive on disruptive change approaches

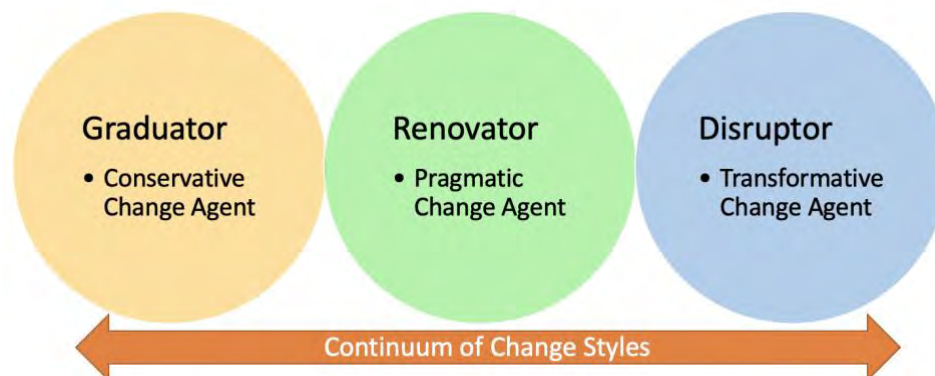


Figure 6: Change Style Range, reprinted with permission, D. Wray, 2021.

Let's look at each style in turn, using our trusted public speaking example.

**Graduator:** In public speaking, a graduator could easily get lost in the details of the speech. To counteract this risk, assess whether the desired goal is being achieved. One way to confirm this is to practice in front of a camera. Self-assessment is a powerful way to critically evaluate your performance. Replay provides objective and immediate feedback. Would you be engaged and inspired if you were in the audience listening to a speaker with the tone of voice, physical movements, stage presence and content that you are seeing in the replay? Is your presentation style charismatic and inspirational in its delivery? Is your content structured and delivered in a manner that elevates the audience? If not, why not?

**Renovator:** In public speaking, a renovator could easily fall behind while trying to decide which speech content to include and which to exclude. A counteraction to this risk is to regularly check progress against due dates leading up to the event to determine whether your goal will be achieved. For a renovator, peer assessments are a powerful way to critically evaluate performance. There are several ways to objectively confirm your status: How is your presentation content going to meet audience expectations for a charismatic, inspirational and elevating delivery? Have you tested delivery with individuals you trust to be honest with you? If not, why not? Are they engaged and inspired listening to your presentation, considering your communication style (e.g., tone, speed, variation of voice and presence) and content?

**Disruptor:** In public speaking, a disruptor style could easily try to boil the ocean by obsessing on shiny new technology devices or software (before they're tried and tested), developing content without adequately validating audience expectations, or losing focus by thinking

about other project possibilities. Counteractions to these risks could include establishing (or outsourcing) new technology testing periods during downtime, using a structured speaking engagement template to consistently assess all relevant aspects of the engagement expectations and establishing motivational reminders to remain engaged with the project.

For a disruptor, peer assessments are also a helpful way to evaluate whether the delivery is on point in meeting its objectives. How is your planned speaking delivery (e.g., content, technology and style) going to meet attendee expectations? Have you tested the speech delivery with a small representative group of individuals for their reaction? Did any delivery hiccups surface? How did the test group rate your performance in meeting the objectives of being charismatic, inspiring and elevating?

**The finance and accounting profession is undeniably undergoing significant change, and will continue to do so, as innovative technologies continue to change how, where and when we work.**

Each of the three change styles brings strengths as well as potential blind spots. Understanding your preferred style enables you to actively consider areas for improvement. This ability to avoid pitfalls secures higher-quality outcomes, a giant step toward mastering the skill.

#### **Where to Next?**

The finance and accounting profession is undeniably undergoing significant change and will continue to do so as innovative technologies continue to change how, where and when we work. It's also evident that traditional learning techniques are only partially effective in long-term success. The time to change is now!

By choosing a breakthrough inside-out approach of identifying and understanding the invisible processing through which our worldview influences our learning, we can get straight to the heart of unlocking our ability to master any skill we want.



## Applying Artificial Intelligence in the Real World

By Edward Hall, CPA



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### SPONSORED CONTENT

My company, PayClix ([www.payclix.com](http://www.payclix.com)), has been in the business of processing online payments for a variety of businesses, in several vertical markets, since 2005. During that time, our business has evolved from a simple transaction processor to being a trusted and integral part of our customers' businesses. Perhaps the greatest change has been the adoption of artificial intelligence (AI) tools and techniques that anticipate our customers' needs. This article describes several case studies of how we applied AI to real business events – especially to delinquent payment situations. Unfortunately, it is a fact of being in business that a certain percentage of customers will default on their accounts.

#### How It All Began

Ten years ago, a prospective customer, a water district in Texas, asked us to give their customers the simple capability of being able to pay their utility bills online. This we did and, as word spread, we ended up with hundreds of utility districts using our PayClix software (<https://payclix.com/home/utility-billing.cfm>). But, as we grew, our customers asked for additional tools they could use to operate their businesses and, since we were processing most of their customer payments, we had a treasure trove of details on when payments were made, the payment method and details on the frequency of delinquent and dishonored payments, all categorized by the type of customers, their locations and businesses. This enabled us to construct accurate cash-flow models and projections in the form of spreadsheets that were customized to a customer's needs, which further embedded us into our customer's business environment. What we didn't realize at that time was that our analyses, projections and models were actually an early form of applying AI to our customers' businesses.

As could be expected, we duplicated the reporting and analysis capabilities that we had constructed for our utility customers and applied it to customers in the accounting and legal professions, which then brought us even more customers.

#### Let's Compromise!

As a retired CPA, I've always been fascinated by the IRS' "Offer in Compromise" program (OiC), which deals with taxpayers who couldn't pay their taxes as they became due and ended up in a quasi-negotiation with the IRS to settle their back taxes. It seemed to me that OiC is a highly confrontational program since, from the get-go, the taxpayer is assumed to be at fault and trying to get something for nothing. The IRS publishes a booklet, [Form 656-B](#), which is 32 pages

long and covers all of the steps required to file and to be successful in having an OiC approved. The required application [Form 433-A](#) has a checklist of a dozen documents that the IRS requires when you file an OiC, plus they even want a \$205 application fee. (And they don't take checks!)

From my experience, the IRS model, with its complex and detailed forms and maze of regulations, procedures, manuals and endless staff, was not going to fit real-life delinquent business customers. Of course, when the creditor is in a service industry, such as a water utility or a tax preparer, there's really no way to enforce payment. You can't repossess a mailed tax return or recover water from a morning shower.

In several states, for instance California, water districts are prohibited from shutting off a customer's water when a serious delinquency occurs, since water delivery – like electrical service – is seen as an essential service. Delinquent water customers in states which do allow shut-offs are also known for their ingenuity. One, in Texas, parked an old junker car on his front lawn, right over the top of his water meter and its shutoff valve, making it impossible for his water utility enforce its shutoff notice. In general, however, the ability to withhold services is a powerful incentive for the debtor to pay.

Service providers are also known for their creativity in collecting overdue accounts. One of our customers, a law firm that collects accident insurance excess payments on behalf of its clients, several national auto insurance companies, developed an innovative way of ensuring that delinquencies in their assigned accounts don't occur. They register a lien on the debtor's vehicle and require the debtor to attach a [small device](#) under their vehicle's dashboard. If the debtor misses a payment, they simply go online and disable the car's ignition. That virtually guarantees that they get the debtor's attention and the overdue payment.

So, recognizing that delinquent accounts are a way of life in business, we decided several years ago to get ahead of the crowd. We created [DebtMagicians](#) for the purpose of enabling a debtor and the creditor to find a non-confrontational solution.

Perhaps the greatest lesson that we've learned about AI is that it is largely based on combining, filtering and projecting a myriad of seemingly unconnected details

### **A Rising Tide of Debt**

On October 30, 2020, CNBC reported "nearly a third of Americans with a credit file have some type of debt that's in collections." And, according to a report from the [New York Fed](#), in the [fourth quarter of 2019](#), 4.7% of outstanding debt was in [some stage of delinquency](#), with \$444 billion in delinquent debt (out of the total \$669 billion in delinquent debt) classified as "seriously delinquent," which included debts that were previously charged off but on which lenders continue to attempt to collect.

And that was all before Covid-19 struck. This past June, the Federal Reserve reported that "Household debt rose by its highest dollar amount in 14 years during the second quarter, thanks mostly to a surge in the housing market that brought the collective American IOU to just

shy of \$15 trillion. Total debt balances jumped \$313 billion in the April-to-June period, the sharpest rise since the same period in 2007.”

### **A Real Life Case**

In January of this year, we had a call from one of our PayClix utility district customers in Illinois. The utility’s management board had voted the night before to unilaterally shutoff the water service of any customer who was delinquent at close of business on April 26. Our customer wanted our help. They had no way or experience in contacting delinquent customers or setting up debt repayment plans. But we did.

We proposed to them that they use our existing [DebtMagicians](#) (DM) software to negotiate mutually acceptable settlements. DebtMagicians was built using a sophisticated AI engine that actually negotiates a settlement using criteria set by the creditor, such as acceptable settlement amounts based on the amount and age of the debt, the debtor’s gross income and the debtor’s fixed and variable expenses, past history in following through with previous settlement proposals and how the debtor, as an individual, compared with peers in similar circumstances on a local and national basis. As well as this data, we also use a calculation originating in the European Union called a Debt Service Coverage Ratio (DSCR). The DSCR evaluates any settlement proposal made by a debtor to ensure that person can realistically afford the settlement proposal offered based on current income and expenses.

### **Introducing Abra**

To the debtor, DM appears to be a helpful, understanding and unbiased entity which is actively seeking a way for debtors to settle their accounts. Our DM bot, named Abra, was given a slight sense of humor and a detailed understanding of each debtor’s situation (since she has access to a large quantity of data that is tied to the debtor). She greets debtors by name and refers sympathetically to their situation, asking questions about how they got behind in their payments, what they propose to do about their current situation and any other debts they might have, all the while referring to the debtors’ known debts (current and settled). Abra generally acts as a debtor’s advocate in negotiating a settlement. When an offer to settle is made, our AI engine evaluates it and can make counter-offers (and even make a “last and final offer” if all previous offers were rejected) based on additional criteria set by the creditor.

Abra makes suggestions on how a settlement could be arranged or scheduled and even suggests innovative solutions such as offering to organize a crowd funding campaign on the debtor’s behalf. She helps the debtor compose an email to family and friends seeking help. (And yes, we do save all of our bot’s chats and crowd-funding email contacts in the debtor’s profile for potential future reference should the debtor default or disappear.) One of the interesting features of DM is that we offer our service at no cost to the creditor. If or when a settlement is negotiated, we charge the debtor a settlement fee based on a percentage of the amount that the debtor saved by using DM. DM also provides the creditor with an annual [1099-C](#) report to be sent to debtors who saved more than \$600 by using DM.

The results of this experiment (and it truly was) were really astounding. We had to create several innovate routines to locate and contact current and former customers of the Illinois



utility, using email and text messages and a “call to action” that would get their attention. We composed a series of messages that progressively stressed the importance of making a settlement before the deadline. Each message told them of the utility’s Board’s intentions and also suggested several ways to settle their accounts. When we sent our first contact message (an SMS text), we actually had a sign-up within an hour of it being delivered. And the customer setup an installment payment plan which she is faithfully adhering to.

Dozens of other customers did likewise. Some called the utility company to verify our email was real and that their water WAS really going to be disconnected. And then they set up payment plans. And, not surprisingly, the common excuse was that they had forgotten and many remarked how they appreciated the reminder.

Some customers started plans and then defaulted. But, by then, the utility knew how to contact them and negotiate alternative arrangements. And yes, on April 27th, the utility did indeed terminate service to several dozen of its delinquent customers. And, as might be expected, many of them showed up within hours with cash and credit cards in hand and, humorously, many asked that their water be turned back on the same day.

Since then, Abra has gained several siblings and we’ve tweaked our AI engine to accumulate large quantities of data to be able to schedule “just in time” petroleum deliveries to an Alabama county’s work sites and also schedule waste oil pick-ups from businesses who do oil and lube changes. As well, we’ve also worked on building an extension to our AI engine that schedules fuel oil deliveries to homes in the north east based on a resident’s previous consumption, the number of “degree days”<sup>1</sup> between deliveries, the wholesale cost of fuel oil and future weather projections.

### **AI Going Forward**

Perhaps the greatest lesson that we’ve learned about AI is that it is largely based on combining, filtering and projecting a myriad of seemingly unconnected details to build an overall picture of a situation from which actions can be inferred and projected. We’ve also learned that no detail is too small to be omitted from a situational analysis and no item is too large that it can’t be broken into its multiple constituent parts.



<sup>1</sup> Degree days: Unit used to determine the heating requirements of buildings, representing a fall of one degree below a specified average outdoor temperature (usually 18°C or 65°F) for one day.

# A Brief Primer on Cryptocurrencies and Keys: How Evolving Payment Trends Influence the Management of Cryptocurrencies in Business

By Eric E. Cohen, CPA



Eric is a prolific author, engaged in virtually every effort to standardize accounting and audit data, a national expert on a wide variety of standards efforts, and co-founder of XBRL.

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As more and more organizations are accepting cryptocurrencies<sup>1</sup> for payment, or investing in cryptocurrencies as part of their treasury function, the issues of both how to acquire and how to manage these assets become more important for financial professionals to understand.

While most organizations are still trying to adapt to the long-standing but challenging world of login names and passwords for security and access, cryptocurrencies exacerbate the issue with new mechanisms and a new vocabulary, largely surrounding the use of private and public keys. In this article, we will examine cryptocurrency management, focusing on this new vocabulary and techniques related to the new issues of key management. For financial professionals with responsibilities for oversight over an enterprise's assets, the article may help with issues related to risks, controls and management. For auditors, it may provide useful background for understanding the new corporate environment and for the development of relevant audit procedures.

