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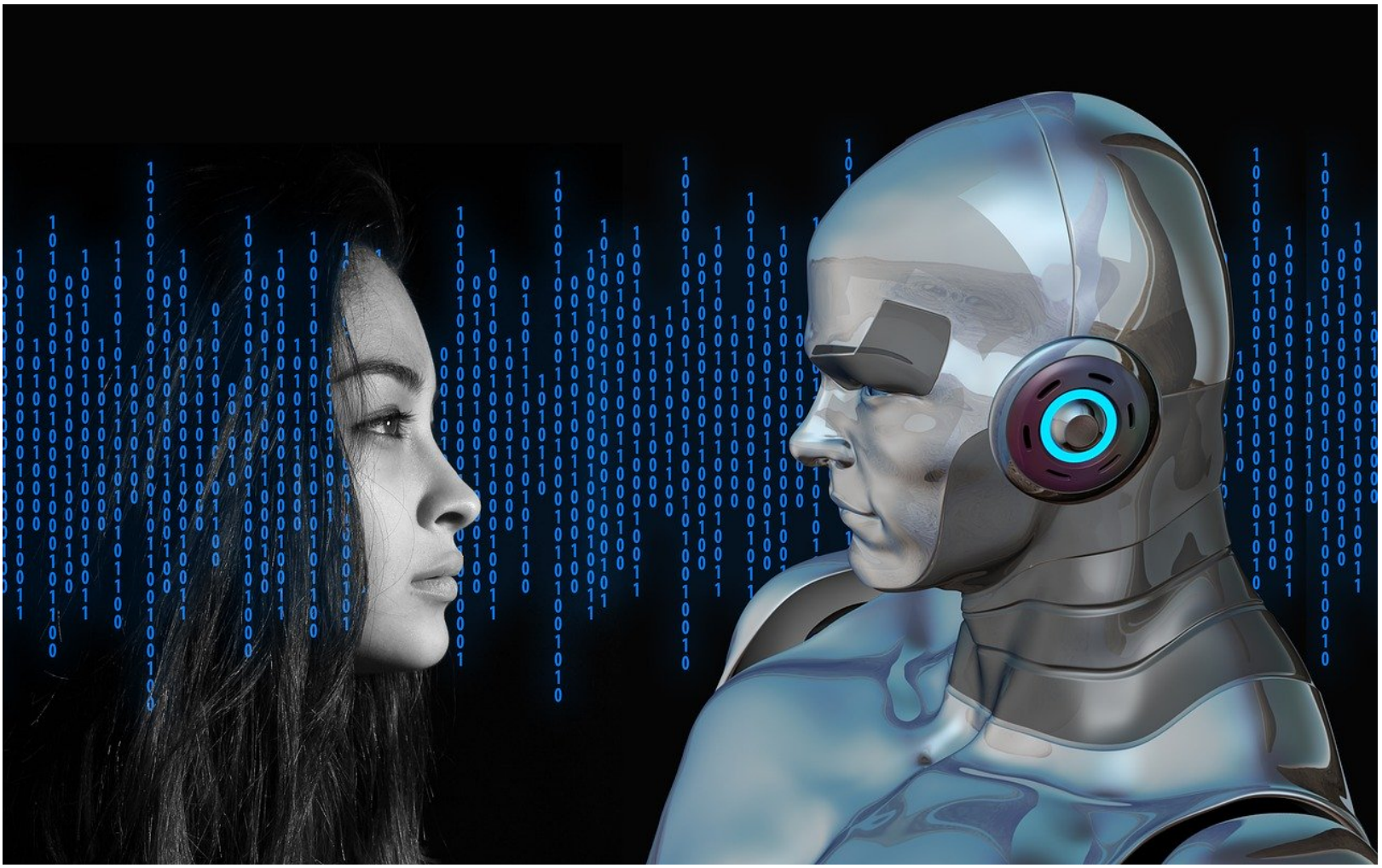



**Twenty-Twenty Vision**

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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. 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

Disruption. Transformation. Continuous change. All of these are common features of our contemporary lives. It's generally said that we need to adapt, or else be left behind.

But what does it mean to adapt? Does it mean we simply accept the modern inventions and move on? Or does it mean we change ourselves in fundamental ways to fit better with the world in which we are living.

There is plenty of evidence of the latter. It's widely believed, for example, that the advent of computers has been a major factor in leading us to have shorter attention spans and to expect immediate gratification.

If this is true, then it is relevant to ask what kind of change we can expect in ourselves over the next twenty or thirty years or so, given that the pace and extent of technological change are accelerating and intensifying.

Much of the change to come will arise from artificial Intelligence (AI). While AI has been with us for some time, it is about to become a lot more powerful, perhaps meeting the Turing Test, in which the actions of machines become indistinguishable from those of humans.

Combine this with the prospect of increased interaction between people and intelligent machines and you have the setting for fundamental adaptation, including the possibility of altering people to compete with machines by inserting technology into their bodies – in Cyborg fashion. Eventually it becomes conceivable that the ultimate Turing Test is evident – that it becomes difficult to distinguish robots from humans. Science fiction or fact? We will see.

## Technology Is Not Disrupting Accounting, Client Expectations Are!

*By John McAlister and Shelley Thomson*

There is no doubt the accounting industry has been in a constant state of disruption for more than a decade. As a result, there's a good chance you have responded in one of the following ways:

- *It's a buzz word, it's not real, and eventually, the talk will fade.*
- *It's the new way of life.*
- *I'll ignore it, and it will go away.*
- *I'm terrified and don't know what to do to keep up.*
- *I'm excited about the challenges ahead.*
- *It will never affect me.*

These are all common reactions that you might feel regularly, and perhaps there are many more.

But it is undeniable that accounting and bookkeeping are ancient professions that are changing rapidly in the face of the digital availability of information and the expert in your pocket.

Remember when you were the "expert"? Think about it: does anyone come to your office anymore without having tried to "self-diagnose"? How often do you hear a client say, "I looked on the Internet and google says…"?

> Empowered clients and technological advances will again upend the way modern financial management is practised.

Yet, accounting as a profession is as old as numbers themselves.

Throughout its thousands of years of history, the profession was disrupted many times, is being disrupted now and will be disrupted in the future. Understanding a little about the changes in the past can help us know how to influence the current and inevitable future changes.

Some say "get over it." Others believe that it is an exciting opportunity. What is clear is that "from ancient Mesopotamia to today, as business, economies and empires get more complex and far-reaching, so too does the sophistication of accounting practices."[1]


In accounting, the days of "business as usual" are, once again, over.

Technology is not in itself the reason for the disruption. The main reason is in response to challenges arising from today's client demands and needs (you know, the ones who pay the bills). Clients have higher expectations from their client experience – many will demand it. And this will invariably be the foundation for expecting "value added" for the fees they pay, not just compliance. Further, they will assume that the technology that enables convenience in other aspects of their lives will flow through to the financial sector.

Unfortunately, accounting organizations that cling to yesterday's outdated systems and stubbornly refuse to accept the tsunami of democratization of information will themselves become obsolete.

Accounting organizations that cling to yesterday's outdated systems and stubbornly refuse to accept the tsunami of democratization of information will themselves become obsolete.

At the same time, every accounting system around the world is wrestling with rising costs, inconsistent data quality, higher business expectations and public scrutiny. Yet, despite the hard work of well-intentioned, highly-trained accounting professionals, many accounting leaders and policymakers lag well behind the ongoing impact of the intense economic, demographic, political, fiscal and monetary pressures, thus making "compliance-focused accounting" unaffordable and unsustainable in the current model.

The long-established compliance systems are increasingly unsuited to responding to challenges arising from today's business demands and needs. It is as if client experience is demanding a *Ferrari,* yet the accountant is familiar only with *Camry* service systems.

At the same time, a revolutionary storm is brewing, driven by technological advances and business expectations. The internet era is rapidly transforming expectations of service delivery for the business and networks.

Developments in Distributed Ledger, Augmented Intelligence, Machine Learning, Privacy, Robotics, Internet of Things, and others are reshaping the business relationship. Advances in data analytics and predictive modelling hold transformative possibilities that could upend the way bookkeeping is practised.

And you can be sure that whatever it ultimately looks like, it will change again further into the future.

**It Is Time for a New Approach!**

The future of accounting must put the business client experience at the centre of a cultural and financial network that is both present and virtual. This is a faciliatory model that meets today's clients' expectations and is fit for tomorrow's opportunities and purposes.

To do this, we must all recognize that the client experience is a mindset, a business discipline and a strategy. It needs time and energy devoted to it, just like any other essential business activity.

How much you can gain is limited only by how well your organization can embrace change and by how deeply you understand clients' expectations. One way of developing that deep understanding is with client journey mapping. If it is done correctly, you will gain an understanding of your current way of working, client experience and what could be changed to improve all aspects of the business. When you use this framework, what your clients do and what they expect will become apparent, and you can then identify gaps between your current service delivery and opportunities to gain efficiency. Curiously, these efficiencies are often enabled by the same technologies that you fear are disrupting you![2]

> Boundaries are explored and sometimes pushed, momentum is created and the foundation is laid for official client-centred transformation within the organization.

According to Christine Crandell, president of New Business Strategies, "Client experience cost efficiencies fall in one of four categories:

- Data integration and integrity – the right employees and partners have access to the data they need.
- Streamline workflows to align with journeys – to overcome organizational silos, political 'turfs,' inefficient technology and eliminate out-of-date, routine tasks.
- Employee empowerment – enable employees and Business Process Outsourcing (BPO) partners to connect the dots between each of their roles and specific customer interaction expectations.
- Scale tasks – use smart AI technology to automate routine, repetitive and replicable activities to deliver consistent experiences."[3]

We like this as it provides easy-to-understand areas that need to be addressed no matter how advanced or progressive your business is and also provides a focal point from which you can assess your current state of "client-centred maturity."

Are you interested in understanding more about your level of client-centred maturity?

**Client-Centred Maturity: Where are you?**

Rapid transformation and disruptive competition threaten most organizations. And the accounting industry is not immune.

To many accounting professionals, this disruption may feel small and inconsequential. But don't be naïve, it will grow exponentially as the proportion of your clients living an active digital lifestyle increases. [4]

Clients are more informed and empowered, with higher expectations. They demand attention, personalization and efficiency. And they require that your values match their

own. Fuelled by rapid advances in technology, they will ultimately demand reform from you to meet these expectations, or they will go somewhere that will.

That stated, organizations that focus solely on implementing new technology in response to this challenge are missing the point. New technology in itself doesn't mean they are transforming or competing in the evolution of integrated models.

Historically, IT systems have been siloed by department, location, type of service and type of data. While playing a pivotal role in the modernization of accounting services, IT often complicates rather than supports integrated, client-centred services. That's because IT is just a tool, and the automation of broken service-delivery processes only gets you more efficient broken processes.