## A Brief History of Payments and Authentication

Over the last 40 years, the methods businesses use to send and receive payments, as well as how they manage their investments, has changed markedly. As the PC revolution began 40 years ago, through the ages of the Internet and now into blockchain, we have gone from mail and phone to online services, to the new world of cryptocurrencies and to investments with decentralized finance (DeFi).

While most organizations are still trying to adapt to the long-standing but challenging world of login names and passwords for security and access, cryptocurrencies exacerbate the issue with new mechanisms and a new vocabulary.

**Forty years ago** (1981), as the PC (personal computer) era began, those computers did not yet do much talking to each other. While the IBM PC and the Compaq portable, and their clones and competitors, starting showing up in offices and for the mobile warrior, neither local area networks nor telephonic connections were common. The digital connection between trading partners, and between businesses and their financial institutions, had not begun in earnest.

The typical small business would primarily be dealing with three methods of payments: for business-to business activities, primarily cash and cheques/checks, the latter more prevalent for payment on account; for consumer-to-business activities, cash and credit cards were more the norm. There was no commercial Internet 40 years ago and only very limited online banking or brokerages. Cash, credit cards and cheques mechanisms each had their own risks; as someone who himself installed point-of-sale systems for clients, I had access to credit card information much like that we hear about in today's security breaches, but only because of direct access to the seller's computers, where the information was collected in batches and sent only on a periodic basis to the credit card processor.



**Thirty years ago** (1991), the (World Wide) Web era began. Although the interim period had heralded the rise of Electronic Data Interchange (EDI) and specialized online services, it was the new connected age where widespread use of online systems and, with it concern about controlled access to those online systems, began to rise. With that growth came the proliferation of login names and passwords, and we sit here – 30 years later – with few excellent answers to those legacy challenges. People have difficulty

remembering login names and passwords; security experts recommend changing those passwords regularly as well as making them more complex, making it even more challenging to remember ... or even type efficiently and accurately. Password managers, software and online systems that offer up the login information on demand, help but have their own problems.

Although two-factor authentication (TFA) devices – combining “who you are” (such as fingerprints or eye scanning) or “what you have” (such as a separate piece of equipment) to “what you know” (your login and password) – were widely available 20 years ago (in 2003 RSA SecurID,<sup>2</sup> as a “what you have” device, held 70% of the market as a hardware device to make logging into systems more secure), it has only been the recent highly publicized privacy breeches that have led more information environments to strongly encourage or require TFA. For example, I can access my email or systems for a University with which I am associated only with the use of one of my smart devices as an authenticator, using Microsoft Authenticator<sup>3</sup> for TFA. Cryptocurrency exchanges, such as Coinbase, highly recommend TFA; Coinbase supports Yubico's Yubikey.<sup>4</sup>

**Twenty years ago**, ACHs (automated clearing houses) started taking off, and business-to-business payments through an electronic funds transfer network took the paper (and the paper trail) out of payment transfers. ACH transfers do require sharing banking information with the

payer, which may not be ideal. With that knowledge, however, ACH payments were fast and easy.

As ACHs were taking off, the Extensible Markup Language (XML) also began its ascent. Where HTML was characterized as “the web of information,” XML ushered in “the web of data.” In XML’s early maturation, the idea that we would be able to hook together our business systems,



including payment processes, using XML Web Services<sup>5</sup> for a Service Oriented Architecture (SOA) held great potential. While you rarely hear about SOA anymore, Application Programming Interfaces (API)<sup>6</sup> and Representational State Transfer (REST) seem to have won the battle<sup>7</sup> for development mindset.

**Ten years ago**, electronic payment methods began to proliferate.

Essentially tied to credit cards, the digital “wallets” (not to be confused with cryptocurrency wallets, as we will discuss) started showing up, joined with the inclusion of NFC (near field communication) technology in mobile phones: Visa,<sup>8</sup> Google,<sup>9</sup> Apple and many others<sup>10</sup> began offering mobile, or digital, wallets. The idea of a wallet as a place you kept your credit cards, and not necessarily your money, wasn’t so confusing then.

**Thirty years ago, the new connected age – where widespread use of online systems and, with it, concern about controlled access to those online systems – began to rise.**

Coincidentally, at the same time, the crypto era began. That crypto era was also marked by a different kind of digital wallets, but these manage something completely different than the Google and Apple wallets. These cryptocurrency wallets store information related to the private keys necessary to control the new assets.

**More recently**, related to payments and investments, decentralized finance has become the big deal – where terms like *staking*, *delegation*, *pooling* and other ways of earning “interest” or appreciation on cryptocurrencies without losing control of the cryptocurrencies has brought additional potential benefit to holding onto cryptocurrencies along with the hoped-for appreciation of the cryptocurrency itself.

Although Bitcoin, Ethereum and others of their ilk are still a mystery to many, the number of people “investing” in cryptocurrency is rising. A recent poll had it as 13% over the last year in the US<sup>11</sup>; in Canada, the numbers may be around half of that.<sup>12</sup> The crypto adoption numbers



don't differentiate between how the cryptocurrencies are handled, and that's where the new



vocabulary comes into play. The term wallet is thrown around even in this space to mean a true cryptoasset wallet managing keys, an account with a custodian where you see your holdings but do not have direct control, and other ways it may be different.

So, with that brief background on how payments have changed over 40 years, let's focus more specifically on

our new world of things like Bitcoin and Ethereum, collectibles known as non-fungible tokens (NFTs) and other assets tracked on blockchains and the variations thereof.

### **A Brief Overview of How Cryptocurrencies Are Tracked by Keys**

The original Bitcoin<sup>13</sup> whitepaper<sup>14</sup> introduced some terms not part of the average financial professional's vocabulary: in particular, *private key* and *public key* are introduced in the whitepaper as the "keys" (no pun intended) to the Bitcoin blockchain's design. (The Bitcoin blockchain<sup>15</sup> is the append-only database that tracks Bitcoin, using cryptographic means and methods to secure it.) Public Key Infrastructure (PKI) is not unique to cryptoassets and blockchain, although the application is. Those who have studied security may be aware of how a matching pair of codes, the private key and the public key, are used as part of encryption – sending secret messages, if you will. The private key is a unique code, meant to be kept private and used to authorize payment in the cryptocurrency world by digitally signing the information, while the public key ... well, the public key is where it starts to get a little tricky. While generally, the public key is designed to be ... well ... public, the Bitcoin whitepaper recommends keeping the public key private as well<sup>16</sup>.

The whitepaper does not speak to a Bitcoin *address* per se. The address is what we give out today to receive Bitcoin "into" our wallet or exchange instead of the public key. The whitepaper introduces the transactions only as "a chain of digital signatures." In fact, the Bitcoin whitepaper doesn't reference a wallet at all. The original Bitcoin client, however, had the ability to create wallets, the storehouse of the keys; that client was known as Bitcoin-Qt.<sup>17</sup> (Qt<sup>18</sup> refers to the software toolkit used to build the graphical user interface.) The whitepaper does, however, speak to the necessity of not only keeping the private key private, but also the benefit of keeping the public key private. To do so, in advance of Bitcoin's implementation, the developer community added the concept of a Bitcoin address.<sup>19</sup> A Bitcoin address is unambiguously derived from the public key, but it is almost impossible to calculate the public key from the address. Bitcoin addresses are usually 34 characters and currently start with the numbers 1 or 3 (legacy addresses) or bc1 (SegWit addresses). Some cryptocurrencies and tokens, such as Stellar, do not have the same "address as abstraction" and use the public key itself as the address.<sup>20</sup> Stellar does use the term address in a different way, which they call a



“federated address”; this is an alias (a simpler phrase you can give out instead of the more complex public key) that you can provide as an easy shorthand.<sup>21</sup>

Although Bitcoin, Ethereum and others of their ilk are still a mystery to many, the number of people “investing” in cryptocurrency is rising.

Creating a private key usually begins with a “seed” to help generate random numbers; most financial professionals are somewhat comfortable with the concept of random numbers, especially used in audit sampling. When the seed is not random, it becomes simple to guess private keys of addresses with balances in them, as the key is derived from the seed by a consistent algorithm. For example, I can use a tool like BitAddress.org to help me generate a private key and a related address. Using the “Brain Wallet” option, I can type in a seed phrase to generate a private key, and then use a lookup tool such as Blockchain.com to see whether the related address has any Bitcoin in it. Typing the seed phrase “Satoshi Nakamoto” results in an address of 1JryTePceSiWVpoNBU8SbwiT7J4ghzizW, and I can tell<sup>22</sup> that address has had transactions run through it in the past. An attacker can quickly run through seed phrases that might appeal to the Bitcoin crowd, automatically identify the private key and related Bitcoin addresses, identify if any have a balance. They then have all of the tools necessary to empty the balance.



Bringing this back to the concept of a wallet: a cryptocurrency wallet manages keys; it can create them, keep inventory of them, look up the related addresses and display balances of holdings, etc. But as a key is just a code, I can create a key without a wallet (as I did in the above example); I can export the keys from one wallet and import them into another

wallet (concurrently). There are no balances or amounts unique to the wallet, which is likened to a window to the holdings on the blockchain; it just has the keys, which blockchains they apply to, and potentially some additional information necessary to identify specific tokens on the chain to which they relate.

### **Tracking Crypto “Beyond” the Keys**

So, an organization tracking cryptocurrency holdings by using private keys (individually) or a key management tool like a wallet is one option for managing cryptocurrencies, and financial professionals have a new challenge of figuring out how to control this information. But self-managed (non-custodial) wallets are not the only way cryptocurrencies are managed.

Unlike the wallets described above, the account holder does not have control of the funds through possession of the keys; they cannot look at the respective blockchains to see their holdings, as they are aggregated by the exchange; you have to look at your account with the exchange instead. You can, however, deposit selected cryptocurrencies into these accounts, and you can withdraw (transfer) cryptocurrencies from these services to true “personal” wallets or to send to others.

Probably one example of the real confusion in this space is with Coinbase (the exchange) and Coinbase Wallet (a true, non-custodial wallet, where the user holds the keys to the cryptocurrencies). Coinbase calls amounts held on its exchange (you have no access to the keys) a “hosted wallet.”<sup>24</sup> It then goes on to say the separate Coinbase Wallet is a “non-custodial” wallet. And to make things more confusing, the non-custodial wallet page<sup>25</sup> speaks about “stor[ing] all of your crypto and NFTs in one place” – when, in fact, the crypto and NFT are *not* stored in the application, only the keys that control them.

**The AICPA’s guide *Accounting for and auditing of digital assets* has much to say about purchasing or receiving cryptocurrencies and how to recognize them for accounting purposes.**

But there is yet another way people are “purchasing” cryptocurrencies – through services like Robinhood or PayPal. They also may call it a cryptocurrency wallet,<sup>26</sup> but these accounts are quite different from the first two options. At the present time, these services do *not* permit deposits of cryptocurrencies or withdrawals of cryptocurrencies<sup>27</sup> at all – just buying with fiat, holding, and selling for fiat.

#### **What Does This Mean for Enterprise Cryptocurrency Management?**

The AICPA’s guide *Accounting for and auditing of digital assets*<sup>28</sup> has much to say about purchasing or receiving cryptocurrencies and how to recognize them for accounting purposes. They describe the situation of *recognition of digital assets when an entity uses a third-party hosted wallet service* as a special and somewhat complicated situation. From a security point of view, however, it is relatively simple: you have an account with a third party and the ability to communicate with that third party.

Third parties also come into play on the receiving side in the first place. Many businesses that have decided to “accept” cryptocurrencies for payment (for appearance’s sake) avoid the technical issues of controlling cryptocurrency as payments by using a third-party service that acts as an intermediary and hides the complexities through immediately turning any cryptocurrency into fiat currencies. For organizations that choose to actually receive and hold the cryptocurrencies for any amount of time, there are more issues to consider.

As mentioned, services like Robinhood or PayPal (under the conditions as this article is being written) do not permit cryptocurrency deposits, and so are not relevant to the management discussion for payments. For investments, these services offer reduced acquisition and liquidation costs (as crypto is not actually being procured), but have certain other concerns outside of the scope of this article.

The exchanges (such as Coinbase, the exchange) or other platforms (such as Coinbase Pro, a trading platform used for exchanging and selling cryptocurrencies, but perhaps less well suited for initial acquisition) can provide a cryptographic address for receiving cryptocurrencies from



third parties, for example, for payments. As custodial accounts where the user does not control the keys, corporate control is more similar to traditional banking and investment accounts.

So, the greatest issue in these “simple” options for new consideration is that of non-custodial wallets, where access to the wallet(s) – or directly to the private keys generated by or managed by the wallets – means control of the assets under control by the wallets’ private keys. On top of that, the keys can be exported and then imported into another wallet.



Most wallets are initiated with a random seed, from which many private key/public key pairs are created. That seed, a very big code, which is very difficult to memorize, can be represented with easier to represent words, so memorizing 12 or 24 words serves as a mnemonic for the long phrase. The mnemonic seed phrase, known as a BIP39 seed, if known by an

employee, can easily be used to duplicate the content of a wallet.

In the COSO thought leadership paper, *Blockchain and Internal Controls: A COSO Perspective*,<sup>29</sup> guidance about “implementing appropriate segregation of duties between the ability to authorize blockchain transactions ... and the ability to record transactions within the entity’s general ledger,” in particular “using multisignature or key sharding techniques” is offered as guidance. The paper notes, however, that, “Enterprise key management software is only beginning to emerge, as are key management guidelines” and references a National Institute of Standards and Technology (US NIST) project on Key Management guidelines.<sup>30</sup>

### **The Challenges of a Rapidly Changing Web of Value**

We have seen payments and investments change markedly over the last 40 years. In the past 10 years, Bitcoin has been the catalyst for a new and rapidly changing *web of value*, where the challenges to financial professionals to understand and control the new cryptocurrency class of digital assets in a rapidly evolving world filled with terms that previously belonged to the IT (information technology) department, not the accounting department. Financial professionals should be working with management and IT to prepare a solid foundation for managing accounting, finance and treasury in the upcoming days.

<sup>1</sup> This article will use the term *cryptocurrencies* generically for digital assets such as coins, tokens, central bank digital currencies (CBDC) and those assets sometimes called digital assets or currencies, virtual currencies, cryptocurrencies or similar terms.