Businesses are left with a spectrum – on one end, organizations are burying their heads in the sand and ignoring the disruption, while others have embraced the challenge and are taking a different approach, focused on their unique "client-centred" proposition. They do this by enabling shifts, by addressing behaviours, upgrading or overhauling processes and creating systems that allow them to be flexible and take advantage of opportunities.

> There are now numerous well-executed systematic reviews and meta-analyses demonstrating the positive impact that client experience has on business outcomes.

Accounting organizations that will thrive aspire to be in the latter group. They have recognized the disruptive environment and are asking themselves the question about the changes they need to make.

The thriving accounting organization feels the pressures from clients, competitors, regulators and staff to act and deliver services differently. They find the prospect of change exciting, complicated, challenging and terrifying (all at the same time). Yet, they have found courage in the face of this volatility, uncertainty, complexity and ambiguity to allow themselves to be vulnerable. They recognize they are not perfect and look to solve problems *and* admit that they exist.

In real client-centred transformation, consideration and integration of technology is driven by purpose and outcome. Clarity of purpose and outcome focuses on the reshaping of business to produce better client outcomes. The technology enables the practitioner to follow clients across services, sites and time for the full cycle of services, not just compliance.

Data is aggregated around clients, not departments, units and locations. Accounting organizations have to compete for today *and* also for the unforeseeable future. Leaders must tackle these modern challenges and have the vision to see a new direction, allow themselves to be vulnerable enough to listen to others and then courageous enough to drive change in how they operate and engage all stakeholders to put the client at the centre.

And through all of this, each organization will be different. Each organization will track itself according to the key stages that help communicate direction and identify pivot opportunities, milestones and achievements throughout the journey.

Want to know more? Let's walk through each stage of maturity at a high level.

**Stage 1: Business As Usual**
These businesses operate in their bubble, conducting "business as usual," resisting innovative or new ideas, and continuing their course in the same way they have always done it. They are unaware of or ignore the risks and opportunities related to technology transformation, disruptive competition and empowered clients.

Companies in this phase are incredibly risk averse. There is a lack of urgency, and leadership rebuffs or dissuades any need for change.[5] "We've always done things this way, and we make a profit, so why should we change?" is the common refrain.

The culture of this kind of organization inhibits ideation, experimentation and innovation and instead operates within established norms, confining and rebuffing anything that suggests alternative ways of working. Leadership makes decisions based on legacy business norms and rules, and only rarely thinks about long-term strategy.


Change is programmatic, and technology is utilized for scale and efficiency, or because of regulatory mandate, rather than being inspired by client empathy and experience.

Growth is part of a roadmap, yet digital is mostly underutilized. If data exists, it is not regularly shared across the business to support business improvement. The critical link between client loyalty and future business growth is not recognized or is undervalued.

Employees are underappreciated and ignored; seen but not heard. Their role in identifying client expectations, awareness of changing trends, marketing and communication methods is not recognized or praised.

These businesses are behind the pace, which restricts their ability to compete for relevance with a new generation of connected clients.

**Stage 2: Momentum**

Companies with momentum recognize that the accounting operating environment is transforming. Early adopters recognize new opportunities and are inspired to experiment within their respective business units (silos). They are excited by the possibilities.

Boundaries are explored and sometimes pushed, momentum is created and the foundation is laid for official client-centred transformation within the organization. Individual projects spark imagination, drive awareness of things that aren't currently working and create energy to address roadblocks, client complaints, gaps in service delivery and lack of visible key performance indicators (KPIs) within the organizational model.

Early adopters may be applauded for their action because it creates internal buzz and momentum. Still, it may also generate concern because the change isn't necessarily organized, coordinated or may even be undertaken without formal approval. It often takes place in an *ad hoc* manner, in isolation and without the benefits of shared insights, cross-functional collaboration or best practice benchmarks.

Companies at this stage are in their infancy of understanding how to invest in new client-centred programs. They try to track initiatives against traditional metrics and KPIs instead of rethinking possibilities and outcomes and how they can change measurement standards.

Organizations start to explore how better to listen to and understand the connected client journey, with efforts to create evidence and visibility to relevant data and analytics. They start to invest in research, understanding or workshops that get executives and strategists out of their comfort zones.

While most efforts continue in isolation, teams become increasingly efficient at identifying legacy systems and processes that fail to deliver an excellent client or employee experience – they become more proactive with opportunities. Decision making starts to support the identification of new technology, systems and processes – including social and mobile applications – to close the gaps in client experiences.

But the lack of coordination can lead to staff and client frustration as they see energy invested and slow progress. The effect of “spinning the wheels” can be more detrimental than beneficial.

**Stage 3: Intentional Exploration**
The organization is getting smarter and more organized, with its change champions seeing a bigger client-centred vision and an opportunity to align staff and leaders to work informally toward it. As a result, the sense of urgency to modernize the client experience accelerates.

Previously siloed groups come together to make a case for collaboration and experimentation, proposing the creation of multi-disciplinary teams. Client-centred transformation efforts are focused on critical areas for exploration and experimentation through pilot programs and task forces that apply design thinking and inter-disciplinary teams to co-develop solutions.

This initial collaboration leads to the development of client-centred transformation roadmaps to prioritize and optimize areas of opportunity and deficiency. Strategic investments in people, products, processes and technology set the stage for a more unified client-centred transformation effort.

| |
|---|
| Technology is purposeful and implemented to drive client outcome goals, rather than limiting processes to technological capabilities. |

Improving the client experience becomes a driver for transformation since it is now tied to business goals and outcomes. As the clients' journies are studied, evaluation criteria and metrics start to mature, allowing every program to scrutinize and optimize investments. Evidence, too, becomes fundamental to informing everything from understanding connected client journeys, preferences, behaviours, thinking and context to using client-facing technology, all to optimize the client experience.

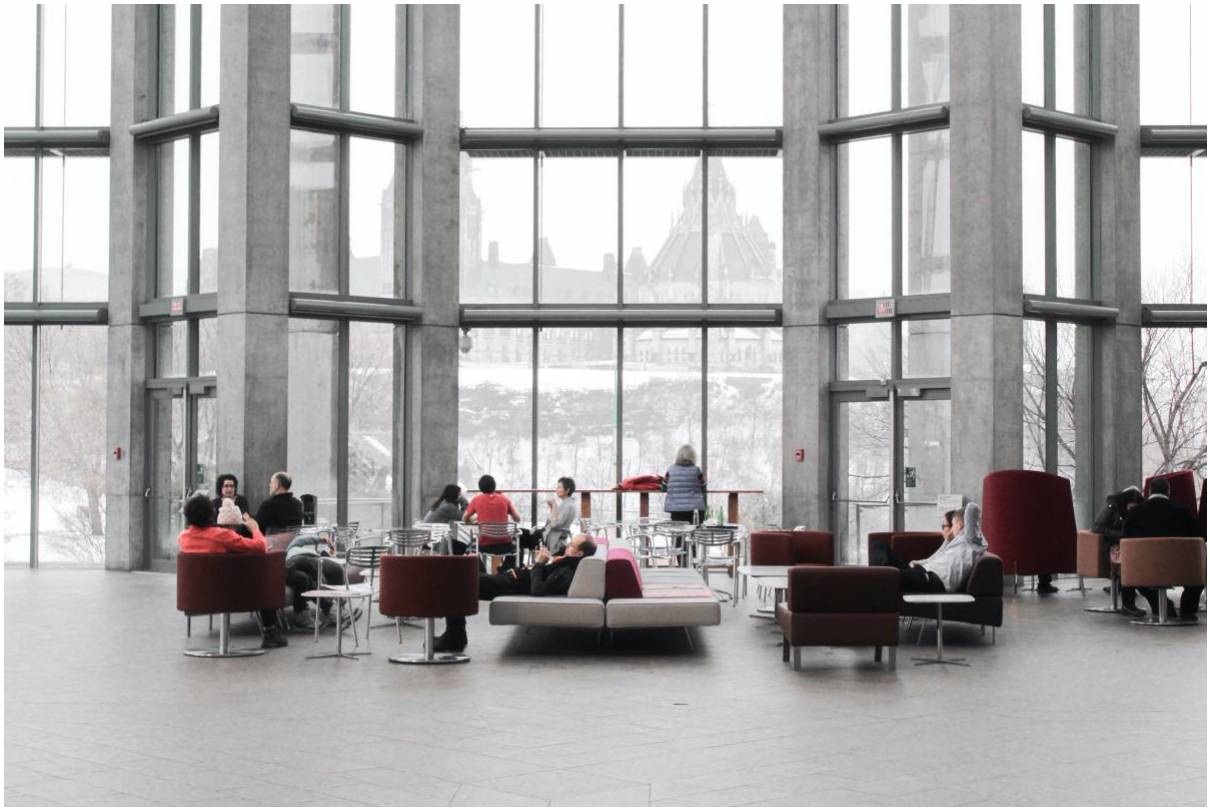
New client-centred expertise becomes a mandate, with new roles and responsibilities joining existing departments or becoming part of the client-centred transformation team to improve research, recommendations and progress.
Employee engagement and improvement programs are designed to reaffirm a connection to the client-centred vision and purpose and provide continuous development of the skills required to deliver an exceptional client experience.

At the same time, client-centred frameworks start to shift from siloed initiatives to cross-collaborative efforts that unite the organization. Introduction of client feedback systems and client-centred analytics designed to track and share findings between teams and departments provide additional momentum to transformation team efforts.

**Stage 4: Strategic Organization**
There is a notable movement at this point, and change is something that the entire organization is starting to recognize and appreciate. A key observation will be that the board and executives are “on the same page” and that their actions are demonstrations of the words they are speaking.

Effort in client-centred transformation has become deliberate and intentional, with short-term and long-term goals and outcomes supported by investments and infrastructure.

Efforts are now more ambitious, organized formally, approved and supported by the board, have executive sponsorship and are moving beyond prioritized and focused pilot programs to official initiatives that integrate and span every department of the organization affecting the client experience and beyond.



Efforts in client-centred transformation are now a focus of the C-suite and other company executives and are a company priority. Change champions get a seat at the table with authority and accountability to drive transformational strategy. At the same time, the working group expands its footprint and focus to formally modify processes and models necessary to support scale and further transformation.

The roadmap becomes more refined to include specific goals that necessitate changes and produce outcomes. This work is supported by a dedicated investment in infrastructure and operations. Investments in people, products, processes and technology are formalized to optimize existing or new touchpoints in the clients' journey.

Digital and client experience literacy is a mandate across all groups, including the executives and board. New technical skill sets are engaged to enhance capabilities in data, analytics, social and mobile involvement, digital integration, support and loyalty.

Technology is purposeful and implemented to drive client outcome goals, rather than limiting processes to technological capabilities. New data investments help monitor performance and identify areas of opportunity. Tools and data systems are integrated to create a single view of the client across every available interaction point.

Because digital client records become more prominent at this stage, privacy and security become paramount within the organization. Client privacy cannot be violated in any way.

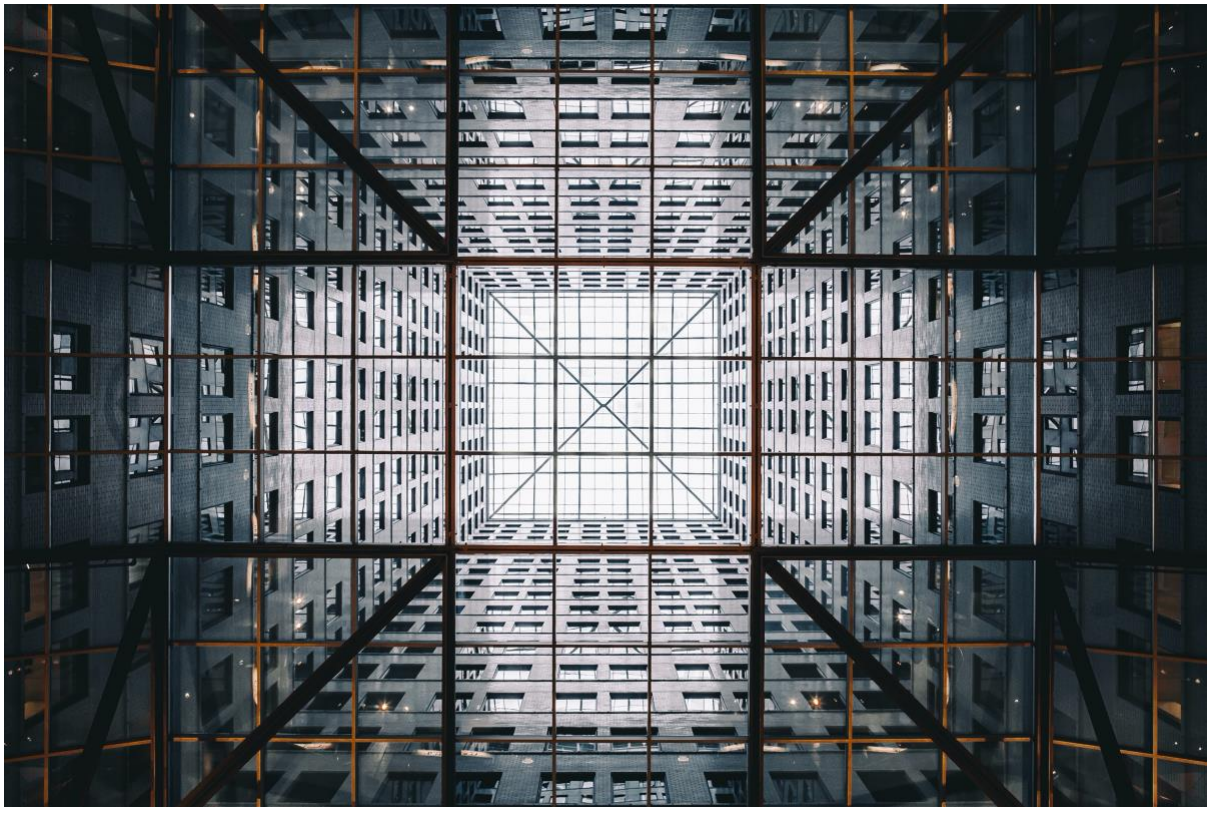
**Stage 5: Harmonious Evolution**
Client-at-the-centre transformation is now in the organization's DNA, and it becomes constant, it is “the way we do things here.”

Along the way, the organization has been reshaped. New models, processes and operating standards have been created that affect all people, product, process and technology vertically by function and horizontally across the organization. The organization is working in a more unified manner with the client at the centre.

Every part of the company is managing aspects of the client experience transformation to optimize change and empower new models to collaborate and adapt. The client experience transformation efforts are a crucial focus of an executive-led team.

Leadership transcends this movement into the establishment of a new agenda around culture, purpose and the future. Operations are streamlined to deliver integrated, consistent and holistic client experiences.

Client experience **is** the leading driver for ongoing change. But, now, everyone operates with a single view of the connected client and employee. As such, face-to-face, phone, digital and mobile experiences are defined and optimized.



Change champions become new leaders of the digital and physical client experience. These champions come from within and outside the organization, and everyone is comfortable to speak openly and freely.

A harmonious journey map with intent and attribution is created for each client interaction. Innovation in strategy, execution and measurement continues to push innovation forward in every facet that touches and supports everything around the client and employee. It is an integrated ecosystem.

The level of investment that went into understanding the client-centred experience is also prioritized and formalized for the employee experience. This work leads to new policies, processes, operations and technology that affect employment, performance and human resources (HR). HR has evolved to modernize the incumbent workforce, recruit new talent and gracefully support those who cannot fit to depart with dignity.

Client-centred experience literacy is now a way of business. Learning is continuous. Every part of the organization is responsible for the client experience and innovation.

Client experience transformation expands beyond the client experience and is now enterprise-wide, contributing to the evolution of client-centred maturity.

**Stage 6: Inspired Innovation**

Inspired innovation is all about culture. A culture of client-centred experience innovation becomes prevalent, and the organization aspires to be and is perceived by others outside as an industry-leading institution. It will be recognized because:

- Clients ask to be referred for services.
- Relatives feel safe knowing their loved ones are receiving the best possible services.
- Price is not the determining factor.
- Employees speak highly of the experience, encouraging others to aspire to work for the organization.
- Trainees prioritize it as *the* institution to gain experience and have on their CV.
- Service partners compete to be associated with it.
- Technology companies want to be a partner.
- Researchers want to be sponsored by the organization.
- Competitors aspire to be like it.
- The community speaks positively about, and is proud of, the organization.

New models, roles and investments shift toward client- and staff-driven innovation that prioritizes transformation efforts and contributes to identifying new or unconventional opportunities for growth.

Client-experience innovation is deeply embedded in the company DNA with the establishment of formal multi-disciplinary teams and efforts to track client-experience and technology trends.

Data and analytics are embedded in the systems with augmented intelligence and machine learning, helping to identify anomalies and opportunities. These are accepted as tools of the trade.

Investments in people, products, processes and technology are tied to business, employee and client experiences. This helps ensure a democratized and empowered approach to ongoing transformation.

Executives and the teams/departments and individuals they manage are not only empowered to acquire knowledge and ideate, but it's also part of their job and a regular part of performance at every level. This means that ideas are sourced, sorted, prioritized and explored as part of the day-to-day management infrastructure.

Employees are expected to contribute to the transformation progress, and managers are measured by their ability to identify and triage *bona fide* opportunities and acknowledge and engage staff in progressing them. Time is often allocated in the regular work schedule for learning or ideating. Additionally, higher education is offered to instil new expertise and keep employees up to date with the needs of an evolving client-centred organization.

The institution aspires to form innovation centres (hubs) or teams, partnering with like-minded institutions to:

- Attract and recruit new talent.
- Identify new technologies to improve client outcomes.
- Partner with, or invest in, innovative start-up/SME (small to medium-sized enterprises) companies.
- Surface new opportunities for products, client experience and service development.

- Create a competitive advantage.

Shifting toward innovation unlocks an entirely different maturity model. Lessons learned here are applied in real-time to improve internal and external operations, as well as market strategies in specific cases. As time passes and experience develops, insights are examined for more significant impact across the organization.

The result of the efforts is a striking improvement in outcomes and efficiency, with clients and employees praising the organization at every opportunity.

**The Continuous Evolution Of Client-Centred Maturity**

This article provides an introductory overview of the essential stages an organization faces as it embarks on the iterative journey to transform into a client-centred business model. Even though each step is representative of chapters in client-centred transformation, they are not absolute nor meant to convey a linear path, nor is any phase isolated unto itself.

We have learned time and time again that organizations can and do occupy more than one stage at any one time!

The clients' experience impact across the organization is vast. And while the client must always be at the centre, transformation is only ever partially defined by the clients' journey.

The ultimate success of a client-centred transformation is defined by the reworking of many essential business functions, processes and models, with each contributing to the evolution of client-centred maturity. This includes all attributes of the organization, such as:

- *Visionary Leadership* – Visionary Leadership is seeing the potential for how the world should exist and then taking steps to get there. It is the basis for more engaged staff delivery, and the research is clear: engaged staff produce much better outcomes in terms of both quality and quantity.
- *Empowered Clients* – Partnering with clients to co-create better business services contributes to improved outcomes and cost-effective use of services. Empowered clients have also been shown to exercise greater control over decisions and actions affecting their business.
- *High-Performance Teams* – A high-performance team is an interdependent, role-defined group of individuals who are focussed on a common goal. They also share common values and show initiative. High-performing teams produce much better outcomes at similar or reduced costs.
- *Frictionless Integration* – Frictionless Integration is the process of eliminating unnecessary friction in service design and delivery. By understanding and quantifying root causes of client experience friction, transformational plans can be prioritized

based on measurable business impacts, effectively driving client-centred improvements throughout the organization.

- *Adaptive Culture and Systems* – To build adaptive capacity requires an organization to consider how it evolves its people, its ways of working and its structures, processes and policies. An adaptive organizational culture enables the organization and people to adapt, evolve and realize their highest positive potentials – maximizing business performance and improving client outcomes.
- *Innovative Practice* – Innovative Practice is the ability to develop, deliver and scale new products, services and processes and business models rapidly – delivering stronger economic value and increase the performance gap separating innovation "winners" from organizations that merely muddle along.
- *Healing Environment* – A Healing Environment is defined as one that has a nurturing and therapeutic effect. Studies show that well-designed environments can reduce clients' anxiety and stress and promote a sense of well-being and comfort.
- *Effective Analytics* – With the shift to value-based client service, the majority of organizations today are working to implement effective client-centred analytics as a strategy for improving outcomes and experiences for a lower over-all cost.
- *Value-Based Service* – Value-based client service puts what client's value at the centre of the service offered. It is a new way of thinking about the optimal use of resources, ensuring that available resources are used for interventions that provide outcomes that client's most value and that limited resources are focused on high-value interventions, rather than just on effectiveness and cost-effectiveness.

Combined in any size and shape, investment in any of these equate to client-centred transformation. The extent and impact of current investment determine the assessment of the organization's current stage against the maturity map, which demonstrates progress, orientation and direction.

If you are at the "business as usual" stage, the good news is that you have many opportunities. But we suspect that if you are still there now, you probably don't want to change.

For everyone else, your organization is on its way.

**The Transformation Journey**

We are also convinced that the way we did things in the past is not the way we will do things in the future. Technology has already determined that there is no turning back. There is little choice but to embrace change as the new "organizational normal."

Transformation:
The realignment of, or new investment in, people, technology, business models, and processes to reshape the business to produce better client outcomes.

Today, accounting organizations need to be at the top of their business game; they need to act differently and think differently to not only survive but also to thrive.