- <sup>2</sup> <https://www.rsa.com/content/dam/en/data-sheet/rsa-secrid-hardware-tokens.pdf>.
- <sup>3</sup> <https://docs.microsoft.com/en-us/azure/active-directory/user-help/user-help-auth-app-overview> See also Google Authenticator at <https://www.google.com/landing/2step/>.
- <sup>4</sup> <https://help.coinbase.com/en/coinbase/getting-started/getting-started-with-coinbase/2-factor-authentication-2fa-faq>.
- <sup>5</sup> <https://www.w3.org/2002/ws/>.
- <sup>6</sup> <https://blog.api.rakuten.net/evolution-of-apis/>.
- <sup>7</sup> [https://www.w3.org/2005/Talks/1115-hh-k-ecows/#\(7\)](https://www.w3.org/2005/Talks/1115-hh-k-ecows/#(7)).
- <sup>8</sup> <https://www.wired.com/2011/05/visa-digital-wallet-nfc/>.
- <sup>9</sup> <https://techcrunch.com/2011/05/26/google-wallet-offers/>.
- <sup>10</sup> <https://blog.717cu.com/resources/education/financial-education-blog/the-history-of-digital-wallets>.
- <sup>11</sup> <https://www.norc.org/NewsEventsPublications/PressReleases/Pages/more-than-one-in-ten-americans-surveyed-invest-in-cryptocurrencies.aspx>.
- <sup>12</sup> <https://reviewlution.ca/resources/cryptocurrency-canada-statistics/>.
- <sup>13</sup> Although this article will be primarily using the term *Bitcoin* throughout, the basics are true for most other cryptoassets.
- <sup>14</sup> <https://bitcoin.org/bitcoin.pdf>.
- <sup>15</sup> From ISO 22739:2020: blockchain is a “distributed ledger with confirmed blocks organized in an append-only, sequential chain using cryptographic links.”
- Note 1 to entry: Blockchains are designed to be tamper resistant and to create final, definitive and immutable (3.40) ledger records (3.44).
- <sup>16</sup> From the Bitcoin whitepaper: “... privacy can still be maintained by breaking the flow of information in another place: by keeping public keys anonymous.”
- <sup>17</sup> <https://news.bitcoin.com/bitcoin-history-part-18-the-first-bitcoin-wallet/>.
- <sup>18</sup> <https://www.qt.io/home>.
- <sup>19</sup> [https://en.bitcoin.it/wiki/Invoice\\_address](https://en.bitcoin.it/wiki/Invoice_address).
- <sup>20</sup> See <https://developers.stellar.org/docs/tutorials/create-account/> where they note “The public key is always safe to share.”
- <sup>21</sup> <https://developers.stellar.org/docs/glossary/federation/>.
- <sup>22</sup> See <https://www.blockchain.com/btc/address/1JryTePceSiWVpoNBU8SbwiT7J4ghzizW>.
- <sup>23</sup> <https://support.kraken.com/hc/en-us/articles/115006441267-Differences-between-a-crypto-exchange-and-a-crypto-wallet-service>.
- <sup>24</sup> <https://www.coinbase.com/learn/tips-and-tutorials/how-to-set-up-a-crypto-wallet>.
- <sup>25</sup> <https://wallet.coinbase.com/>.
- <sup>26</sup> [https://www.paypal.com/us/smarthelp/topic/MY\\_WALLET\\_PER](https://www.paypal.com/us/smarthelp/topic/MY_WALLET_PER).
- <sup>27</sup> <https://www.paypal.com/us/webapps/mpp/ua/cryptocurrencies-tnc>.
- <sup>28</sup> <https://www.aicpa.org/content/dam/aicpa/interestareas/informationtechnology/downloadabledocuments/accounting-for-and-auditing-of-digital-assets.pdf>.
- <sup>29</sup> <https://www.coso.org/Documents/Blockchain-and-Internal-Control-The-COSO-Perspective-Guidance.pdf>.
- <sup>30</sup> <https://csrc.nist.gov/projects/key-management/key-management-guidelines>.



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## Purpose, Accountability and Value Creation: Paradigm Shifts in the Future of Corporate Reporting

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. Alan was a member of the founding Steering Committee of the Global Reporting Initiative from 1997 to 2002, and of the Working Group of the International Integrated Reporting Council in developing its 2013 Integrated Reporting Framework. He has served on the Advisory Council of the Sustainability Accounting Standards Board, the Integrated Business Reporting Committee of the International Corporate Governance Network, the Technical Working Group of the Climate Disclosure Standards Board, and the Sustainability Advisory Board of CPA Canada.*

*“Following a period of huge innovation in sustainability reporting, it is now time to consolidate and rationalize these various standards.... they (companies) have to be mindful of how the requirements of social license may evolve.” Mark Carney, Value(s), 2021<sup>1</sup>*

We are at an inflection point in corporate reporting. Three significant phenomena are occurring concurrently that are having unprecedented influence on the future of corporate reporting: convergence among proliferating standards and guidelines for meeting user information needs in the ESG/sustainability reporting space; shifts in long-accepted doctrines about corporate purpose and accountability; and conceptualizing anew, i.e., re-thinking, the fundamental nature of value and value creation – all in a time of urgency for achieving the UN Sustainable Development Goals (SDGs)<sup>2</sup> and, driven by climate change, the transition to low-carbon economies and renewable energy.

In the next year or two, we can expect more notable developments in the global reporting landscape flowing from those announced in 2020 and 2021, but will they represent genuine, ground-breaking progress in fulfilling stakeholder needs for decision-useful information about corporate performance and impacts?

Will they embody fresh insights about the path to a sustainable future, or simply perpetuate out-dated mindsets about corporate purpose and accountability? Will there be wider uptake of the holistic concept that enterprise value creation depends over time on interactions with connected, interdependent systems of natural, social, human and man-made resources, or will we continue to think of it just in terms of value for shareholders resulting from the last period’s operations and commercial transactions?

### **Sudden Signs of Convergence in Standards for ESG/Sustainability Reporting**

As to the direction of reporting, since 1997 we have seen how the regularly updated and expanded sustainability reporting guidelines developed and promulgated by the Global Reporting Initiative (GRI)<sup>3</sup> (and converted by them in 2016 into the format of standards) became the *de facto* global standard for sustainability reporting. These have been widely adopted by most of the world's largest companies (and many other organizations) for reporting – voluntarily in most jurisdictions – to all of an organization's stakeholders on its sustainability performance and management, namely its environmental, social and economic impacts, including its performance relative to the UN Sustainable Development Goals (SDGs).

**We have seen increasing demands by mainstream investors and other financial market actors for information about environmental, social and governance (ESG) issues they consider material to their decisions.**

Then, since early in this century, we have seen increasing demands by mainstream investors and other financial market actors for decision-useful information outside financial reporting about environmental, social and governance (ESG) issues they consider material to their decisions. This information is not clearly identified as such in typical lengthy corporate sustainability reports, even those prepared according to the GRI sustainability reporting standards. Such sustainability reporting aims to present information of concern to a wide range of stakeholders, whose concepts of what is relevant and material to them often vary considerably.

The acronym “ESG” was coined in investor circles around 2005 for information they consider material about the impacts of environmental and social issues on a company's financial performance and prospects and about corporate governance regarding such issues.<sup>4</sup> Recently, this investor-led demand for decision-useful ESG information (i.e., embodying reliability, comparability, consistency, etc.) has become so strong that it can no longer be ignored by capital market regulators, as we see in Europe and now even in the US.

And, during the last decade, we have seen the emergence of other well-intentioned frameworks and standards for reporting outside the scope of financial statements, such as, to name a few, those of the Sustainability Accounting Standards Board (SASB), the International Integrated Reporting Council (IIRC), the Climate Disclosure Standards Board (CDSB) and the Task Force on Climate-Related Financial Disclosures (TCFD), not to mention the CDP disclosures about GHG emissions etc., requested annually since 2004. The confusion to report preparers and users arising from this proliferation of frameworks and standards has resulted in an urgent and widely expressed need for their convergence and consolidation, ideally within a rational framework that would integrate financial information with the other information – especially ESG-related – that is essential for a comprehensive understanding of corporate performance, value creation and impacts on stakeholder interests.

As described further below (**2020: A Year of Unexpected Progress towards Convergence**),

starting in 2020, there have suddenly emerged a number of initiatives announced by leading bodies in the reporting standards and guidelines space.<sup>5</sup>

These have the promise of resulting before long in two broad, connected streams for corporate reporting, each guided by appropriate globally accepted and enforceable standards and guidelines. One stream focuses broadly on the information needs of all stakeholders (e.g., customers, suppliers, employees, communities and the general public) who are concerned about a company's impacts on the planet and society (sustainable development) and achievement of the UN SDGs. The second stream focuses primarily on meeting the needs of investors and other financial market participants for decision-useful information they need to assess a company's performance and prospects in generating cash flows and creating enterprise value, and the principal factors and risks that sooner or later may affect such prospects.

Realistic evaluation of the merits of these two approaches and their implementation needs to take into account the unprecedented fundamental shifts we are now seeing in the context for doing business in the 21st century. Developing and applying reporting standards with a "business as usual" 20th century mindset will not promote and support progress toward sustainable development or enlightened corporate, investor and other stakeholder decision making in times of transformational change.

Early in 2019 in a lecture to masters' students in a Toronto university class on Financial Accountability, I said: "Business and companies are in a period of fundamental transformation in the global, societal context for doing business and creating value for stakeholders, while respecting the needs of future generations. This has significant implications for business purpose, corporate accountability and transparency – what to report, to whom and how."

So, what are these transformational changes to be mindful of? In addition to the imperatives of transition to net-zero, low carbon economies and meeting the UN SDGs by 2030, business enterprises in general and companies in particular are beginning to recognize and respond to fundamentally new thinking about corporate purpose, accountability and the nature of value and value creation.

### **Paradigm Shifts in Corporate Purpose and Accountability**

Until very recently, dialogue about, and proposals for, future directions in corporate reporting occurred in the context of long-held beliefs and mindsets about corporate purpose and accountability, which in turn are foundational underpinnings of corporate reporting. In just the past few years, we have been seeing the erosion of concepts and, indeed, mindsets that have shaped business and investor thinking for more than 150 years.

Imagine for a moment the time back in the 19th century when legislators were drafting laws and charters for limited liability companies – unquestionably an innovative vehicle for harnessing private wealth to produce goods and services that satisfy societal needs and wishes at a scale unattainable by individuals. I first wrote about this in December 2019.<sup>6</sup>

A company was to be a legal person with indefinite life. Should it encounter financial failure, the stock holders who invested in it were to be liable for its debts only to the extent of what they had invested.

In return for these privileges, the company's directors, appointed by the shareholders, were to be held accountable, but only to the shareholders, for stewardship of the funds invested.

For this purpose, there already existed the well-established practice of drawing up balance sheets and profit and loss accounts according to the principles and practices laid down by a Venetian monk (viz. Fra Pacioli<sup>7</sup>) a few centuries earlier.

It simply did not occur to those mid 19th. century legislators that company directors should be held accountable to anyone other than shareholders, for anything else besides stewardship of invested capital.

Nor did they foresee either the size and global reach of future corporate enterprises or the devastating scale and extent of impacts on the planet and society that companies would be causing a 100 or more years later, affecting the interests and wellbeing of not just local communities but as far afield as all stakeholders worldwide.

The 19th century social contract between companies and society unwittingly paved the way for the era of shareholder primacy and the famous (or infamous) Friedman doctrine that the social responsibility of business is to increase its profits for the benefit of shareholders.

Thankfully, that is now under serious challenge. Consider what Britain's Professor Charles Handy wrote for a 2002 article in the Harvard Business Review,<sup>8</sup> in which he stated: "The purpose of business is not to make a profit. It is to make a profit so that business can do something more or better."

This narrative has even progressed in the US, as we saw in the notable statement by corporate CEOs in the US Business Roundtable in mid-2019, about the purpose of a corporation and its accountability to stakeholders:<sup>9</sup> Larry Fink's 2019 letter to CEOs about "Profit and Purpose" eloquently reasoned the case for accountability to all of a company's stakeholders, not just its shareholders,<sup>10</sup> and highlighted the concerns of the new generation and workforce (future leaders!) about company purpose.

In other words, we are now in a time when the very purpose of a corporation is under reconsideration, along with emergence of the concept of accountability to all stakeholders, present and future, beyond just shareholders, for more than simply returns on financial investment.



This leads to my working definition of accountability, namely that it is “the obligation to accept responsibility for and report on one’s actions.” Under a broader view of accountability, the question therefore arises “to whom should a corporation report and for what?”

We should recall in passing that the GRI, back in 1997, was founded on a belief, grounded in the Brundtland definition of sustainable development, that companies (and organizations of all types) should be accountable to society in general for their positive and negative impacts on the environment, society (including employees) and the economy. Therefore, they reasoned, there was a need for global guidance on how organizations should be transparent to all stakeholders about their environmental, social and economic performance and impacts.<sup>11</sup>

### **Re-thinking the Concept of Value and Value Creation**

To answer the “accountability to whom, for what” question, it is helpful to reconsider the terms “value” and “value creation” in the context of what a company aims to do through its purpose, business model and execution of strategy. As noted above, starting in Victorian times, the social contract between companies and society legitimized a focus on creating financial value and returns for the benefit of shareholders through effective stewardship of invested capital. For too long, this been the prevalent mindset of business executives and boards of directors, investors, lawyers, regulators, academics and, yes, professional accountants about the purpose of a company. It’s what we all learned in business and professional education.

But relatively recently it has dawned on thought leaders in business, academia and civil society first that creation of financial value by any enterprise, corporate or otherwise, depends on the availability and use of other forms of capital besides financial – such as human, natural, social, manufactured/man-made and intellectual capital – and second that, as a result of a company’s value creation processes and activities, those same capitals are affected in various ways (positively or negatively), sooner or later. It follows that the interests of stakeholders in those capitals are, in turn, inevitably affected. Further, it is not in the long-term best interests of a business or company to act in ways detrimental to the capitals on which it depends.