But it's hard to do from the inside. Accounting organizations require someone who will challenge the status quo, challenge every aspect of how they work and embrace technology. It must include supporting their

teams to develop a relentless, client-centred orientation to provide more value, produce better client outcomes and organizational growth.

Over the next few years, the client-centred approach will become the new normal for the most successful practices and accounting businesses. In today's environment, any edge is vital and, as the concept becomes more widely understood, many practices are going to adopt it to deliver high-value services and create a competitive advantage.

Do you understand your clients' journey? It concerns us how many don't have a clue or, if they do, it's not documented, benchmarked or valued.

Some accounting organizations are "flying blind" – operating without the benefit of client insights – and don't prioritize understanding client behaviour or study the clients' journey. And others are procrastinating because they don't know where to start.

In working with organizations through the years it's clear that client-centred transformation is not a single step, an outcome or an end-goal, it's a complex and enriching journey, an overarching philosophy that is a shift in mindset.

So far, none of our clients would suggest they have reached the end of the client-centred transformation process, nor have they been able to modernize their organizations fast enough to meet the changing demands of their clients. But they have a clear vision of the road ahead, they are progressing and they remain relevant to their clients' needs.

When organized into approachable steps, client-centred transformation offers a solid strategy for understanding and incorporating change. In the process, businesses break new ground, changing from a state of "business as usual" to a culture of innovation.

At a time of constant change and evolving end states, what's important is to find and build ways to be relevant now. This means changing from the inside out to become nimbler and more resilient for our current and future worlds. For those who are bold enough to make the change, there will be significant benefits. Are you ready to take the first step towards client-centred transformation?

**So What Does the Future Look Like?**
We don't think we can say it any better than Patrick DeRuvo did in 2017:[6]

> *"For the foreseeable future, there will be a need for compliance work to keep clients above Board. I don't see any threat to this line of business. However, clients do not engage an accountant to keep them out of trouble. Accountants are trusted advisors and clients turn to them for strategies to improve their business, find efficiencies and achieve sustainable growth. Accountants have an opportunity to broaden the scope of what advice they give. New technologies are continuously proliferating through*

*the business community, and the businesses that adopt these technologies tend to flourish.*

*The type of accountant I want to see in the future is a fusion between a tax accountant, management accountant, business adviser and project manager. This accountant will meet with her or his clients, identify inefficiencies in the business or opportunities that can be exploited and then hold the business owner accountable for executing on the plan they hatch. It may involve liaising with technology vendors and helping the business integrate innovations into the business's DNA. The advent of artificial intelligence will make the accountant more efficient, in turn freeing up time to allow a higher value of service to be delivered."*

John McAlister is a leading advisor specializing in information creation, management and distribution through enabling technology. Leveraging his government and private sectors background, John partners with executives to re-image the future of their business and employs technology to enable transformation. He hails from Australia but is currently on assignment in Bhutan.

Shelley Thomson is Director of Experience 360, an Australian consultancy specializing in client-centred operating models, service design and journey mapping. Her career spans more than 30 years across in the healthcare industry, private business, commercial sectors and as a company director.

**End Notes**

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## An Age of Digital Media in Accounting and Audit

**The evolution of technology and the flexibility of audit standards**

*by Eric E. Cohen, CPA*

Eric E. Cohen 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. He is a contributing editor to *ThinkTWENTY20*.

Audit standards promulgators are considering whether their pronouncements are "broken" and need massive overalls to cope with the evolution of technology, or whether application guidance simply needs to better reflect the digital age.[1] There are many paths to consider, as we have written previously. This time, I wanted to focus on digital media: audio, graphics, images, video and holograms. Can a video be audit evidence? Can a video be part of your audit documentation?

**The Technology Transformation**

Those of us of a certain age remember when text (only) was the dominant output from (and input to) computers and "ASCII (American Standard Code for Information Interchange) art" was the height of graphics; dorm rooms were decorated with banners from large dot matrix printers with Snoopy[2] or more adult themes. Back then, available printers simply lacked graphics abilities, and we were happy to print our columns of text on a dot matrix printer. Soon, rudimentary art came from dot matrix printers, then print plotters with pens for color, followed by ink jet, and then color laser printers.

Technology is making reliance on digital media even more challenging; the same AI that *gives* also *takes*, with the emergence of "deepfakes."

Many years ago, spurred on by the evolution of technology around us, I noted in my monthly column in the *Rochester Business Journal*[3] that we had been forced as accountants to transform ourselves because of emerging technology – to move from "business experts" (here's the facts, expressed as text) to "document layout artists" (here's the fact, but doesn't it look good?) to "Steven Spielberg" (the facts are there, but the music and motion is captivating!) just to have our thoughts heard over our competition. This was especially true for onscreen Powerpoint presentations but had some applicability for word processing as well. As long as the final result was paper or paper parallel, like PDF, however, that was not as big a challenge.

Then things began to change. Youtube emerged in 2005, and we became obsessed with video. Want to learn to do something? Find a Youtube video. Cloud computing rolled in starting approximately 2006. The iPhone came out in 2007 and our phones starting becoming our still and video cameras. The Sharing Economy launched in the late 2000s, with AirBnB (2009), Uber (2009) and others of their ilk. I would be remiss to not mention also the virtual world, Second Life, in which some substantial business was taking place.

Office 2010 ushered in interactive documents, and Office 2013 blurred the lines between word processing and "information sharing environment". The on-screen/online document itself became the focus rather than some output from it. Since then, electronic devices replaced paper and online first became mainstream. Webcams were everywhere, including residential front doors (with names like Ring Video Doorbell or Google Nest Hello Doorbell).

Now the use of Artificial Intelligence (AI), drones and imagery are breaking down barriers. A session on this tool for physical inventory was one with the most buzz at August's American Accounting Association (AAA) National Meeting. At the same time, technology is making reliance on digital media even more challenging; the same AI that *gives* also *takes*, with the emergence of "deepfakes."[4] As the Public Company Accounting Oversight Board (PCAOB) and International Auditing and Assurance Standard Board (IAASB) have long noted that original documents are more reliable than electronic copies of those documents[5], even videos are now being altered in very convincing and disturbing ways.

> If you have a chart or graphic, and that chart or graphic has XBRL code inside and represents data from a financial statement, do you have assurance within assurance on assured information?

How is the profession adapting to the trend from static text and the paper paradigm to interactive and digital? When the Sarbanes Oxley (SOx) Act of 2002[6] called for "real time issuer disclosure" with both "trend and qualitative information" including "graphic presentations," has the profession prepared to provide opinions on information, in real time, in images rather than text? Or is the profession – and in particular are the audit regulators – mired in the written-word, paper-based past? Can we audit graphics and video? Can graphics and video be the basis of our audit documentation?

In this article, we discuss the use of digital media – including sound, images, video – as part of the financial reporting and audit supply chain, how audit standards (in particular, those related to audit evidence and audit documentation) contemplate or challenge their use, and additional issues related to digital media.

**Are Audit standards Still Up to Their Job?**

My own study in this area has been with a focus on whether today's audit standards stand in the way of the use of digital media within audit documentation. I presented[7] on this topic at the 2018 World Continuous Auditing and Reporting Symposium (WCARS) conference: images, audit documentation, and support in the audit rules. That presentation served as the catalyst for this article. I explored in particular whether audit standards consider these emerging technologies, and focused on whether the PCAOB's AS 1215[8] had room for images as a core aspect of the audit documentation, as it focuses on the word "written." That standard also speaks to "other media" (beyond "paper" and "electronic" – what else is there: clay tablets?) I expand on the former topic in this article.

My fanboy report is that my primary technical resource for that conference session, Prof. Touradj Ebrahimi, recently was awarded an Emmy from the US Academy of Television Arts & Sciences for his ground-breaking work on the JPEG standard.[9] Perhaps, as digital media finds a place in audit, he will be inducted into the Accounting Hall of Fame.[10]

**The Emergence of Graphics, images and Digital Media**

I began installing accounting software for my clients in the early 80s. That software was all text-oriented. If you wanted graphics, you could pull the data into Lotus 1-2-3 or later Excel and create charts or graphs from it. With the move from DOS to Windows, and Windows to Windows 95, accounting software developers began building in more graphics; in particular, you could associate a picture with a master file record, such as with an inventory item or an employee. In addition to pictures, many packages also began to work with bar codes, to facilitate data entry and information exchange. Paper documents were being incorporated into computer environments through document management and scanning, and Optical Character Recognition (OCR) was used to pull out information from the documents for data input and searching; many of our standard tools today (Adobe Scan, Google Drive) are performing OCR on documents to facilitate finding documents at a later time.

Even before the Windows era, however, the issue of graphics – table and charts – in financial statements became an issue. Even back in the early 80s, graphics were seen as an important tool in decision support, and companies were finding ways to manipulate graphics for their

favor.[11] A leading book on the use of graphics, Edward Tufte[12]'s *The Visual Display of Quantitative Information* (2001), is still listed as an Amazon Best Seller as of this writing.

Researchers began considering issues such as interpretation accuracy, decision quality, viewer preference, speed of comprehension, and decision speed. I recall numerous presentations at early WCARS conferences on research related to how graphs are used to "manipulate the perception of the data through selections of graph type, color, scale, base, size, and other treatments to create distortion and lead to different decision making."

At the same time, the profession did not consider those tables, images and graphs to be part of the financial statements, but as "other information," with the auditor's responsibility limited to pushing back only if there were "material inconsistencies" between the graphics and the financial statements themselves.[13] We knew this as "SAS 8" – the relevant IAASB, American Institute of Certified Public Accountants (AICPA) and PCAOB standards now are ISA 720, AS 2710 and AU-C 720, respectively. And they all say pretty much the same thing: the auditor "should 'read' the other information and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements." And in the application guidance, they mention specifically "Tables, charts or graphs containing extracts of the financial statements" – which raises many questions, especially with the word "extracts."

One of the reasons I raise that terms "reads" and "extracts" is because of the Extensible Business Reporting Language (XBRL). From our earliest considerations of assurance and XBRL, we considered whether XBRL was "other information" or not (and the early answer was "or not," although the PCAOB came up with ways to provide assurance early on XBRL,[14] and the US SEC later permitted assurance under AT 101.[15]

XBRL was not about readability or images or viewability, at least until the era of *Inline XBRL*. It never focused on a standard presentation or images or graphics, although a few taxonomies called for binary content (particularly PDFs) to be stored. In fact, we were encouraged by a technical committee of the American Bar Association to stay away from presentation, due to the challenges and inconsistencies found in rendering by different Web browsers.[16] And "reading" an XBRL document was an exercise in maneuvering through the angle brackets – you might look at a rendering of XBRL, but it was not designed to be "read" on its own.

Creating taxonomy concepts to provide standardized metadata for the reporting context of an image is possible, but rarely done in practice. (For the techies amongst us, I'm aware of a couple of taxonomies that leveraged XBRL's base64BinaryItemType to embed binary content like images or PDFs, but that's it). Regulators (and XBRL is not limited to regulatory reporting, however important their role in the business reporting supply chain) do not generally collect and consume images or video.

With all of these potential uses of photos and graphs and images and videos as part of audit processes, it was important to look at how digital media that auditors rely on could be incorporated into audit documentation.

XBRL was, of course, originally based on the Extensible Markup Language – XML.[17] The XML family of recommendations includes a special specification related to graphics, known as Scalar Vector Graphics (SVG).[18] I was hawking SVG and XBRL transformations to SVG very early on. Charts and graphs are potentially a natural by-product of numeric reporting; SVG is an XML-based file format for images, and that means that there can be an automatable and auditable way to vouch and trace between XBRL instances and SVG charts, graphs and other visualizations from that data.

This seemed important, as I noted previously that SOx 409 was not limited to words and numbers; this section, focusing on Real Time Issuer Disclosures, said of those disclosures "*in plain English, which may include trend and qualitative information* ***and graphic presentations.***" What if graphic presentations were an automated transformation from text and auditable?

It can get a little "Inception"-ey; inception is about a dream within a dream. If you have a chart or graphic, and that chart or graphic has XBRL code inside and represents data from a financial statement, do you have assurance within assurance on assured information?

**Imaging in Audit**

Fast forward to the present. We are now hearing about theory[19] and practice[20] where audit firms are leveraging advanced audit technologies – virtual presence, drones, Internet of Things, artificial intelligence, with computer vision and pattern recognition – as part of their audit procedures – to create and analyze images and videos. At the same time, we are recognizing that video can be used to document procedures performed in a more informative way than written commentary, and illustrations can also better convey information more rapidly than the written word – the proverbial "a picture is worth a thousand words."

I had the opportunity to take part in a joint effort a few years back known as the *Rutgers Center for Dynamic Data* Analytics (the CDDA was led by Rutgers, in conjunction with SUNY Stony Brook). Although the project is now over, and the web site expired, the very informative defunct web site was archived and is available on the Wayback Machine.[21] The project focused on Data Mining and Decision Making (DM-DDA), Graphics and Visualization (GV-DDA), Medical (M-DDA) and Security (S-DDA) and showcased amazing things related to analytics and images/video.

The need for these kinds of tools is even greater as the profession considers how it can perform *continuous auditing* tasks, which require more automation and limited manual intervention. Technology has to compensate for limiting the involvement of the knowledgeable and observant auditor on-site with new tools for observing changes in the business environment, assessing the way management and personnel are acting, observing processes and activities, and otherwise acting as an experienced human auditor would. While many organizations are

calling for the off-site, analytics-driven audit, speaking about the reduction in disruption for the client, we would once make quick judgements on trouble at a company when the controller wouldn't look at us when we first showed up, where they were all garrulous and inviting the prior year; imaging may be used to detect stressors instead.


**Imaging and Conducting an Audit**

Digital media is coming into play as part of audit processes. The standards seem to allow room for them, although some – the PCAOB's requirement for an auditor to be "present" for a physical inventory (AS 1215.11) – have room for growth, unless you can be "present" through a drone, virtual presence or other remote means. The AICPA's June 2019 exposure draft on Audit Evidence[22] seems to anticipate this. Speaking to inspection and observation procedures, it offers automation as a new option (bolding is mine):

"Inspection

A57. *Inspection involves a physical examination of an asset or an examination of records or documents, whether internal or external or in paper form, electronic form, or other media. An example of inspection used as a test of controls is inspection, using manual* ***or automated techniques****, of records for evidence of authorization.*

*A58. An example of an automated technique for inspection is the use of* ***text-recognition programs to examine large populations of documents****, such as contracts, to identify items for further audit consideration.*

*Observation A60. Automated tools and techniques such **as a camera accessed remotely** (for example, a **camera mounted on a drone**) **may aid the auditor in performing an observation procedure, such as management's physical inventory count**."*

**Imaging as Part of Audit Documentation**

Likewise, with all of these potential uses of photos and graphs and images and videos as part of audit processes, it was important to look at how digital media an auditor relied upon could be incorporated into audit documentation. Some descriptions of audit documentation include:

*records of the planning and performance of the work, the procedures performed, evidence obtained, and conclusions reached by the auditor (AS 1215.02); information the auditor has identified relating to significant findings or issues that is inconsistent with or contradicts the auditor's final conclusions … procedures performed in response to the information, and records documenting consultations on, or resolutions of, differences in professional judgment among members of the engagement team or between the engagement team and others consulted (AS 1215.08); see also .10 and others.*

While technology kept evolving, the PCAOB's standards on Audit Documentation did not evolve as much. The PCAOB may have evolved from AS No 3. to AS 1215, but the content didn't change much. The AICPA's clarification project brought its AU-C Section 230 much closer to ISA 230, which left doors open to more options.

> It is important to continue to assess accounting and audit standards so they are neither watered down to become ineffective or so constraining that they hold the profession back.

The PCAOB's AS 1215 has a troubling word in it: the word "written." AS 1215.02 notes "Audit documentation is the **written** record of the basis for the auditor's conclusions that provides the support for the auditor's representations, whether those representations are contained in the auditor's report or otherwise," although 1214.04 says audit documentation may be in the form of paper, electronic files or **other media**.

In contrast, ISA 230 on Audit Documentation speaks to "record" 16 times, with no limitation to something being "written"); "One or more folders or other storage media, in physical or electronic form, containing the records that comprise the audit documentation for a specific engagement." (ISA 230.6.b)

What of this "written"? AS 1215 contrasts it with "oral": *Oral explanation alone does not constitute persuasive other evidence, but it may be used to clarify other written evidence*. (AS 1215.09) But does "written" mean it has to use words? Would they have used "recorded" if they meant something other than using words?

We know that even the use of words can lead to ambiguities. What of the following sentences? Can you see more than one potential interpretation?

- When you enter the facility, the custodian will check your bag.
- The partner saw there were two apples left and two supervisors left.
- The employee said his job was to check out the customers.
- Because of management's oversight, the corporation's international controversial action was sanctioned.

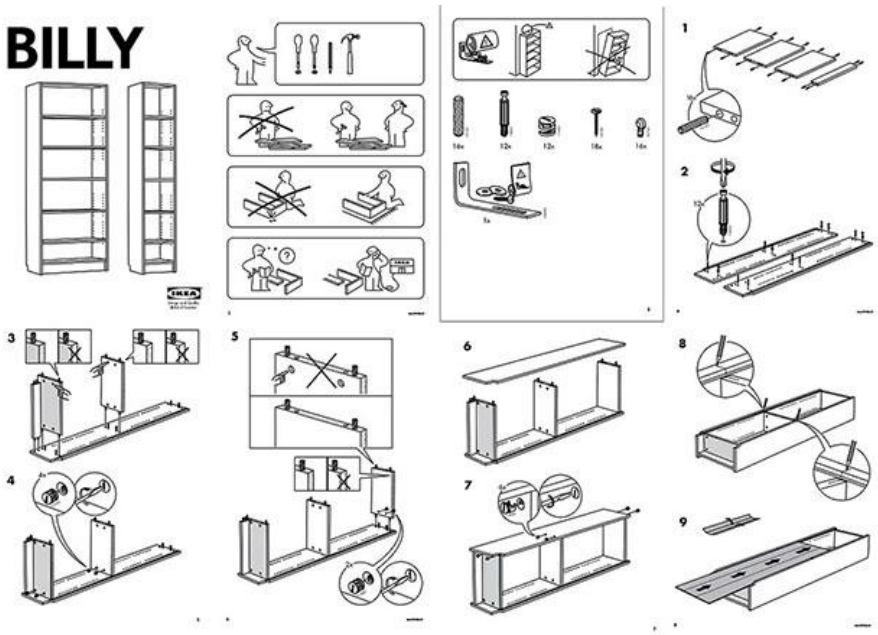
We must ask if "written" is superior to graphics, pictorial diagrams, photographic or video content without the written word when seeking to fulfill a goal of audit evidence: to be *sufficient to enable an experienced auditor, having no previous connection with the audit, to understand* (ISA 230.8). Table 1 compares writing with video for their expressive capabilities and usefulness.

*Table 1: Written vs Video*

| Writing | Video |
|---|---|
| Generally asynchronous (for later consumption), although synchronous communication (online chat) possible. | Generally synchronous and often two-way, although asynchronous (recorded) possible. |
| Visual formatting is explicit, including placement, color, graphics, tables. Leverages punctuation. | Descriptive information can be provided to emulate the visual formatting. |
| Readers can access information dynamically, consumption generally at speed of consumer. Footnotes/hyperlinks can permit user-selected sidetracking. | Listeners can access information serially; consumption generally at speed of producer. Side tracking/rabbit trails must be explicit. |
| No ambiguities between homonyms or similar sounding words/phrases ("it's hard to wreck a nice beach"; "it's hard to recognize speech"). | Ambiguities can only be disambiguated through explicit mention. |
| Can *indicate* timing, tone, volume, emotional state and timbre, using tools like emoticons. | Can include timing, tone, volume, and timbre; sarcasm easier to identify. |

The PCAOB also has current guidance saying that electronic information on EDGAR, or a corporate web site or other electronic venues aren't "documents" but just information.[23] This seems to contradict the other guidance that XBRL files were documents.[24]

This illustration, for example, shows instructions from IKEA on how to build the Billy Bookcase. The word "Billy" is written; step numbers are written; the rest is illustrated; is the commitment to a visual media as a document "writing"? What about this video on assembling a Billy?[25] Is it less suitable to document what was done and to help someone else understand?




**Questions**

- A visit to the Thomas Edison National Historical Park[26] proves that sounds and information recorded to traditional media is still usable a century later. Digital obsolescence may, however, mean it is very difficult to use information in media formats (e.g., the Lytro[27] light field format) in a much shorter period of time. Is that a problem?
- Although the regulators recognize that auditors are not expected to be experts in document (and by extension other media – AS 1105.09), will that need to change and experts be expected to be employed if necessary?
- Can the audit procedure of "observation" be performed through a window, on a monitor nearby in real-time, on a monitor on a delay?
- Can the audit procedure of "inspection" likewise be performed in some abstracted fashion, where technology captures and later permits review?

**Standard Setting in the New World**

The world of committing information to storage has changed markedly in the last 40 years – from paper, to "analog" digital (requires OCR), to metadata enhanced "analog" digital, to digital, to metadata enhanced digital and beyond. Nevertheless, the profession is still focused on the superiority of "original documents" and text. The market moves forward with AI and other tools to capitalize on digital media and expedite information for decision making. It is important to continue to assess accounting and audit standards so they are neither watered down to become ineffective or so constraining as to hold the profession back.