Value, like beauty, needs to be considered through the eye of the beholder. Value created for shareholders may not be seen as value by other stakeholders if it is created at the expense of, say, employee health and welfare, the natural environment’s finite resources or community security and well-being. Value and values are multi-nuanced words whose implications are now challenging business, investors and accountants to consider in conversations about value creation, stakeholders and accountability. Contemporary concepts of value and value creation were thoughtfully explored and discussed in a 2012 background paper to the IIRC Integrated Reporting Framework<sup>12</sup> and more recently by Mark Carney in his 2021 book, *Value(s)*.<sup>13</sup>

**Creation of financial value by any enterprise depends on the availability and use of other forms of capital besides financial – such as human, natural, social, manufactured/man-made and intellectual capital.**

It is, therefore, important to view enterprise value creation through a multi-capital, multi-stakeholder lens, recognizing and understanding the process holistically, not just uni-dimensionally. It is a process calling for complex interactions between the several affected capitals. It also affects the present and future interests of societal stakeholders in those capitals, not just shareholders or other providers of financial capital (such as lenders and creditors).



Moreover, “non-financial” stakeholders may, in turn, be able and choose to influence a company’s access to one or more of the non-financial capitals on which its value creation depends. There is, therefore, a reasonable business case for companies to engage and communicate effectively (openly, reliably, regularly, etc.) with all key stakeholders, as well as with

providers of financial capital. Trust building with them is increasingly seen as a valuable, resilience-building process that can enhance access to capitals, customer relations and talent attraction.

Thus, a new paradigm of multi-stakeholder accountability and transparency is emerging, along with broader concepts of corporate purpose and value creation, replacing the former mindset focused solely on stewardship of financial capital and returns to shareholders. Indeed, in some jurisdictions, we are already seeing the appearance of new forms of social contract and corporate charter, such as the Benefit Corporation.<sup>14</sup>

### **Implications for Future Corporate Reporting**

Accordingly, if we re-imagined, in a 21st century context, the social contract and accountability of an enterprise enjoying the privilege of limited liability for its shareholders, the obligation of a corporation to report on its actions might now be viewed in the two broad streams mentioned above, but under the broad umbrella or keystone of a new public accountability statement on enterprise value creation to all stakeholders. This would provide an overarching context for understanding how an enterprise creates value, with concise disclosures about purpose, business model, key risks, highlights of use of and impacts on (changes to) resources (capitals), corporate structure and governance and external operating conditions. This core public accountability report would be similar to, and built on, the IIRC’s International Integrated Reporting Framework,<sup>15</sup> but focused on the interests of all stakeholders, not just “providers of financial capital.” It is similar in concept to what I envisaged in the 2007 Corporation 20/20 paper *Transforming Corporate Reporting*.<sup>16</sup> Carney writes: “As corporate and investor understanding of the connectivity between value and values evolves, integrated reporting

provides a framework for companies to highlight and communicate their purpose and what they view as the drivers of value creation.”<sup>17</sup>

## A new paradigm of corporate purpose - - dependent on multiple capitals, will require “inside out” sustainability reporting to all stakeholders.

### *Stream A: Reporting to all Stakeholders on Sustainability*

First, to recognize accountability to society and multiple stakeholders whose present and future interests are affected, all publicly listed and large privately owned limited liability companies would be required to report regularly on their environmental, social and economic performance, impacts and risks that stakeholders deem material to their interests: in other words, on how well a company is fulfilling its social license to operate.

This could be seen as consistent with reporting to stakeholders in the non-financial capitals on which enterprise value creation depends. No planet, no people, no profit! It remains to be seen whether a single multi-stakeholder accountability report would suffice, or multiple capitals-focused reports to their respective stakeholders within an integrative framework would be preferable. In either case, linkages with financial value creation would need to be apparent for a holistic appreciation of enterprise value creation within the context of the capitals on which that depends.

### *Stream B: Reporting to Providers of Financial Capital*

Second, within the prevailing and probably continuing socio-economic context of capitalism and capital markets, providers of financial capital are a particular category of stakeholder who are understandably concerned with assessing future prospects for financial value creation, cash flows, debt repayment, returns on capital, etc. They are interested in information, beyond that provided through traditional financial reporting, such as about business models and processes for value creation, including use of, and risks to, non-financial capitals on which these depend – information deemed material to assessment of future prospects for financial value creation.

Further, the emergence of public policy concern about the role of capital and financial markets in aligning with the achievement of the UN SDGs and of actions that promote sustainable finance (capital flows and market practices that promote financial stability, sustainable development and transition to low-carbon economies) underscores the need for information about corporate environmental, social and economic performance and risks, notably climate change-related disclosures. Legislation, regulation and stock exchange requirements are increasingly addressing how capital markets and business practice can support and reward – not impede or punish – global progress toward achievement of the SDGs.

It is clearly foreseeable that corporations will be required before long to report to providers of financial capital information that communicates a holistic view of enterprise value creation across the financial and other affected capitals, including the present and likely future impacts

of environmental and social issues on value creation. They will probably also have to report on ways in which they affect society and the environment, which could, over time, become prejudicial to the capitals on which enterprise value creation depends – arguably a matter of corporate self-interest as well as common sense and social responsibility.

### **Flashback**

Two years ago, in the summer of 2019, I proposed that future corporate reporting needed to be shaped in two “bundles” to address, on the one hand, the information needs of investors and providers of financial capital and, on the other hand, the information needs of other stakeholders.

For the former I proposed the development of a “Value Creation Report” for companies to prepare and issue in accordance with a set of reporting standards or guidelines based on a consolidation of existing frameworks and standards (e.g., those of the IIRC, SASB, TCFD, IASB Practice Statement on Management Commentary), to be accompanied by financial statements prepared in accordance with IFRS (or, in the US, FASB standards). The importance of IOSCO support for this Value Creation Report was highlighted but I confess to expressing doubts as to whether the requisite level of cooperation and collaboration among existing standards setters to develop the Value Creation Report would be forthcoming. In my mind’s eye, I characterized the Value Creation Report as an MD&A on steroids!

As to who would develop the standards for the Value Creation Report, the boldest I dared to be at that time was to say: “Design and development of the Value Creation Report would be undertaken by a credible consortium similar to the IIRC’s Corporate Reporting Dialogue, convened by organizations accustomed to due process in setting corporate reporting standards. This work would not necessarily call for establishment of a new global organization if an existing one, such as the IIRC, were widely seen as capable of undertaking it, subject to showing it had or could acquire suitable leadership, governance and resources.”

For the latter (other stakeholders’ needs), I proposed the development of an “Accountability and Sustainability Report,” based on the GRI Sustainability Reporting Standards, augmented or refined by sources such as, among others, the UN SDGs, the UN Global Compact Principles and the Future Fit Business Benchmark.

As to who would develop the standards for the Accountability and Sustainability Report, I ventured to suggest: “To accomplish this work, the GRI could convene an appropriate new multi-stakeholder collaborative task force to design and develop the new Accountability and Sustainability Report, building on the GRI’s original mission and its current reporting standards.”

Above all, I argued: “What we don’t need now is even more piecemeal reporting frameworks for this and that – we need integration and consolidation of what’s already out there, through a meaningful, trusted contemporary process and a lens that all stakeholders, including investors and companies, can align with: long-term value creation, the importance of ESG factors and wide acceptance of the new concepts of corporate purpose and accountabilities...”

See [https://thinktwenty20.com/docs/Enhancing\\_Relevance\\_IFAC.pdf](https://thinktwenty20.com/docs/Enhancing_Relevance_IFAC.pdf).

## 2020: A Year of Unexpected Progress toward Convergence

I proposed my two-part approach, summarized in the box above, in mid-2019. Fast forward to now. During 2020, we suddenly witnessed a steady stream of significant new reporting initiatives, proposals and commitments, some from wholly unexpected sources. Together, they augur well for collaboration in global convergence of standards for sustainability and ESG reporting. The most noteworthy of these are summarized below.



First out of the gate, in January 2020, the World Economic Forum’s International Business Council published a consultation white paper developed with the Big Four accounting firms, *Towards Common Metrics and Consistent Reporting of Sustainable Value Creation*. This was updated and reissued by the WEF in September later that year as a report, *Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation*.<sup>18</sup> These proposed metrics were developed from existing reporting frameworks and standards such as those of the GRI, organized around a four-pillar framework. It also introduced an interesting concept that it termed “dynamic materiality,” to reflect the likelihood that disclosures not deemed material to investors today might become so over time in light of new insights about the impact of ESG factors on enterprise value creation.

Next, in July 2020, the GRI and SASB announced that they were going to collaborate in promoting clarity and comparability in the sustainability reporting landscape.<sup>19</sup> This was followed in September by the joint publication by CDP, CDSB, GRI, IIRC and SASB (hereafter referred to as “The Five”) of their “Statement of Intent to Work Together Towards Comprehensive Corporate Reporting,” proclaiming a shared vision for what is needed for progress towards comprehensive corporate reporting and their intention of working together to achieve it.<sup>20</sup>

Their proposed approach recognized the differing information needs and materiality concepts of “providers of financial capital” (e.g., investors) as distinct from those of other, broader categories of stakeholders. The former are seen as primarily concerned with decision-useful information for the assessment of performance and prospects concerning enterprise value creation and future cash flows; the latter mainly concern themselves with a wider range of



sustainability topics and related disclosures about enterprise impacts on the economy, environment and people, and contributions to the UN SDGs.

The Five envisaged a stepping stone approach to harmonization, with two main building blocks. The first building block, based on what has come to be termed “outside-in materiality,” would address disclosures about how ESG issues affect enterprise value creation. This approach would deploy information from the existing frameworks and standards of both financial standards setters (IASB and FASB) and those of the Five proponent organizations, plus maybe others such as the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

The second building block would draw on the same existing frameworks and standards but, under an “inside-out” concept of materiality, would go beyond the first building block, recognizing the wider range of information needed by a broader range of users who seek to understand an enterprise’s impacts on the economy, environment and people, not just the value it creates for shareholders.

On the very same day in September 2020 as the Five’s announcement, the International Federation of Accountants (IFAC) issued a release<sup>21</sup> calling for the “creation of an International Sustainability Standards Board alongside the International Accounting Standards Board.” This was accompanied by “The Way Forward,” a schematic depiction of the objectives and structure of the proposed new board. “The Way Forward” included a structural element advocating that this new sustainability standards board should “adopt a building blocks approach,” working with and leveraging the expertise and disclosure requirements of leading initiatives, including CDP, CDSB, GRI, IIRC, and SASB.

The real game-changer occurred on September 30, when the Trustees of the International Financial Reporting Standards Foundation (under which the IASB develops and issues IFRS) published a consultation paper to assess the demand for global sustainability standards and what role the IFRS Foundation might play in their development.<sup>22</sup> In short, the IFRS Foundation proposed that it establish a new Sustainability Standards Board (SSB) alongside the International Accounting Standards Board (IASB), echoing what IFAC had proposed earlier that same month. On the same day, September 30, IFAC issued a release applauding the IFRS Foundation’s new initiative!

The IFRS Foundation paper recognized the widespread and urgent demand for consistency and comparability in sustainability reporting – a demand shared among investors, preparers, central banks, regulators, public policy makers, auditing firms and other service providers – and noted the multiplicity of sustainability reporting frameworks, standards and metrics. Indeed, earlier in 2020, at a conference in Toronto on sustainable finance and investment, a leading figure in the sustainable investment research world had publicly called for “IFRS for ESG”!

The paper further pointed out that any contribution by the IFRS Foundation would build on its track record of expertise, credibility and due process in standard setting (i.e., for the work of the IASB in developing IFRS used by public companies in nearly all jurisdictions and capital

markets around the world), plus, through IOSCO, its worldwide supportive relationships with securities regulators and governments.

After consideration of strategic options to (a) do nothing or (b) try to facilitate harmonization among existing initiatives, the IFRS Foundation paper concluded that (c) its best response to the demand for consistency and comparability in sustainability reporting to serve investors and other primary users of financial statements would be to create a Sustainability Standards Board (SSB) alongside the IASB.

The IFRS Foundation paper clearly recognized the importance to a new SSB of not only developing and acquiring its own expertise in setting standards for sustainability reporting, but also collaborating with and building on the established work of the existing leading organizations in this space, such as the Five plus the TCFD.



Strangely, the IFRS Foundation consultation paper was notably silent as to the role of the IASB's Practice Statement on Management Commentary (equivalent to the MD&A in North America) in the future corporate reporting system, a statement which was already (and still is) under revision, and about which more is commented below.

The IFRS Foundation's paper proposed that, in the interests of making early progress, the sustainability reporting standards established by the SSB should initially focus on the information needs of investors and other financial capital market participants, based on what is presently considered material to their decision making. The paper recognized, however, that, over time, information about an entity's impacts on sustainability, i.e., on the environment, economies and society, might in fact become material in the eyes of investors, not just, as today, in the eyes of broader categories of stakeholders. Therefore, in due course, the SSB would need to consider whether it should broaden the scope of its standards to align with, for example, the very widely recognized and used sustainability reporting standards that the GRI has developed over the last 20 years. Over 500 comments on the IFRS Foundation's Consultation Paper were received by year's end, a very robust and mostly encouraging response.

Meanwhile, in November 2020, came an unexpected announcement by the IIRC and SASB that, in 2021, they were going to merge into a new unified organization, to be called the Value Reporting Foundation (VRF).<sup>23</sup> The aim of this, they stated, would be to provide investors and companies with a comprehensive framework for reporting on the full range of information that is relevant and material to understanding and assessing enterprise value creation.

The announcement emphasized that the IIRC <IR> Framework and the SASB Standards are complementary, that the new Value Reporting Foundation would work to integrate other existing frameworks and standards as appropriate into the new corporate reporting system, and engage with the IFRS Foundation, IOSCO, et al, in "working towards global alignment on a corporate reporting system" in which "integrated reporting and sustainability disclosure have the same level of rigour as financial accounting and disclosure." The merger officially took place in June 2021.