**End Notes:**

[1] https://www.ifac.org/system/files/meetings/files/20190311-IAASB-Agenda_Item_8-Audit-Evidence-FINAL_0.pdf.

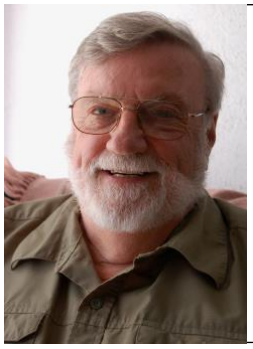
[2] https://www.asciiart.eu/comics/peanuts.
[3] Reiterated in this article: https://rbj.net/2012/11/09/word-2013-is-a-useful-upgrade-not-just-pointless-tweaking/.
[4] Comedian/impressionist Jim Meskimen showcases his impressions and worked with a deepfake expert to transform himself into his celebrities at https://www.youtube.com/watch?v=5rPKeUXjEvE.
[5] AS 1105.08, ISA 500.A31.
[6] https://pcaobus.org/About/History/Documents/PDFs/Sarbanes_Oxley_Act_of_2002.pdf, section 409 *Real Time Issuer Disclosures.*
[7] http://raw.rutgers.edu/docs/wcars/43wcars/EricChohen_PDF_presentation.pdf.
[8] https://pcaobus.org/Standards/Auditing/Pages/AS1215.aspx.
[9] https://www.emmys.com/photo/530056.
[10] https://aaahq.org/AHOF.
[11] DeSanctis, Gerardine. "Computer graphics as decision aids: Directions for research" (*Decision Sciences* 15.4, 1984): 463-487.
[12] https://www.edwardtufte.com/tufte/.
[13] Steinbart, Paul John. "The Auditor's Responsibility for the Accuracy of Graphs in." Accounting Horizons 3.3 (1989): 60.
[14] https://pcaobus.org/Standards/QandA/05-25-2005.pdf.
[15] Now superseded by https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/ssae-no-18.pdf although SEC Rule 33-9002 has not been changed.
[16] Cases such as Pennar Software Corp. vs Fortune 500 Systems, Ltd. relating to reliance of certain information on a web site were provide – see https://casetext.com/case/pennar-software-corp-v-fortune-500-systems.
[17] https://www.w3.org/XML/.
[18] https://www.w3.org/Graphics/SVG/.
[19] D Appelbaum, R A Nehmer, "Using drones in internal and external audits: An exploratory framework" (*Journal of Emerging Technologies in Accounting*, volume 14, issue 1), p. 99 – 113.
[20] *Auditing in the Drone Age*: https://www.ey.com/ca/en/newsroom/pr-activities/articles/2019-september-faster-cheaper-safer-better-welcome-to-auditing-in-the-drone-agel.
*EY Using drones to enhance audits* https://www.journalofaccountancy.com/podcast/using-drones-to-enhance-audits.html.

[21] Web site expired: http://www.cdda.rutgers.edu/; illustrative content from Archive.org Wayback Machine https://web.archive.org/web/20140712182719/http://cdda.rutgers.edu/.

[22]https://www.aicpa.org/content/dam/aicpa/research/exposuredrafts/accountingandauditing/downloadabledocuments/20190620a/20190620a-ed-sas-audit-evidence.pdf.
[23] https://pcaobus.org/Standards/Auditing/Pages/AI20.aspx 4.16-18.
[24] https://pcaobus.org/Standards/QandA/05-25-2005.pdf
[25] https://www.youtube.com/watch?v=JyH6igMVVBI.
[26] https://www.nps.gov/edis/index.htm
[27] https://en.wikipedia.org/wiki/Lytro

## Artificial Intelligence May Not Replace Accountants But It's Sure Going to Change Us

*By Gerald Trites, FCPA, FCA, CISA*



Jerry is a retired partner of KPMG, and a former Professor of Accounting and Information Systems at a Canadian university. He also served for 12 years as Director of XBRL Canada. He has published 12 books and numerous articles and papers and is presently Editor in Chief of *ThinkTWENTY20*.

Artificial Intelligence has been entering the world of accountants and other financial professionals for some time – usually at a basic level, such as selecting accounts to post, helping with data searches, and offering suggestions for problem-solving purposes. But, now, we are on the verge of a new wave of AI, with new technologies that have not been used before.

**Artificial Intelligence Is Our Friend**

According to IT consultants Gartner Inc., there are several levels of AI – Reactor, Categorizer, Responder, Learner and Creator.[1]

The reactor level involves simply automating existing processes, e.g., filling orders. This is the most basic level. The categorizer level, as the name implies, is AI that can identify categories of transactions and apply algorithms to enhance related decisions.

A good example of responders is driverless cars. That level of AI can identify and react to a number of particular situations. This is quite a sophisticated level of AI, which raises the issue that one of the considerations in implementing AI is the risk appetite of the organization, or its risk appetite in particular interactions, some being more sensitive or critical than others.

Learner levels can learn from experience and then use that experience to augment future decisions. One example of a learner level application is medical diagnosis – obviously a critical application. A system at the creator level can create its own applications.

The prospect of more powerful AI systems entering the world of accountants has fed a concern that accountants may be replaced. Both CPA Canada and the Institute of Chartered Accountants in England and Wales have released reports that explore this issue.[2] Both books make similar points – that accountants need to adapt to AI, that AI will not replace accountants and that AI will take over much routine work and make it possible for accountants to focus on more complex and challenging tasks.

Many organizations are now automating their processes using smart bots that can monitor an activity, learn how the processes work and determine which ones should be automated. For example, they can follow the work of an insurance representative, track the interactions with

customers and potential customers, including the reactions of the people in different scenarios, and learn from their experiences. In other words, the bots use machine learning, a concept that is not new but is in process of becoming more common and more powerful.

The idea, again, is to reduce repetitive, manual tasks to leave more time for the more interesting and important relationship-enhancing work. The human/technology interaction is referred to as orchestration and the objective is to optimize it.[3]

**The Need for Training**

Clearly there is a need for training of personnel. “The biggest pain point that emerged from Gartner’s 2018 CIO survey was the lack of specialized skills in AI, with 47% of Chief Information Officers (CIOs) reporting that they needed new skills for AI projects. As such, talent acquisition is likely to be one of the biggest barriers to AI adoption going forward.”[4]

AI is based on large volumes of data and various algorithms. The data can be used to "train" the algorithms. To do so, the data need to be not only voluminous, but clear of errors and bias. As for the algorithms, they often start out as generalities, biased by social and economic norms that may not apply in a particular application. So the training is needed to be able to evaluate the algorithms and allow them to be adapted to reality. Also, training is needed to enable the AI to adapt to changing circumstances. Of course, the data must fairly reflect those changes, which again puts a large burden on data quality.

**Humans and AI Orchestration**

As AI usage grows, humans will need to work more closely with AI and even compete with it. Consequently, the human/AI interface will become very important. At the basic level, that interface is at the traditional computer/human level. As robotics capabilities grow, however, the interface will become more like inter-human interaction. This will involve robots working side by side with humans – doing reports, answering correspondence, attending meetings, and making decisions.

There are psychological implications: how will a human feel when his/her promotion is given to a robot? Or when that person must report to a robot. If robots become part of the regular workforce, will they have rights? What rights would they have? Already the issue has been raised of whether robots have a gender. Eventually, humans will need to consider having an AI interface physically installed to enhance mental capabilities. This will be necessary in order to compete. AI implants are already available and being used to help people perform various tasks. As humans work more closely with AI designed to augment their own capabilities, those human capabilities could be overcome by the technology. This will raise questions as to responsibility for decisions and actions.

AI is moving ahead so quickly that our traditional social institutions may not be able to keep up. AI promises to be pervasive within just a few years. And there is a growing recognition of the necessity of AI for competitive advantage. When you look at how quickly Google has moved into our fact-finding space, and how much we rely on it, we can get some sense as to how quickly AI can move.

Companies, particularly retail businesses, have been making greater use of Artificial Intelligence to enhance their customer service. Customers can't always go totally online, so it is in the companies' interests to enhance the customer experience by improving convenience and helping to build customer loyalty. One approach has been to provide customer service personnel with technology such as tablets loaded with useful data and related AI apps, as well as apps designed to effectively close a sale and facilitate immediate delivery. We see this, for example, in Chapters stores. With so many companies not yet totally online, customer service has been expanded to include a variety of new AI technologies and the means to deliver them. The latest trend includes the use of wireless technologies that can track customer movements, including when they enter the store, so that sales personnel can approach them knowing their interests and preferences.

One lesson that has been learned is that, in many cases, direct human interaction is necessary before a deal is closed. This means that the technology must remain in the role of supporting the human activity rather than replacing it. The strategic issue has been to define the best mix of human and technological involvement – the orchestration – in the process.

This is a process requiring continuous improvement which, in turn, requires that the actions of competitors must be closely watched to maintain or build on product differentiation.

Recent Gartner surveys show that customer interaction is likely to be a major part of AI implementation. "At a recent conference, Gartner vice president and analyst Janelle Hill noted that a range of AI technology projects is underway in many enterprises and said that chatbots may be among the first that organizations have implemented.

"The fact that companies such as Amazon have done some of the early work to make chatbot engines such as Amazon Lex available to enterprises has probably given a leg up to these early efforts.