It was clear from the comments received on the IFRS Foundation's Consultation Paper, including the Five, as well as from IOSCO and IFAC, the Big Four accounting firms and a wide range of interested parties from business, investment, NGO, civil society, academia and accounting profession circles, that broad worldwide support exists for the IFRS Foundation to establish a new International Sustainability Standards Board (ISSB) alongside the IASB.<sup>24</sup>

A further encouraging sign was the December publication by "The Five" of a prototype for a climate-related financial disclosure standard as an illustration of what reporting on enterprise value might look like under a comprehensive corporate reporting system in which the ISSB would be a key component. This aligns with what is seen as the first priority for the ISSB's work, namely a standard for climate-related disclosures.

During 2021, IFAC and IOSCO have published various statements about their support for the IFRS Foundation to establish an International Sustainability Standards Board.<sup>25</sup> Indeed, IFAC has called on national public accounting bodies worldwide to promote in their respective jurisdictions the establishment of the ISSB in progressing the sustainability agenda.<sup>26</sup> A

summary of CPA Canada's steps in this regard may be found on CPA Canada's website.<sup>27</sup> In April 2021, the IFRS Foundation published the conclusions it had reached from its analysis of the comments on its consultation paper,<sup>28</sup> and issued a further consultation paper about considerations regarding the suitability of its present governance structure and processes to accommodate the new ISSB.<sup>29</sup>

Further, the IFRS Foundation has called for nominations for the chair and vice-chair of the ISSB, established various working groups to explore aspects of the path forward and has clearly stated its aim to announce the establishment of the ISSB by the time of the November 2021 COP26 meeting in Glasgow.<sup>30</sup>

### **The Path Ahead to Global Standards for Sustainability Reporting<sup>31</sup>**

The building blocks approach proposed for a future comprehensive corporate reporting landscape<sup>32</sup> envisages two broad connected components, at least for the foreseeable future. Block 1 is to be Investor Focused (referred to above as *Stream B: Reporting to Providers of Financial Capital*), and Block 2 (referred to above as *Stream A: Reporting to all Stakeholders*) is to be multi-stakeholder focused.



In the earlier part of this paper, I positioned Stream A before Stream B, because, conceptually, it seemed important from a sustainability perspective to consider first how business and companies have an impact on the planet and society and, accordingly, to address the information needs of various societal stakeholders of today and tomorrow who depend upon finite planetary systems, thriving communities and inclusive economies that support business enterprise. Sustainability reporting as conceived by the GRI and promoted in its standards aims to guide accountability reporting to all stakeholders about an organization's contributions to and impacts on sustainable development.

I positioned Stream B to follow Stream A, because investors and other providers of financial capital are a vital category of stakeholders and a key element of the financial markets to which enterprises turn for the financial capital on which they depend for value creation and for access to other forms of capital they need. Under a multi-capital, multi-stakeholder concept of value creation within today's global economies and financial markets, it is essential that investors and other actors in capital markets can readily access decision-useful information specific to their decision-making needs, available from both financial statements and other types of subject-matter disclosures, such as management commentary and sustainability reporting.

What does the path ahead look like?

### **Building Block 1: Investor Focused**

It is presently undetermined exactly what the ISSB will look like in terms of its membership and leadership, but clearly there will be appropriate inclusion of members with ESG/sustainability knowledge. In terms of constitutional arrangements and due process, it is likely to mirror the IASB.

Its first priority, focused on "enterprise value creation," is expected to be a standard for climate-related financial disclosures, built on the TCFD recommendations as well as VRF input (likely derived largely from SASB standards), with mid-2022 as the target date for release of an exposure draft. Following this, the ISSB would turn its attention to other, broader, aspects of sustainability reporting through a priority-setting process that is yet to be revealed. There is no doubt that the ISSB will devise processes for building on existing frameworks, standards and guidelines, for which close collaboration with the VRF (SASB and IIRC), TCFD and other organizations will be critical. But the extent and manner of ISSB collaboration with, and input from, the GRI seems less certain, based on IFRS Foundation progress statements released to date.

Meanwhile, it is also unclear how ISSB standards would interface or align with the IASB's future Practice Statement on Management Commentary, the May 2021 exposure draft for which includes extensive detailed recommendations for environmental and social disclosures.<sup>33</sup> At present, the IASB Practice Statement on Management Commentary does not require presentation of Management Commentary along with IFRS-based financial statements in order for a company to assert compliance with IFRS. It is hoped, however, that, with IOSCO support, ISSB standards will be made mandatory for corporate reporting in worldwide securities regulatory jurisdictions.

A key issue will be the definition of materiality used in developing ISSB standards, not only for climate-related financial disclosures but, in due course, for disclosures about the broader range of environmental, social and governance issues that providers of financial capital are concerned with. There's no question that it will be essential to embody "outside-in" focused materiality about E&S impacts on companies ISSB standards. "Inside-out" disclosures about a company's impacts on the environment and society may, however, be more difficult to agree on, especially if, under the "dynamic materiality" concept, E&S issues that today are not considered to have a



material impact on enterprise value creation could in future become issues of significant (material) interest to investors. Governance-related disclosures might be regarded as material regardless of how E&S issues are viewed, as is currently the case with the TCFD recommendations on climate-related financial disclosures.

Three more questions arise about the emerging global landscape of investor-focused reporting.

*Role of Management Commentary/MD&A and IIRC Integrated Reporting Framework.* First, comprehensive reporting about enterprise value creation entails more than providing just financial, environmental and social information. Investors also need information about matters such as business model, strategy and risks, intangibles such as intellectual capital, external conditions in the business environment, and corporate governance. Management commentary or MD&A reports are well-known possible places for such disclosures, but typically fail in doing so in a decision-useful way. The IIRC Integrated Reporting Framework<sup>34</sup> offers the most promising way of providing such information in a connected format, along with disclosures about entity impacts on natural, social, human, man-made and intellectual, as well as financial, capital. But, under the ISSB and the IIRC components of the Value Reporting Foundation's intellectual capital, will integrated reporting eventually fulfil the promise of a single overarching accountability statement to providers of financial capital (and indeed to all stakeholders) about enterprise value creation? Indeed, this possibility somewhat reflects the IIRC's vision for integrated reporting.<sup>35</sup>



*Proposals for New SEC (USA) 10K Disclosure Requirements.* Second, the IASB's global standards for financial statements are IFRS, which have become mandatory in most jurisdictions around the world. A glaring exception is in the US, where the SEC-mandated FASB issues its own version of general-purpose accounting standards required to be used by corporations registered with the SEC, i.e., public companies in the world's largest capital market.

Until very recently, the SEC 10K filings were not required to provide specific disclosures about ESG matters or even climate change related performance and risks (subject to complying with the 2010 interpretive release about disclosures of climate related issues that meet the SEC rules about material risks and uncertainties).

Since November 2020, however, under new leadership, the SEC has indicated very clearly that it will introduce a new rule about climate-related disclosures before the end of 2021<sup>36</sup> and, further, will be considering new rules for broader ESG-related disclosures demanded by

investors.<sup>37</sup> The question arises as to whether the SEC will act entirely independently in these respects, or will it in some way attempt to harmonize its future climate and ESG disclosure rules with ISSB standards? The influence of IOSCO and the G20 finance ministers may have some bearing on the extent to which we end up with a single set of global sustainability reporting standards or one set for the US and another for the rest of the world.

Indeed, it remains to be seen how successful IOSCO will be in persuading its member countries to adopt and mandate ISSB sustainability reporting standards alongside IASB accounting standards in their respective jurisdictions<sup>38</sup> For example, the terms of reference of an independent committee established in May 2021 to review standard setting in Canada call for the committee to review and make recommendations about “the potential creation of a Canadian Sustainability Standards Board to mirror the proposed establishment of the ISSB by the IFRS (sic) Trustees.”<sup>39</sup>

*European Union Proposals for Corporate Sustainability Reporting Directive:* Third, in April 2021 the European Union introduced proposals for a new, updated version of its Non-Financial Reporting Directive (NFRD), called the Corporate Sustainability Reporting Directive (CSRD).<sup>40</sup> The CSRD would apply to many more companies than the NFRD, both listed and unlisted. The new sustainability reporting standards for the CSRD are to be based on the “double materiality” concept, meaning that companies will have to report on how sustainability issues affect their business and on how they affect people and the environment. The new EU sustainability reporting standards are to be developed by the European Financial Reporting Advisory Group (EFRAG), a private association of appropriate reporting bodies and individuals, whose constitution is to be strengthened to ensure due process as a standards-setting body serving the public interest. The EU has indicated its intention that the new CSRD reporting standards will be aligned with the standards issued by the forthcoming ISSB and build on the work of the TCFD on climate-related disclosures.

Further, in July 2021, the GRI entered into an agreement for cooperation with EFRAG in developing the new CSRD reporting standards.<sup>41</sup> In the announcement, John Berrigan, Director General for Financial Stability, Financial Services and Capital Markets Union, European Commission, stated: “European sustainability reporting standards should build on and contribute to the progress of existing standards and frameworks that are widely used by companies. I welcome this Statement of Cooperation between EFRAG and GRI as an important step towards promoting convergence between European and global sustainability reporting standards.”

To which Patrick de Cambourg, Chair of the EFRAG Project Task Force, added that: “In the spirit of the co-construction and convergence we promote, we want to benefit from long-standing precursors and avoid reinventing the wheel while contributing at the same time to further substantial progress globally.”

This is a complicated process. As Eric Hespenheide, GRI’s Chair commented: “We firmly believe that requirements that position sustainability reporting on an equal footing with financial

disclosure – as set out in the EU proposals – will ensure transparency for all stakeholders on the impacts of companies while acting as an enabler for responsible business conduct and societal dialogue on pivotal issues. This agreement is the first step towards establishing a long-term strategic collaboration on the co-construction of standards which meet the requirements of the CSRD to become legally binding in the EU but also can be incorporated in the voluntary global standards from GRI.”

Questions remain, therefore, as to how truly global reporting standards will evolve in a scenario where there might be ISSB standards, European standards and American SEC standards.



### **Building Block 2: Multi-stakeholder Focused**

For more than 20 years, the GRI has been the source and custodian of the world’s continuously evolving and widely used *de facto* standard for reporting to stakeholders of all types on an organization’s sustainability performance and impacts. Sector-specific versions of the standards are periodically issued.

Recognition of the stature of the GRI and its standards is clearly reflected in the encouraging announcement above about cooperation between the GRI and EFRAG for developing the EU’s CSRD reporting standards.

But the degree of future liaison and collaboration established between the GRI, with its primarily “inside-out” looking standards, and the task forces and working groups set up by the

IFRS foundation to design and establish the future ISSB and develop its “outside-in” looking sustainability reporting standards is less clear. In theory (or the dictate of common sense), satisfaction of the needs of financial markets for standards that promote decision-useful, investor-focused information about enterprise value creation should proceed in alignment with satisfaction of the needs of broader stakeholders in society, including government and regulatory agencies, for reliable information about enterprise impacts on the environment, economies and people, and toward achievement of the UN SDGs. The E&S issues addressed in ISSB standards would ideally correspond with those addressed in the GRI standards.

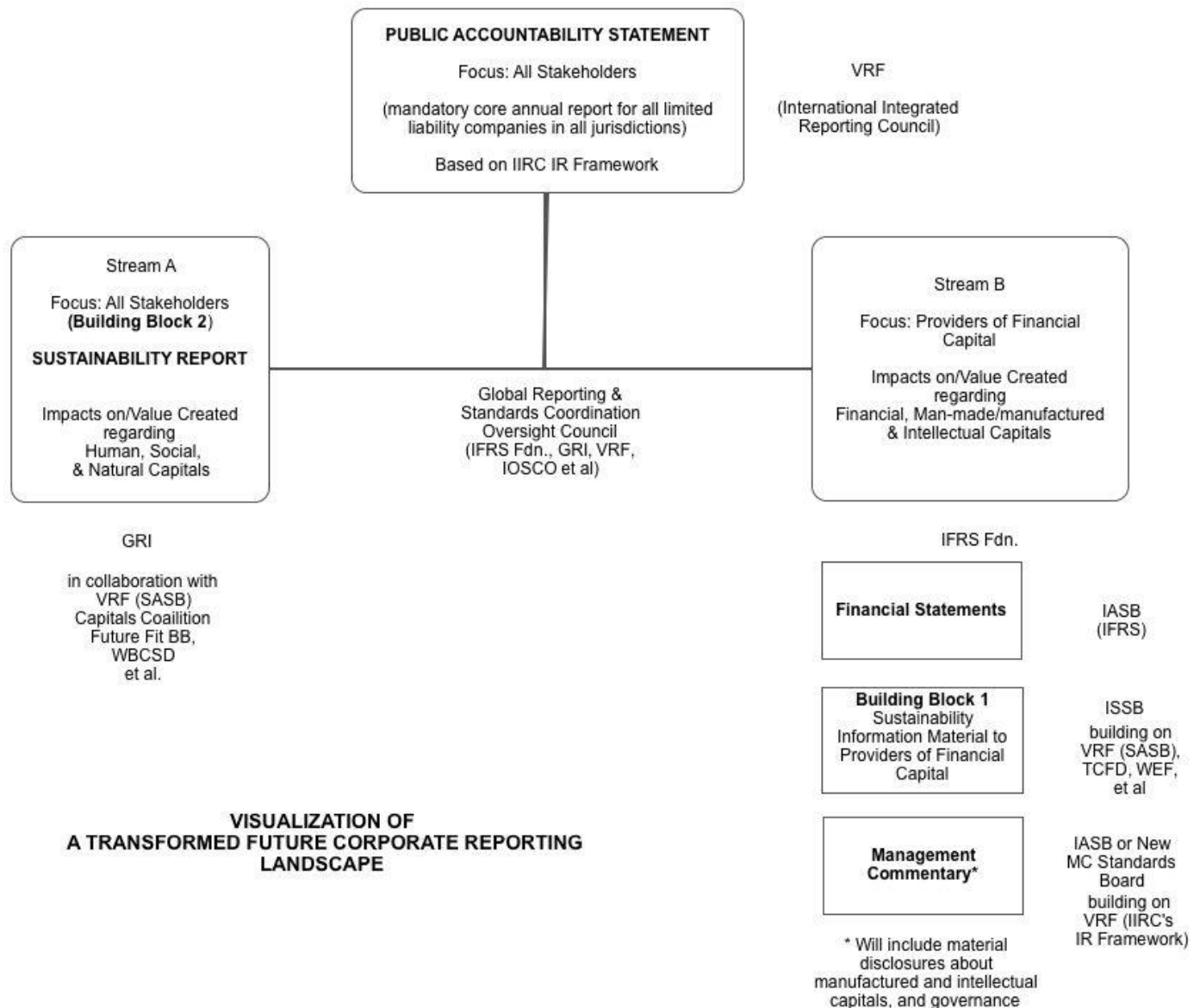
Under a new paradigm of corporate purpose with multi-stakeholder accountability for enterprise value creation dependent on multiple capitals, “inside out” sustainability reporting to all stakeholders, in accordance with the global GRI standards, needs to become mandatory, alongside the “outside-in” reporting in accordance with the ISSB standards – standards that are expected to become mandatory and of comparable standing to IASB’s IFRS accounting standards. Whether, when and how this scenario could come to pass is presently unclear, although the Sustainable Stock Exchanges initiative<sup>42</sup> or G20 actions<sup>43</sup> and other global pressures to advance achievement of the UN SDGs might be keys to achieving global uptake of what at present is voluntary sustainable reporting in most jurisdictions.

If, however, the emerging paradigm shift about corporate purpose and accountability were to result in re-writing of corporate governance laws and revision of corporate charters appropriate for the 21st, not 19th, century, or if Benefit Corporations were to become the norm, not the exception, to corporate chartering, then mandatory “inside-out” corporate sustainability reporting would likely become mandatory, accompanied of course by IFRS-based financial statements and a more “integrated reporting” form of Management Commentary or MD&A.

For the next while, it will be important to pay close attention to the stature, recognition and expectations accorded to the GRI standards and corporate sustainability reporting as envisaged under Building Block 2, and their positioning within the IFRS Foundation, EU and SEC views of the reporting landscape.

### **A Transformed Future Corporate Reporting Landscape**

Based on what we now see emerging as a new paradigm for corporate purpose, accountability and multi-capital concepts for value creation, reflected in a re-imagined social contract and charter for corporate enterprises, and considering my proposal for a new mandatory overarching Public Accountability Statement (see **Implications for Future Corporate Reporting** on page 45 above), it is possible to envisage a new corporate reporting landscape. The diagram below offers a visualization of what this might look like.



It is anchored at the top by the Public Accountability Statement as the connecting cornerstone for the two broad streams and building blocks. This Statement would be based very much on the IIRC Integrated Reporting Framework, but focused on the interests of all stakeholders, not just providers of financial capital. It would provide high-level common context for both of the streams and building blocks: one that focuses on the information needs of providers of financial capital, the other on the sustainability-related information needs of all stakeholders, especially where those interests are rooted in human, social and natural capital.

I do hope that we may be able to look to the recently formed Value Reporting Foundation (with its integrated reporting expertise) as the source for reporting standards for the new Public Accountability Statement, to be mandatory by law or regulation in all jurisdictions where limited liability companies are chartered.



Global reporting standards for Stream B/Building Block 1 for providers of financial capital would be the remit of the IFRS Foundation, under its IASB and ISSB, subject to deciding how to position the Management Commentary Practice Statement. This might possibly be upgraded to a reporting standard status under the auspices of a new third board alongside the IASB and ISSB, but without unduly replicating disclosure requirements already embedded in the Public Accountability Statement.

Global reporting standards for Stream A/Building Block 2 for multi-stakeholder focused reporting on sustainability would be primarily the remit of the GRI but in collaboration with not only the Value Reporting Foundation (with its SASB expertise) but also with others, for example the Capitals Coalition<sup>44</sup> for measurement and reporting on natural, social and human capitals, the Future Fit Business Benchmark,<sup>45</sup> and the UNDP and WBCSD<sup>46</sup> for reporting according to the UN SDGs. In some jurisdictions, under the new Public Accountability Statement regime, sustainability reporting would also be made mandatory, at least for public companies and large private ones where the new Public Accountability Statement alone cannot provide the depth of information called for about impacts on capitals.

### **Action in the Public Interest – A Fundamental Shift**

If this article had been written only five years ago, it might have mentioned the IIRC-initiated Corporate Reporting Dialogue to promote convergence among reporting standards and frameworks with their conflicting concepts of materiality. It might also have discussed the possibilities of global progress towards the IIRC's vision of integrated reporting.

It almost certainly would *not* have viewed developments in sustainability reporting through the lens of fundamental re-thinking about the purpose of a corporation and its accountability to stakeholders, nor the lens of broader systems-based thinking about the nature of enterprise value creation and its dependencies on capitals whose well-being are central to the interests of present and future generations.

The future usefulness of corporate reporting beyond financial statements and the development of comprehensive, fit-for-purpose reporting standards beyond IFRS call for standard setters, legislators and regulators to recognize the paradigm shifts described in this article – shifts that forward-looking business enterprises, CEOs and investors are already recognizing and, indeed, supporting.

Finally, IFAC is to be commended for exhorting the accounting profession worldwide, and its constituent national bodies, to inform themselves about, actively engage in and support the initiatives we now see for urgent convergence in global reporting standards related to climate-related and other sustainability issues – pressing calls for action in the public interest.

Such actions will require mid-career professional accountants to educate themselves about issues, trends and developments such as those described in this article and, above all, will call for a fundamental redesign of pre-qualification curricula and competency maps for future professional accountants.

It may then become more reasonable to claim that accountants will save the world!<sup>47</sup>

<sup>1</sup> <https://www.penguinrandomhouse.ca/books/669023/values-by-mark-carney/9780771051555>, pp. 434-435.

<sup>2</sup> <https://www.undp.org/sustainable-development-goals>.

<sup>3</sup> <https://www.globalreporting.org/about-gri/mission-history/>.

<sup>4</sup> <https://www.forbes.com/sites/betsyatkins/2020/06/08/demystifying-esgits-history--current-status/?sh=48f8acc02cdd>.

<sup>5</sup> Principal initiatives in 2020 are summarized at <https://thinktwenty20.com/index.php/561-%20the-pace-quicken-the-plot-thickens-unexpected-progress-toward>.

<sup>6</sup> <https://greattransition.org/gti-forum/csr-willis>.

<sup>7</sup> Pacioli dramatically affected the practice of accounting by describing the double-entry accounting method used in parts of Italy. This revolutionized how businesses oversaw their operations, enabling improved efficiency and profitability. The *Summa*'s section on accounting was used internationally as an accounting textbook up to the mid-16th century. The essentials of double-entry accounting have for the most part, remained unchanged for more than 500 years. "Accounting practitioners in public accounting, industry, and not-for-profit organizations, as well as investors, lending institutions, business firms, and all other users for financial information, are indebted to Luca Pacioli for his monumental role in the development of accounting." Wikipedia.

<sup>8</sup> <https://hbr.org/2002/12/whats-a-business-for>.

<sup>9</sup> <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>.

<sup>10</sup> <https://www.blackrock.com/americas-offshore/en/2019-larry-fink-ceo-lette.r>

<sup>11</sup> <https://www.globalreporting.org/about-gri/mission-history/>.

<sup>12</sup> <https://integratedreporting.org/wp-content/uploads/2013/08/Background-Paper-Value-Creation.pdf>.

<sup>13</sup> <https://www.penguinrandomhouse.ca/books/669023/values-by-mark-carney/9780771051555>

<sup>14</sup> <https://benefitcorp.net/what-is-a-benefit-corporation>

<sup>15</sup> <https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf>.

<sup>16</sup> <https://www.corporation2020.org/pdfs/SummitPaperSeries.pdf> - see Willis, item 8 (page 77).

<sup>17</sup> <https://www.penguinrandomhouse.ca/books/669023/values-by-mark-carney/9780771051555>, see page 442

<sup>18</sup> <https://www.weforum.org/reports/measuring-stakeholder-capitalism-towards-common-metrics-and-consistent-reporting-of-sustainable-value-creation>.

<sup>19</sup> <https://www.sasb.org/blog/gri-and-sasb-announce-collaboration-sustainability-reporting/>.

<sup>20</sup> <https://www.sasb.org/blog/progress-towards-a-comprehensive-corporate-reporting-system/>.

<sup>21</sup> [ifac.org/news-events/2020-09/ifac-calls-creation-international-sustainability-standards-board-alongside-international-accounting](https://www.ifac.org/news-events/2020-09/ifac-calls-creation-international-sustainability-standards-board-alongside-international-accounting).

<sup>22</sup> <https://www.ifrs.org/projects/work-plan/sustainability-reporting/consultation-paper-and-comment-letters/>.

<sup>23</sup> <https://www.sasb.org/wp-content/uploads/2020/11/IIRC-SASB-Press-Release-Web-Final.pdf>.

<sup>24</sup> <https://www.ifrs.org/projects/work-plan/sustainability-reporting/consultation-paper-and-comment-letters/#view-the-comment-letters>.

<sup>25</sup> See for example <https://www.ifac.org/news-events/2021-06/ifac-supports-iosco-s-vision-global-baseline-investor-focused-sustainability-standards> and <https://www.iosco.org/news/pdf/IOSCONEWS594.pdf>.

<sup>26</sup> <https://www.linkedin.com/pulse/corporate-sustainability-reporting-look-ahead-kevin-dancey/>.

<sup>27</sup> <https://www.cpacanada.ca/en/business-and-accounting-resources/financial-and-non-financial-reporting/sustainability-environmental-and-social-reporting/publications/sustainability-reporting-updates>.

<sup>28</sup> <https://www.ifrs.org/content/dam/ifrs/project/sustainability-reporting/sustainability-consultation-paper-feedback-statement.pdf>.

<sup>29</sup> <https://www.ifrs.org/content/dam/ifrs/project/sustainability-reporting/ed-2021-5-proposed-constitution-amendments-to-accommodate-sustainability-board.pdf>.

<sup>30</sup> <https://www.ifrs.org/projects/work-plan/sustainability-reporting/#project-news>.

<sup>31</sup> <https://www.ifrs.org/news-and-events/news/2021/06/is-there-a-path-to-global-sustainability-standards/>.

<sup>32</sup> <https://www.ifac.org/news-events/2021-05/ifac-encourages-building-blocks-approach-reporting-sustainability-related-information>, followed by <https://www.ifac.org/knowledge-gateway/contributing-global-economy/publications/how-global-standards-become-local>.

- <sup>33</sup> See <https://www.ifrs.org/projects/work-plan/management-commentary/>.
- <sup>34</sup> <https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf>.
- <sup>35</sup> Ibid. page 2 “It is anticipated that, over time, integrated reporting will become the corporate reporting norm”.
- <sup>36</sup> <https://www.sec.gov/news/speech/gensler-pri-2021-07-28> and <https://www.sec.gov/news/speech/lee-playing-long-game-110520>.
- <sup>37</sup> See for example <https://www.sec.gov/news/speech/lee-climate-esg-board-of-directors> and <https://www.sec.gov/sec-response-climate-and-esg-risks-and-opportunities>.
- <sup>38</sup> <https://www.iosco.org/news/pdf/IOSCONEWS608.pdf>.
- <sup>39</sup> <https://www.newswire.ca/news-releases/accounting-and-auditing-standards-oversight-councils-initiate-review-of-standard-setting-in-canada-801793361.html>.
- <sup>40</sup> [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en).
- <sup>41</sup> <https://globalreporting.org/about-gri/news-center/gri-welcomes-role-as-co-constructor-of-new-eu-sustainability-reporting-standards/>.
- <sup>42</sup> See for example <https://sseinitiative.org/publication/action-plan-to-make-markets-climate-resilient-how-stock-exchanges-can-integrate-the-tcfd-recommendations/>.
- <sup>43</sup> See <https://www.ifrs.org/news-and-events/news/2021/07/ifrs-foundation-response-to-g20-finance-ministers-communiqué/> (G20 bulletin focused on climate related disclosures).
- <sup>44</sup> <https://capitalscoalition.org/>.
- <sup>45</sup> <https://futurefitbusiness.org/>.
- <sup>46</sup> <https://www.wbcsd.org/Programs/Redefining-Value>.
- <sup>47</sup> <https://hbr.org/2013/03/accountants-will-save-the-world>.



## Book Review: Value(s): Building a Better World for All

By Jonathan Andrews, CPA



*Jonathan Andrews, CPA, lives in Victoria, BC. He is the owner of Netlearn.ca, a provider of e-learning content and delivery services.*

The world has just emerged from one man-made crisis, is undergoing another and is fast entering a new one. Each has a significant economic impact in a world caught up in relentless change. Global direction is of increased concern to the world's population, especially as the driving forces are suspected of being devoid of values.

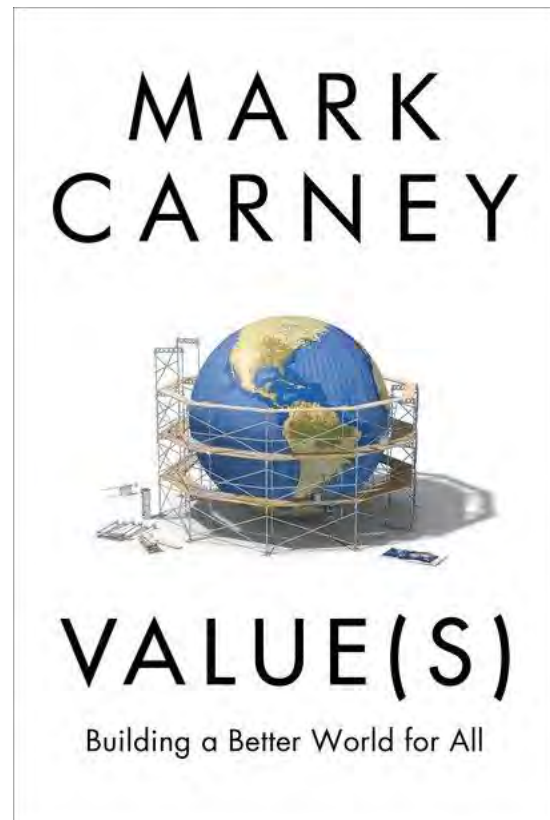
### A Difficult Relationship

In *Value(s): Building a Better World for All*, Mark Carney explores the relationship between “value” in an economic sense and “values” in a moral sense. Carney believes that “value” and “values” are judgments. Conflict between the two is responsible for the financial crisis in 2008, the impact of the COVID-19 virus and worsening climate change. This book discusses the source and nature of the problem and the potential solutions.