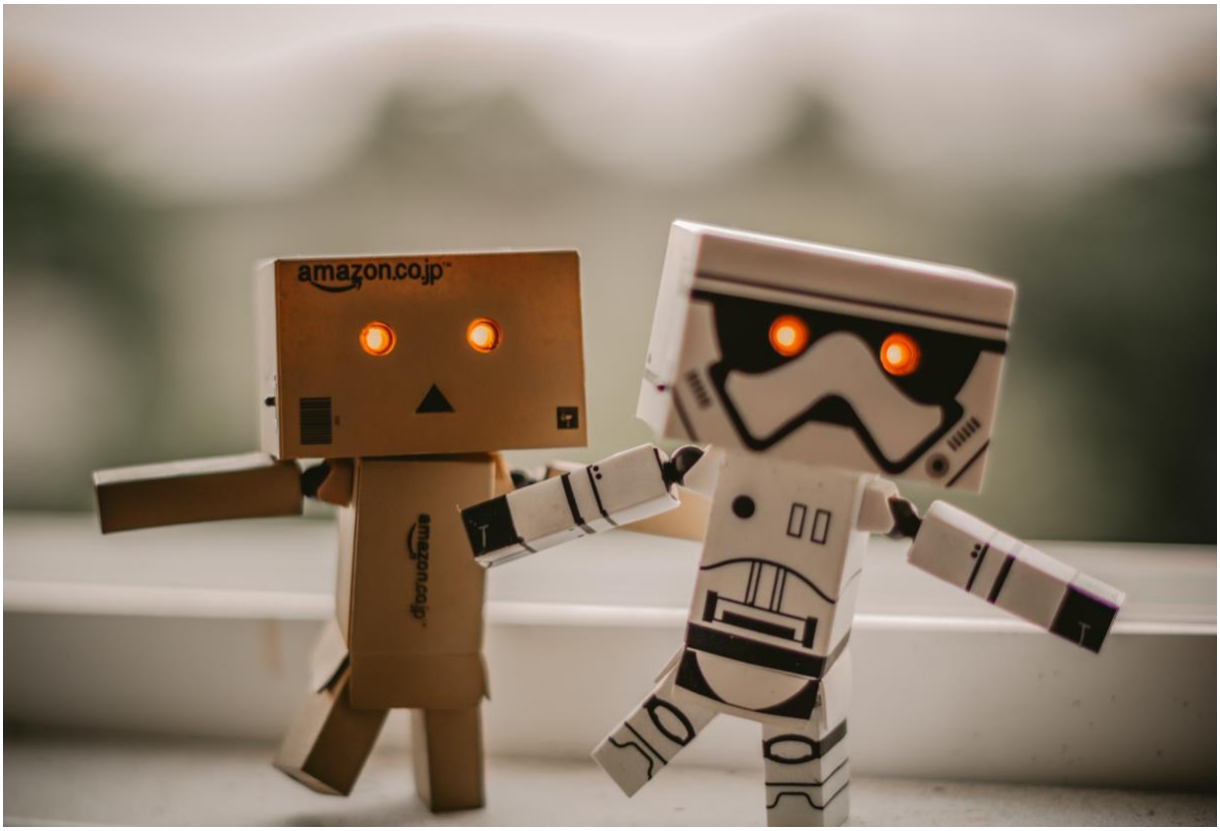
"But the big breakthrough in this area is still five to ten years away, Hill said, and CIOs should reset expectations with their boards. In 2017, 3% of customer service interactions were handled by conversational agents. She expects that number to rise to 30% by 2023."[5]

While powerful, modern AI has its limitations. For example, humans are better than machines at empathizing. Customers act differently with humans than they do with machines. Humans are better than machines in establishing the context of particular purchases. for example, wedding and anniversary gifts call for different sensitivities than many other more routine

purchases. Machines, on the other hand, are better at finding nuances in data being used, in determining product categories for particular market segments, even in determining customer clothing sizes.

Clearly, then, human and machine activities must be carefully thought out and implemented. Experience has shown that these activities should be as discrete as possible, so that they don't overlap.

**AI and Automation**




The most common approach to AI implementation is to approach it as an exercise in automation. Companies look to the processes in their organization and decide which ones can be automated, thus removing or reducing the human content and saving money.

Over one-third of respondents to a recent Consumer Technology Association (CTA) survey say they plan to automate accounting tasks. McKinsey & Co estimates that about 20% of the tasks in a typical recording and reporting cycle can be automated and nearly 50% of those tasks can be mostly automated. "CIOs could consider looking at the ways their accounting department collects, processes and reports financial data. For example, many firms have been automating the process of producing and submitting regulatory filings."[6]

While this approach can be useful, and perhaps even a way to start, Gartner, in their release "How to Build an AI Business Case,"[7] points out that it is a mistake to stop there. They argue

that many organizations are missing the best of what AI has to offer. That the way to approach AI is to find ways in which human effort can be augmented. That involves looking at decisions that need to be made and considering how AI can help, rather than looking at processes that can be automated to reduce human involvement.

“The mindset shift required for AI can lead to “cultural anxiety” because it calls for a deep change in behaviors and ways of thinking.”[8]

**AI and Accounting**

The accounting profession is gearing itself for a major upheaval because of the implementation of artificial intelligence. The massive changes on the way – and already happening – are truly impressive. A recent report by PWC[9] makes this clear.

In a global sense, the report states that GDP will be up by 14% by 2030 as a result of AI. A high portion of this growth will come from the replacement of workers in routine jobs by AI, something which is not new for technology but will be speeded up and enhanced with AI. And there will be new jobs for those who must manage and supervise the AI applications.

The impact of AI by augmenting or replacing humans is well known. The PWC study goes a lot further. To illustrate, it includes the following example of an AI application:

"An online insurer has leveraged an AI bot to automate the claims process from beginning to end. Instead of the days or even months it traditionally took to settle a claim, the bot is able to complete the entire pipeline from claims receipt, policy reference, fraud detection, payout and notification to customers in just three seconds."[10]

Both accountants and auditors are deeply affected by this kind of application. Both are required to have a knowledge of the control system. Since this control system has been placed entirely under the actions of an AI bot, the accountants and auditors need to have a good understanding of how that bot works – both in principle and in practice. They need to know how to test the effectiveness of that bot.

Multiply this by thousands of AI bots and you have an appreciation of why people are calling the AI revolution transformative.

A recent Gartner survey showed that 4% of companies have implemented AI and 46% plan to do so. That shows two things: AI is in its infancy and interest in it is strong.

How to actually implement AI is an open question. Companies can develop it on their own, but that's really expensive and requires a major effort. Or they can outsource it from providers like Amazon or Google. A third approach is to buy it from their software providers, which involves waiting until they offer it and then determining if it fits their organization.

The latter approach is bound to be quite popular for the larger organizations and many medium ones that use SAP or Oracle, because a great many already use one or the other. Also, typically, SAP or Oracle will usually have invested in learning about the needs of the company and can help develop solutions that will most likely fit.

Most companies will not build their own AI apps. So, under either of the other approaches, the issue will be how to establish a competitive advantage. Forrester Research's Brandon Purcell has the answer to that issue: data will be the key source of competitive differentiation in the world of AI. Emerging data sources, innovative data transformations and business-infused data understanding will lead to better models and, ultimately, better results from AI.

**AI and Analytics**

Given the importance of data, a powerful use of AI is in autonomous data analytics. The word "autonomous" implies that the analytics are able to stand on their own – they are able to make their own decisions. This is what is happening with the help of AI and machine learning.

Companies have more data available to them than at any time in history. That data is of little use, however, unless it is analyzed to yield useful insights and prospective information. Also, the analysis must go a lot further than simply being sufficient to support a particular hypothesis. Rather, it must be mined to yield the secrets and lessons it holds.

Autonomous analytics, aided by AI, supports that approach by being able to recognize relationships in the data that can then be used to formulate further lines of enquiry. That's where machine learning comes in. All of this is automated. In addition, the analysis can encompass very large bodies of data, maybe even all the data available to a particular company.

Techniques for implementing such systems are advancing quickly and several companies have been reporting useful results.

**Digital Transformation**

Artificial Intelligence adoption is playing a major role in the implementation of digital transformation by businesses. The hype is strong and expectations are running high.

Pew Corp did a study asking some "979 technology pioneers, innovators, developers, business and policy leaders, researchers and activists" to answer the question, "As emerging algorithm-driven artificial intelligence (AI) continues to spread, will people be better off than they are today?

"The experts predicted networked artificial intelligence will amplify human effectiveness but also threaten human autonomy, agency and capabilities. They spoke of the wide-ranging possibilities: that computers might match or even exceed human intelligence and capabilities on tasks such as complex decision-making, reasoning and learning, sophisticated analytics and pattern recognition, visual acuity, speech recognition and language translation."

Pew Corporation found a variety of concerns and opportunities for humans, but all agreed that massive change is in the works, with some saying that such change is likely to extend over the next 50 years or more. The change will not come at once, meaning that humans will need to be very responsive in dealing with the change as it comes. In the process, some people, including accountants, will be displaced and left behind, which, in turn, means social unrest and more populist uprisings. It's a massive challenge calling for restructuring of our social, educational and government institutions.

Pew's overall conclusion: "Experts say the rise of artificial intelligence will make most people better off over the next decade, but many have concerns about how advances in AI will affect what it means to be human, to be productive and to exercise free will."[11]

**End Notes**

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## IAASB Mission Accomplished? Not Quite Yet

*By Gundi Jeffrey*

Gundi Jeffrey, Managing Editor of *ThinkTWENTY20*, is an award-winning business journalist specializing in writing about the accounting profession for various publications in Canada and England.

"I have tremendously enjoyed the challenges in leading the International Accounting and Auditing Standards Board in developing, in the public interest, high-quality standards for auditing and assurance for use across the world," says former IAASB chair Professor Arnold Schilder in a recently released report outlining the Board's work over the past three and a half years. He added that "the innovations we have made in auditor reporting, quality management and assurance on non-financial information will benefit both users and practitioners. There is still much work to be done, and I am confident the IAASB has the foundation it needs as it enters its new strategy period in 2020."

The work projects outlined in the report have been the subject of some criticism for not reacting quickly enough to perceived new needs, nor adequately addressing those new needs - such as the use of technology in auditing - but have also been lauded for completing several badly needed projects such as the enhanced auditor report and a new standard on auditing estimates.

There is ample evidence that the IAASB's process is too slow, both in fact and perception.

"There is ample evidence that the IAASB's process is too slow, both in fact and perception," says Gregory Shields, CPA, CA, former director of auditing and assurance standards at CPA Canada and now member of the board of directors and the University of Waterloo's Centre for Information Integrity and Information Systems Assurance as well as well as a member of CPA Canada's Audit Analytics Committee. Further, he adds, "Many audits are performed for entities that are not complex large public companies. Many auditors of these less-complex entities have expressed concerns that the IAASB is not meeting their needs."

On the other hand, notes Cameron McInnis, CPA, CA, chief accountant at the Ontario Securities Committee, "the work the IAASB is doing on improving audit quality through topics such as professional skepticism and firm quality control is important, as improving these standards has the potential to improve audit quality and reduce the audit inspection findings of audit oversight bodies such as Canadian Public Accountability Board (CPAB)."

**Improving Audits Takes Time**

Schilder led the IAASB for more than a decade before handing over the job of chair last July to Tom Seidenstsein, who was the senior vice president for Strategy, Innovation and Capital Management at Fannie Mae, a leading source of US housing market liquidity.

The report, *IAASB Public Report, January 1, 2016 to June 30, 2019: Foundation For The Future,* covers what the board has been up to for the past three and a half years. In short:

- The IAASB approved five revised International Standards on Accounting (ISAs). Of those, three (ISAs 800, 805 and 810) are reporting standards that represent the tail end of the IAASB's project on auditor reporting. The revisions to these ISAs were approved in the fall and early winter of 2015 and became effective for audits of fiscal years beginning on or after December 15, 2016. This means that they apply largely to 2017 year ends for which year-end audit work would be done in 2018. The IAASB's initial information gathering for its auditor reporting project started in 2006, 12 years before these revised ISA likely would affect audit work.

- The IAASB also approved revisions to Canadian Auditing Standard 250 *Consideration of Laws and Regulations in an Audit of Financial Statements* in June 2016. It became effective for audits of fiscal years beginning on or after December 15, 2017. This project originated with related information-gathering work done by the International Ethics Standards Board for Accountants (IESBA) that started way back in 2010.