*Value(s): Building a Better World for All*, by Mark Carney, was published by McClelland & Stewart in early 2021. The length of the book is 528 pages, plus notes, glossary and index; the audio version, narrated by the author, lasts 20 hours and 32 minutes. There is also a Kobo eBook version.

### About the Author

Mark Carney received a doctorate in economics at the University of Oxford. He spent thirteen years as an investment banker before joining the Canadian public service, where he became Governor of the Bank of Canada in 2008. He was appointed chairman of the Financial Stability Board in 2011 (for seven years) and then Governor of the Bank of England in 2013 (also for seven years). Unlike his appointment in Canada, while in the UK Mark Carney also had supervisory responsibility for the insurance industry; this was



where he became familiar with the climate change challenges already being faced by that industry. And it was in the UK that he wrote *Value(s)*.

### **It's a Big Book**

This is a very long and detailed book, and some of the information is in “excruciating detail” (as Carney will admit to later). Can Carney, with his distinguished career background, having acted at the very top of his calling for many years, provide an interesting and comprehensive read?

*Value(s)* goes broad and deep in examining the historical concept of value. It explores how the monetary system has evolved over the centuries and continues to evolve in the digital world. Moving to the present, Carney examines the current crises of finance, Covid and climate change. With an eye to the future, in the final one-third of the book, he questions why economic thought should control the direction that the world is taking, and provides values-based solutions for leadership, companies, ESG and for Canada.

Let's take a closer look:

### **Introduction**

Carney's approach to this book is to review the past in “The Rise of Market Society” (Part I), examine the present in “Three Crises of Value(s)” (Part II), and prepare for the future in “Reclaiming our Values” (Part III). Continuing, he refers to a meeting with several others at the Vatican several years before to discuss the future of markets. Using a parable, Pope Francis noted that there is only one aspect of humanity that constituted the market at that time – self-interest. With this in mind, he charged the participants with changing the market to include a broader aspect of humanity or, as he refers to it in concluding his parable, “putting grappa back into wine.”

### **The Rise of Market Society (Part I)**

***Perspectives of Value – Objective Value*** views value in terms of actual costs incurred in producing goods or delivering services. This chapter examines the concept of objective value from Greek philosophers 300+ years BC, “canonists” in the Middle Ages, “mercantilists” in the fifteenth and sixteenth centuries, “physiocrats” in the seventeenth century, through to the “classicists” (Smith, Ricardo and Marx) in the eighteenth and nineteenth centuries. (Chapter 1)

***Perspectives of Value – Subjective Value*** takes the opposite view, adopted by the “neo-classicists” who examine value from the perspective of the consumer. In taking this contrary approach, value is now in the eye of the beholder. Value has now gone mainstream; prices have become driven solely by demand. Carney explains that there is no difference now between productive, “value creators” and non-productive, “rent seekers.” The subjective value approach begins to pull markets away from the need to possess values of integrity and fairness. (Chapter 2)

***Money, Gold and the Age of Consent*** refers to Adam Smith's definition of the role of money: a store of value, a medium of exchange and a unit of account. This chapter examines the origins



of money and the necessity for public institutions and moral values to underwrite money. Gold has been of value for centuries but proves to be too restrictive for the needs of an expanding world. Most countries adopted centralized, public fiat money backed by institutions. (Chapter 3)

***From Magna Carta to Modern Money*** describes the legacy of the Magna Carta, highlighting the need for accountability from those in power, and explains how that legacy flowed right through to the Bank of England as it evolved in its role to represent constitutional order for modern money. A change to public ownership in 1946 resulted in direct political influence for the next 50 years, causing a cumulative inflation of 2,200%! The Bank of England Act introduced in 1998 limited political influence, as a result reducing annual inflation today to 2%, compared to 6% of the previous 20 years.

And then came 2008, Carney advising the reader that, “As shocking as the crisis was, it was hardly unique,” adding reassuringly, “financial crises occur roughly once a decade.” The outcome was that central banks, such as the Bank of England, were given increased responsibility to ensure that vulnerabilities, such as lack of capitalization, funding and resilience, did not build up again. Carney describes how accountability to Parliament and to the public, transparent conduct of policy and good governance are all needed as a solid foundation to maintain the value of money. (Chapter 4)

***The Future of Money*** examines the changing role of money in society: “public” money of the banks and “private” money created by pensions funds, insurers and asset managers is now joined by private payment systems.

Carney considers three current options for a new type of money: cryptocurrencies, stable coins and central bank digital currencies (CBDCs). He sees two solutions: making electronic public money available to the wider public, or allowing private currencies to become the medium of exchange.

To illustrate the challenge of introducing new types of money, Carney quotes American economist Hyman Minsky: “Everyone can create money; the problem is to get it accepted.” (Chapter 5)

***The Market Society and the Value of Nothing*** brings Part I to a close with a critical examination of the fundamental changes brought about by the rise of the “market society” and the resulting decline of values. Carney provides an interesting example: a gift at Christmas. He points out that the economist perceives gift giving, with its attentiveness and thoughtfulness, as representing “primitive loss of utility,” believing that “cash is more efficient.” Here, Carney questions the economic attitude. Subjective value and market price implies that, if something is not in the market, i.e., it has no price, it has no value. This shift is of great concern to the author: “What impact will this have on the values of society, its ability to create value, and more precisely to improve the welfare of its citizens?” (Chapter 6)

This last chapter in Part I sets the stage for what is to follow. Carney now questions the wisdom of having economic thought exercising supreme control over the direction that society is taking.

### **Three Crises of Value(s) (Part II)**

*"I can calculate the motions of celestial bodies, but not the madness of people."* Sir Isaac Newton, after losing a fortune in the South Sea bubble.

***The Global Financial Crisis: A World Unmoored*** gives us a front-row seat as the author describes the steps taken to put the global monetary system back together again. Bankers seen as "masters of the universe" had done little to "promote the values of responsibility, accountability, prudence and trust that are essential to sustainable finance." This is somewhat of an understatement as Carney lays the blame squarely at the feet of bankers spurred on by self-serving incentive culture. The outcome was the formation of the Financial Stability Board (FSB) by G20 countries, an initiative triggered by US president George Bush. (Chapter 7)

***Creating a Simpler, Safer, Fairer Financial System*** points out that the goal of the newly formed FSB, comprising central banks, regulators, finance ministers and standard setters, was to address the "three lies" of finance: "markets always clear," "this time is different" and "markets are moral." The FSB did much to address the "immorality" of the bonus culture and reduce irresponsibility. The most senior decision makers of banks, insurance and investments companies were now held directly accountable.

***The Covid Crisis: How We Got Here*** describes how the UK and other governments had to face the twin challenges of health and the economy. Carney talks about the duty of a state to protect its citizens, adding that it must do so "with their consent" and describes state protection in the form of pandemic preparedness which, in most countries – despite international studies to the contrary – was woefully short. Carney warns of the perils of using cost-benefit analysis and statistics in valuing human life, in making decisions based on financial optimization and not on human compassion. (Chapter 9)

***Covid Crisis: Fallout, Recovery, Renaissance?*** In quoting Hobbes' view that "obedience to the state was the price for protection," Carney does at least acknowledge that Hobbes wrote this in the middle of the English Civil War, and adds that the actions of the state still need to be trustworthy, unified and fair. Official responses to the Covid-19 virus have aroused a significant lack of trust in governments, questioning such values as legitimacy and reciprocity, solidarity, and fairness in an unequal society. The noteworthy benefit of this chapter lies in descriptions of the economic effect of governments' responses to the Covid-19 virus. (Chapter 10)

***The Climate Crisis*** is one of the most important chapters in the book. Carney's message is clear: there is a real climate crisis, the situation is rapidly deteriorating and is caused by greenhouse gases, principally CO<sub>2</sub>. To stabilize temperature rises, worldwide sources must cut their emissions to net zero. Carney identifies the present sources of emissions, throws the window wide open to the world of global warming and lays out solutions. He makes several quoteworthy comments, such as: "Scientists and academics have made a business of forewarning the

world of high-impact events.... Humanity has made a business of ignoring them. Covid-19 has shown that this is an expensive and destructive strategy.”

“Actions to curtail risks have no immediate political benefit to a governing party and politicians are elected to represent current not future constituents.” (Chapter 11)

***Breaking the Tragedy of the Horizon*** derives from a speech given by Carney to Lloyd’s Underwriters in London in September 2015, just 10 weeks before the Paris Agreement. This chapter is a call to action, restating the problem and describing how to transition to net zero. The author does not pull any punches: “Politicians are tempted to pursue environmental efforts that are more soundbite than substance.”

Carney recognizes climate change as an intergenerational issue and said of his meeting with environmentalist Greta Thunberg in 2019, “With her, you are always conscious of... the need to rearrange national priorities and act. Now.”

In wrapping up this chapter, Carney clearly states what has to happen to create credible and predictable climate policies – this is a compelling chapter. (Chapter 12)

### **Reclaiming our Values (Part III)**

***Values-Based Leadership*** acknowledges that, to address climate change, the first step is to identify good leaders, ones you can trust. The author quotes Montek Singh Ahluwalia, a high Indian government official: “Trust grows at the rate of a coconut tree and falls with the speed of the coconut.”

Carney promises to “grossly simplify” leadership models into three major categories. He admires leaders who “would consistently communicate extremely complex issues with clarity and purpose,” such as:

Emmanuel Macron : “By putting our own interests first, with no regard for others, we erase the very thing that a nation holds dearest, and the thing that keeps it alive: its moral values.”

CEO Morgan Stanley: “It’s hard to have a financial system if you don’t have a planet.”

In defining values-based leadership in a disruptive age, this chapter does it well. (Chapter 13)

***How Purposeful Companies Create Value*** examines how purpose can be revealed and reinforced during times of disruption. Initiatives, such as B Corps, requires a company to commit to its purpose to ensure that it actually happens. Carney examines such questions as “Who owns the company?” and “What is the connection between purpose and profit?” In the author’s view, a sense of corporate purpose earns social capital and enables companies to weather difficult times. The insight into company values provided by this chapter is enlightening. (Chapter 14)

***Investing for Value(s)*** now turns to investors as potential instruments of change. Carney believes that the common cause of crises is how we measure and report value. He describes the several aspects of applying ESG considerations in the investing world, including fiduciary duties, disclosure of information, approaches to applying ESG factors and the transition to net zero as a new asset class. The chapter ends with a discussion of the social purpose of investing, the care that needs to be taken in using ESG data and, prompted by William Blake, the advice that investors should “know their values rather than be enslaved by those of another.” (Chapter 15)

***How Canada Can Build Value for All*** is the longest chapter in the book by far. The tone is positive and motivational, referring to Canadian values and the challenges that Canada faces in a changing economy. Carney warns that increasing risks and the macroeconomic challenges of Covid can still undercut sustainable growth. In a thorough game plan for the future of Canada, he states the need to reinforce core values, such as solidarity, fairness and responsibility. And he doesn’t hesitate to take a side swipe at bankers: “In a recession, banks become belatedly prudent, choking the economy of credit when it needs it the most.”

As he lays out his plan for Canada (looking very much like a political manifesto), Carney talks about the importance of feedback loops, particularly for climate change and decreasing carbon budgets. He describes actions to be taken to build resilience and sustainability, in order to transition to a net-zero economy. (Chapter 16)

***Humility*** provides a suitable conclusion to a book that covers so much. It provides a background and insight into the author’s beliefs and values. As he explains, things can go wrong, there are limits to meritocracy and the humble will always feel the need to plan for failure. Carney refers to *Uncertainty* and the need to be flexible and adventurous, *Chance* and its significance in our lives, *Responsibility* and how it relates to a sense of vocation. Ending with *Renewal*, he describes how “in pursuing virtue we help build it in ourselves and others. We expand its practice and give it life.” Carney then ends this book with a final message that transcends all others.

### **Reason Enough to Write a Book**

*Value(s)* is a combination of intense, exhaustive economic text and insightful observations of a central banker that wants to but cannot make things happen: “Armed with reams of data, brilliant colleagues and access to people from all walks of life domestically and globally, I could see much, but do very little. Central banks provide much of what’s needed for prosperity but not enough to achieve sustainable growth.”

Carney admits, with his customary self-effacing and dry humour, that he had a tendency to “dump... on an audience in an attempt to convince by analytic volume rather than by reasoned argument and anecdote.” The result is an intensely detailed book.

Carney has not been particularly well served by his publisher. Some parts of the book, particularly those on economics, are provided in great detail. He quotes from many references, sometimes leaving the reader unclear as to what his views really are. There are several lists throughout the book, some difficult to follow. Most of the charts reproduced in the book have

been taken from intricate slides and are difficult to read.

The book does not have a particularly supportive layout, given the potential quality of the content. The book's editors' energy flags before reaching the end, for example, "The US approach would break the attachments of workers with their employers but speed adjustment, particularly if the disease lasted longer than expected." Work that one out.

A broader audience may be tempted to skip certain sections, even chapters, to reach the point where they can understand what this book is really about: the economic crisis brought about by governments' autocratic response to the Covid-19 virus and the ever-growing impact of greenhouse gas emissions on climate. This is where *Value(s)* makes you really think about topics that are being updated in real time. You begin to question what the author and various sources of information are telling you.

### **True Value**

Carney's message on climate change is clear: "How can we undo what we have done?" He pins his hopes on the restoration of values and "everyone pulling together." He may not appreciate that the values determined and enforced by "society" will not ensure that everyone pulls in the same direction. Although differing from country to country, we have seen reactions to governments' response to the Covid-19 virus. Yes, there are lessons to be learned and carried forward, but they may not be the ones the author is thinking of.

Carney's book is a mine of information. It is stimulating and motivational, an impressive personal call to action. He raises many issues, directly and indirectly. He provides personable asides at all levels throughout the book, even down to his description of the benefits of morning meditation. These and other insights serve to underpin the sincerity and passion of his message.

An enormous challenge for humanity lies ahead. Carney's *Value(s)* is a must read. The only caveat is that, by the end, you may have more questions than answers. But that's OK.





## Hey! What's New? Special Edition

By Gundi Jeffrey, Managing Editor



*One of the themes in this issue of ThinkTWENTY20 is Artificial Intelligence (AI) and how it is changing the accounting world and how it does business. Here are three different takes on what's happening now and what we can expect in the near future.*

### **COSO Guidance to Help Realize the Full Potential of Artificial Intelligence**

September 15, 2021, the Committee of Sponsoring Organizations of the Treadway Commission (COSO), issued a press release saying that, as artificial intelligence (AI) becomes more pervasive in business and in our every-day lives, organizations will likely no longer have the option of ignoring or avoiding the unique risks that accompany AI. "Instead, it will be critically important that they learn to identify, manage, and respond to AI-related risks effectively to maximize benefits for all stakeholders involved.

New COSO guidance, "Realize the Full Potential of Artificial Intelligence," helps organizations align risk management with their strategy and execution of their AI initiatives. The project, commissioned by COSO and co-authored by Deloitte & Touche LLP, focuses on the need for organizations to design and implement governance, risk management and oversight strategies and structures to realize the potential of humans collaborating with AI.

The COSO ERM framework, coupled with Deloitte's Trustworthy AITM Framework, "can provide an overarching and comprehensive approach that aligns risk management with strategy and can reduce performance variability and improves the likelihood of success for AI initiatives," the press release says.

COSO Chair Paul Sobel adds that "AI-related risks need to be top of mind and a key priority for organizations to adopt and scale AI applications and to fully realize the potential of AI. Applying ERM principles to AI initiatives can help organizations improve governance of AI, manage risks, and drive performance to maximize achievement of strategic goals."

"Although AI seems like a panacea for business transformation, similar to any strategy or business objective, there are risks associated with adopting and deploying AI that could result in serious damage to an organization's reputation and brand, trust, and even regulatory fines and lawsuits," notes Brian Cassidy, US Audit & Assurance Artificial Intelligence/Algorithms Leader and Partner, Deloitte & Touche LLP. "Organizations need to adopt and implement frameworks, such as the COSO ERM framework, in combination with Trustworthy AITM, to design and implement governance, risk management, risk response and oversight strategies and structures to realize the potential of AI."

According to the paper, understanding AI-related risks, better equips an organization to deliver return on investment and meet stakeholder expectations. Furthermore, by implementing ERM, organizations can refine and adapt their innovation initiatives to support their strategies in a rapidly changing business environment.



Although not authoritative, Deloitte's Trustworthy AI™ Framework can help organizations think through the risks when implementing COSO's ERM Framework for AI. AI solutions need to be trusted, tried, and true, according to the guidance. Trusted – because ERM is transparent by nature and it helps keep an organization abreast of its risks and opportunities. Tried – in that models are continually tested and vetted to verify they are operating as intended. And True –

governance, risk management, testing and monitoring regimes help models to operate in ways that reflect the organization's values and protect its reputation.

"The call to action is for organizations to use the COSO ERM Framework, informed by AI-specific considerations, to help establish and promote trust in AI," Cassidy says.

Please visit [www.COSO.org](http://www.COSO.org) for the full paper.

## **Artificial Intelligence in Accounting and Finance**

Bernard Marr, a world-renowned futurist, influencer and thought leader in the fields of business and technology, writes in a recent blog on his webpage that, "as artificial intelligence has done for every industry, it's making a significant impact in the world of accounting and finance. From saving time and money and providing insights, AI-enabled systems for accounting and finance are the way finance professionals and their firms will stay competitive and attract the next generation as employees and customers."

When accounting firms adopt artificial intelligence for their practice, says Marr, they become more attractive as employers and service providers to millennials and Gen Z professionals. These folks grew up with technology, and they will expect prospective employers to have the latest technology and innovation to support not only their working preferences of flexible schedules and remote locations, but also to free them up from mundane tasks that machines are better suited to complete. As clients, millennials and Gen Zers will determine who to do business with based on the service offerings they can provide.

Robotic process automation (RPA) allows machines or AI workers to complete repetitive, time-consuming tasks in business processes such as document analysis and. Once RPA is in place, advises Marr, "time accountants used to spend on these tasks is now available for more strategic and advisory work. Intelligent automation (IA) is a more sophisticated version of RPA.

IA can mimic human interaction in many cases, such as understanding inferred meaning in client communication and using historical data to adapt to an activity. There are multiple applications of RPA and IA in accounting work.”

Marr points out that AI can often provide real-time status of financial matters since it can process documents using natural language processing and computer vision faster than ever making daily reporting possible and inexpensive. “This insight allows companies to be proactive and adjust course if the data show unfavourable trends.”



He also notes that automated authorization and processing of documents with AI technology “will enhance several internal accounting processes, including procurement and purchasing, invoicing, purchase orders, expense reports, accounts payable and receivables, and more.”

So, what is stopping us from moving with the times? Read [Artificial Intelligence In Accounting And Finance | Bernard Marr](#).

## **How AI Is Changing the Role of Accounting and Finance Professionals**

An article by Derek Parker, written for *INTHEBLACK*, a newsletter published by CPA Australia, argues that AI will not be a “big bang” but a series of waves that occur over time, first in areas where the work is repetitive and the decision principles are easy to determine. Then, it will move into areas such as inventory control, stock locations and customer service. Eventually, virtually every area of a business will be affected in some way by AI.

“The most limiting factor for AI will be consumer acceptance,” he writes, “and it will only be adopted once it can be shown to be superior in function to the human equivalent, as well as reliable and safe. The transition, when it starts, will be fast. There is a real risk that it may happen too quickly for the ethical issues to be fully considered, understood and mitigated.”

That said, however, AI also presents many new opportunities for finance professionals. Parker quotes Dr. Mathew Donald, FCPA, an academic who consults widely on change management and business strategy, as saying that “the removal of routine tasks will allow financial specialists to get closer to business decision making, providing more of their expert opinions and advice. To take full advantage of this, they may have to overhaul their business structures, procedures and skills base, so they can offer up-to-date advice in almost real time.”

Donald points out that, as AI moves squarely into workplaces, “managers will likely be presented with the task of explaining to staff that their roles have changed or diminished, or even been eliminated. Staff, especially those with lower levels of skill, will likely become worried about their future, and managers will have to stretch themselves to provide

workplaces that people want to work in. On the other side of the coin, highly skilled people will become more valuable.”



“Managing this period of transition is going to be a real challenge, a balancing act,” Donald says. “And, in the longer term, there will be even more issues to address. Some employees may have to work for, rather than with, an AI system, and that is a big psychological shift. Managers will have to work much harder to attract and retain staff in this situation.”

Parker writes that there will be a new period of re-learning for managers and leaders, so they have a conceptual knowledge of the technology and what it may deliver. “The spread of 5G communication will assist AI development. Faster communication speeds will underpin AI-integrated driverless urban vehicles, drones, and even power generation.”

For more on Parker’s and Donald’s thoughts, go to [How AI is changing the role of accounting and finance professionals | INTHEBLACK](#).

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## At a Glance - Different Views

Jonathan Andrews, CPA



Here is a quick snapshot of a number of interesting books. If you would like us to review one of them, please let us know at [info@thinktwenty20.com](mailto:info@thinktwenty20.com)

**More - a History of the The World Economy from the Iron Age to the Information Age** by Philip Coggan. Published by The Economist Books (March 24 2020) comprising 369 pages. Audiobook version 15 hours and 29 minutes, also available as a Kindle eBook.

*“... successful states have always benefited from a thriving private sector and the private sector has always benefited from the infrastructure provided by the state. The debate is where to draw the line; how to divide responsibilities between private and public sectors and how much of overall income should be claimed by the government.”*

A very interesting and well-written book on how the world economy developed to this day.

**Future Babble - Why Expert Predictions Fail - and Why We Believe Them Anyway** by Dan Gardiner. Published by Emblem Editions (Sep 27, 2011) comprising 320 pages, also available as a Kindle eBook.

*“There are no crystal balls, and no style of thinking, no technique, no model will ever eliminate uncertainty. The future will forever be shrouded in darkness. Only if we accept and embrace this fundamental fact can we hope to be prepared for the inevitable surprises that lie ahead.”*

It is unlikely that the reader will ever want to place too much dependence on experts again.

**Invention: A Life** by James Dyson. Published by Simon & Schuster (September 7, 2021) comprising 352 pages. Audiobook version 11 hours and 33 minutes, narrated by the author, also available as a Kindle eBook.

*“Invention is so very important today because young people are passionate about saving the planet, improving the environment, and finding cures for life-threatening diseases. I believe that these problems can be solved by the diligent application of research and development.*

An autobiography that provides tremendous insight into the activities and experiences, good and bad, of this truly global and inventive entrepreneur - an extraordinary life.



**Unsettled - What Climate Science Tells Us, What It Doesn't, and Why It Matters** by Steven E. Koonin. Published by BenBella Books (April 7, 2021) comprising 320 pages. Audiobook version 7 hours and 14 minutes, also available as a Kindle eBook.

*“The earth has warmed during the past century, partly because of natural phenomena and partly in response to growing human influences. These human influences (most importantly the accumulation of CO<sub>2</sub> from burning fossil fuels) exert a physically small effect on the complex climate system. Unfortunately, our limited observations and understanding are insufficient to usefully quantify either how the climate will respond to human influences or how it varies naturally.”*

Maybe climate change is not quite so straightforward as many would be led to believe. The author's insight is truly unsettling.

**American Values** by Robert F. Kennedy, Jr. Published by Harper (May 15 2018) comprising 448 pages. Audiobook version 15 hours and 43 minutes, also available as a Kindle eBook.

*“The current hostile takeover of American government by the same energy, chemical, pharmaceutical, and military-industrial cartels that flourished in fascist Europe in the 1930s has been hastened by the weakening of the labor movement and sold to the public by artfully packaging the fascist ideology of unfettered corporate dominion beneath a moral and patriotic gloss.”*

This publication reveals personal and memorable insights into the background of those values declared and followed by the author's uncle - John F. Kennedy, father - Robert F. Kennedy, and by the author himself.

**Noise - A Flaw in Human Judgement** by Daniel Kahneman, Olivier Sibony and Cass R. Sunstein. Published by Little, Brown Spark (May 18, 2021) comprising 464 pages. Audiobook version 13 hours 28 minutes, also available as a Kindle ebook.

*“Some judgements are biased; they are systematically off-target. Other judgements are noisy, as people who are expected to agree end up at very different points around the target. Many organizations, unfortunately, are afflicted by both bias and noise.”*

The authors provide a follow-up to Daniel Kahneman's ground-breaking “Thinking, Fast and Slow” in which they reveal how flawed judgment can be.

**Thinking in Systems** - A Primer by Donella H. Meadows. Published by Chelsea Green Publishing (Dec 3, 2008), comprising 240 pages. Audiobook version 6 hours and 26 minutes, also available as a Kindle eBook.

*“The behavior of a system cannot be known just by knowing the elements of which the system is made.” “Purposes are deduced from behavior, not from rhetoric or stated goals.”*

By encouraging increased awareness as a result of systems-based thinking, the author alerts readers to those factors that are connected, previously thought to be unconnected.

**The Truth about Covid-19 - Exposing The Great Reset, Lockdowns, Vaccine Passports, and the New Normal** by Dr. Joseph Mercola, Ronnie Cummins and Foreword by Robert F. Kennedy Jr. Published by Chelsea Green Publishing (April 29, 2021), printed in Canada, comprising 224 pages. Audiobook version 7 hours and 55 minutes, also available as a Kindle eBook.

*“With mounting evidence and increasing certainty, a growing number of independent scientists, investigators, and lawyers have begun to deconstruct and critique the “official story” on the origins, nature, dangers, prevention, and treatment of the COVID-19 pandemic.”*

A new, detailed perspective in a growing sea of information and misinformation - for the reader to decide.

**The Data Detective** by Tim Harford. Published by Riverhead Books (February 2, 2021) comprising 334 pages. Audiobook version 10 hours and 24 minutes, also available as a Kindle eBook.

*“Of course, we **shouldn't** be credulous—but the antidote to credulity isn't to believe nothing, but to have the confidence to assess information with curiosity and a healthy skepticism.”*

A thoughtful reminder on how to react to statistics, before inevitable biases take over.

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## Twenty-First Century Corporate Reporting: Effective Use of Technology and the Internet

How and why do corporations use the internet for reporting to their stakeholders? How and why has corporate reporting extended beyond financial reporting to include environmental, social, and governance (ESG) reporting and even integrated reporting. The major drivers of modern reporting have changed, to include data driven decision making, big data, and advanced analytics, as well as the use of electronic representations of data with tools such as XBRL.

Here we explore the various vehicles for using the internet, including social media and blogs as well as corporate websites and the websites of regulators. And we delve into the impact of portable devices, like smartphones and tablets.

Corporate reporting on the internet is changing fast because of changes in technology and stakeholder expectations. Companies are having a hard time keeping up. This book offers a roadmap to follow—a roadmap to start on now. Most importantly, the book lays out a strong case for integrated reporting and shows how reporting on the internet is ideally suited to the creation of integrated reports.

This book is of interest to executives in charge of the reporting function for their companies, students of accounting and management, and to serious investors and others with a strong interest in corporate reporting and the direction in which it is headed.



Gerald Trites is a CPA with a history of writing and publishing and a unique background. He was a partner in KPMG for seventeen years, and a tenured professor of accounting and information systems for ten. He also served for twelve years as director of XBRL Canada. He has published twelve books and numerous articles and papers. He worked as a research associate for the Canadian Institute of Chartered Accountants and served as chair of the Auditing Standards Board. He currently serves as editor-in-chief of ThinkTENTY20 magazine, a publication he started in 2019 with the objective of publishing well-researched articles of substance.

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