- Finally, the IAASB approved revisions to ISA 540 *Audit of Accounting Estimates*. In comparison to the other projects, this was relatively quick. It started in early 2015, with revisions approved in June 2018 and effective for audits of fiscal years beginning on or after December 15, 2019. So, year-end work that would need to comply with this revised ISA would be done in early 2021, "only" six years after the start of the project.

> We are also currently innovating our way of drafting our standards to help make them capable of effective and consistent application to all sizes of entities.

"Setting high-quality standards takes time, and we continually have competing calls for more, and quicker standard-setting activities," Schilder writes in the report. "My overall impressions are that we have substantially progressed our program to enhance audit quality since the clarified International Standards on Auditing became effective in particular over the past three and a half years. The progress includes addressing not only the challenges and issues identified by our ISA Implementation Monitoring Project, but also those arising from the continually changing environment, including significant revisions to international accounting standards and other external reporting frameworks."

Schilder notes that the IAASB efforts to enhance audit quality have taken a large proportion of the Board's time over the period January 1, 2016 to June 30, 2019. "We have finalized a more robust standard for auditing accounting estimates, and we are now focusing on other foundational and core ISAs, including those to identify and assess risks of material misstatement and group audits. We are also currently innovating our way of drafting our standards to help make them capable of effective and consistent application to all sizes of entities."

Climate change is also on the minds of Board members. Schilder points out that "we continue to be mindful of changes in the environment and how we can best respond, in particular in relation to broader quality objectives which are core to the engagements performed using our standards." The IAASB recently consulted on a new approach to quality management for firms and engagements, and its new proposed quality management standards are likely to result in substantial changes from current practice. "We believe that enhanced quality management will lay a more solid foundation for the way that the engagements using our standards are carried out." The IAASB expects to finalize the new quality management standards in 2020.

The IAASB has, for some time, recognized that stakeholder needs stretch beyond entities' financial statements and is close to finalizing the revision of the standard on agreed-upon procedures (AUP) engagements. It has also, over the past two years, been developing guidance on how to apply the standard on other assurance engagements to extended external reporting (EER). "We already published a first phase of draft guidance and hope to have a full draft approved for consultation by the end of 2019. Innovation and responsiveness to our stakeholders' needs are critical as EER engagements continue to grow and evolve," Schilder says.

More needs to be done for engagements where entities operate in less complex environments.

As to what comes next, Schilder explains that "considerations relating to technology will form part of a possible new project related to audit evidence as issues in this regard are primarily driven by technology, professional skepticism and the sources of information available to auditors. Scoping activities for this new initiative commenced early in 2019. Furthermore, professional skepticism remains an ongoing initiative that affects all our projects currently underway."

There has also been a recurring call to meet the needs of smaller stakeholders. "More needs to be done for those engagements where entities operate in less complex environments. In the last decade we have revised our standards on reviews, compilations and other assurance engagements, and are nearing completion of our revised AUP engagements."

**Working for the Public Interest**

A key input to the development of the IAASB's standards comes from the Consultative Advisory

Group (CAG). The CAG provides the IAASB with insights and inputs on proposals as the Board develops standards and sets strategy.

Jim Dalkin, who chairs the IAASB Consultative Advisory Group, lauds ISA 540 (Revised) *Auditing Accounting Estimates* achieving the objectives performance relation to the expected 9 *Financial Instruments* importance of the professional skepticism estimates. "The CAG *and Related Disclosures* for of meeting more robust requirements, particularly in credit loss model set out in IFRS as well as emphasizing the appropriate application of when auditing accounting Representatives were keenly interested in this project given its public interest impact on all audits, but particularly on financial institutions."

> The due process of standard-setting has not evolved much in the last several decades. In my mind, standard-setting is marked by long duration projects and highly formalized procedures.

He also is satisfied with ISA 315 (Revised), *Identifying and Assessing the Risks of Material Misstatement*, which addresses several public interest issues the CAG raised, including in relation to the complexity and scalability of the standard. "The auditor's ability to serve the public interest includes the ability to apply this, and other standards, to the audits of financial statements for all entities – ranging from small, simple, non-complex entities to large, complex, multinational entities."

> The enhanced auditor report gives investors information they didn't previously have on difficult and important areas of the audit.

He notes that the CAG has been involved with the development of the new and fundamental suite of quality management standards, providing advice and input throughout the development process from a public interest perspective. "The proposed standards address the most relevant public interest issues raised by the CAG related to quality management at the firm and engagement levels The balance achieved in these proposed standards between regulatory needs for more robust quality management standards and those of small and medium-sized practices (SMPs) to avoid a 'one size fits all' approach was a key concern for the CAG as the revisions to the standards were developed."

He adds that the IAASB is embarking on further exploration of how its standards can better address an audit of a less complex entity. "The CAG strongly supports this initiative and looks forward to providing further input as the IAASB consults and develops recommendations on more can be done."

Carol Paradine, CPA, CA, the CEO of the Canadian Public Accountability Board, agrees that The work on quality management standards for audits is very important; CPAB is encouraged to see

many audit firms begin to work on implementation in advance of these standards being finalized in 2020. “

CPAB also supports the IAASB’s commitment to placing additional focus on two critical standards areas – going concern and fraud – as noted in a recent speech by the IAASB’s new chair, Tom Seidenstein. “CPAB has conducted a review in both these areas and expects to publish our perspectives later this year.”

Paradine noted in particular “the IAASB’s recognition of the need to better reflect the application of new technology in the standards, and to innovate processes to improve overall responsiveness and agility.”

**Changes to Standard-Setting Process Essential**

In his speech, delivered in London on October 4, 2019, Seidenstein acknowledged that “the due process of standard-setting has not evolved much in the last several decades. In my mind, standard-setting is marked by long duration projects and highly formalized procedures. This formality favors those with the time and resources to participate in the process – and likely means the barriers for entry for participation are high. What I envision, to borrow a term from the technology world, is a much more agile standards-development process.

“Standard-setters should be adopting new technology collaboration tools to engage stakeholders through all parts of the process. We need to meet people where they want to meet us—not where we want them to meet. In a more innovative world, we should move from paper and .pdf-based standards, to digital forms where we could track how practitioners are using them. At the IAASB, we should be willing to adopt more quick response mechanisms to address practice issues in shorter time periods. …This agile approach will require experimentation and a willingness to fail. However, success could be measured in greater participation and trust in the process and more rapid standards development.”

The OSC’s McInnis says the IAASB proposed strategy and work plan for the next few years acknowledges technology as a key environmental driver and that he is “pleased to see that the IAASB has established an Innovation Working Group to look at technology issues in audit. We have seen recently that Canadian markets move quickly in new areas of technology such as crypto-assets and blockchain, and auditors need to have the right tools and guidance to audit these new areas. I’m pleased that organizations within the Canadian financial reporting ecosystem have been able to work together to develop domestic guidance and audit approaches to handle these situations.”

He also believes that “the IAASB has completed a number of good projects so far including the enhanced auditor report and new standard on auditing estimates. The enhanced auditor report gives investors information they didn’t previously have on difficult and important areas of the audit, and the new standard on auditing estimates ensures robust

audit procedures for new financial reporting areas (i.e., expected credit losses of financial institutions)."

And McInnis certainly supports the work of the IAASB's Monitoring Group, which is looking at the board's governance and standard-setting structure. "One of the objectives of that work is to develop a structure that will improve time to market for standards. Sometimes standards can take too long to develop. One example of this is the work being done on ISA 600 *Group Audits*. This was an area that we have been expressing concerns about for a long time and I'm pleased we are seeing significant progress recently on this project."

For his part, Shields finds that IAASB's response to the impact of technological change "has so far been inadequate. There are recent signs that the IAASB is finally starting to develop standards that more appropriately stress the fact that most audits are conducted in a high-tech environment. But the IAASB's standard-setting process is far too slow. I don't think that the IAASB will ever be capable of properly responding on a timely basis to the impact of technology unless it makes fundamental changes to its process."

> The IAASB often seems like the proverbial cat that sees fish in the water but is very reluctant to experience the discomfort of actually getting its feet wet.

He adds that none of the IAASB's recently revised standards reflects use of technology by either auditees or auditors. "The reporting standards would not be significantly affected by technology – at least not for now. However, use of data analytics can be effective in auditing compliance with laws and regulators and accounting estimates. Such use might even be essential, for example, to performing high-quality audits of the allowance for credit losses of a financial institution. The absence of any reference to use of technology in ISAs 250 and 540 is, to me, evidence that the IAASB has not kept up with the impact of changes in technology."

**Hope for the Future**

But Shields is hopeful, noting that there are recent signs of improved IAASB performance regarding technology. "Revised ISA 315 *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment* was approved in September 2019. It now includes application and explanatory material explicitly stating that automated tools and techniques 'may be used' for aspects of assessing risks of material misstatement.

"Also, the IAASB is preparing non-authoritative guidance in the form of FAQs on the use of automated tools and techniques in assessing risks of material misstatement. However, the IAASB formed its IAASB Technology Working Group (formerly the Data Analytics Working Group) in the fall of 2014. Despite years of consultation and apparent widespread support for the use of data analytics in assessing risks, ISA 315 still does not contain a requirement to do so. To me, this is highly problematic. There is likely a significant number of auditors who will defer use of data analytics until such use is required. They will therefore forego any improvements in audit quality that are likely to result from use of technology in assessing risks."

To demonstrate its commitment to addressing technology issues, he adds, "the IAASB would no doubt point to its current major initiative to revise ISA 500 *Audit Evidence* and make conforming changes to many other standards. This initiative likely would result in finally recognizing the importance of technology throughout the ISAs. Optimistically, an exposure draft of revised ISA 500 might be approved as early as March 2021. The exposure draft period could be the usual 90 days, but given the breadth of the project, could be much longer. Further, addressing comments could take another 18 months (based, for example, on the time taken to finalize revised ISA 540). Final approval, again optimistically, could take place in late 2022 and with the revised ISA being effective for years beginning on or after December 15, 2023. The revised standards would be applied in year-end audit work mostly starting in early 2025. By that time, many relevant aspects of technology could have changed significantly. "

In Shields' view, "a key reason that the process is so slow is that information gathering is the easy part of making changes to standards. People are generally happy to be consulted. The only significant resistance to change (by auditors and audited entities) comes when new requirements are proposed that may increase audit costs. Consultation is definitely needed to help ensure that there is buy-in to any changes in requirements in standards. Otherwise, the standards will not be 'generally accepted.' However, information gathering is never complete (you can always obtain more). So, it is so easy for the IAASB to say yet more consultation is needed. The IAASB often seems like the proverbial cat that sees fish in the water but is very reluctant to experience the discomfort of actually getting its feet wet. Standard setting should not be a popularity contest. Ever more consultation should not be a substitute for biting the bullet and doing what is right to improve audit quality, in the public interest."

**Revisions Urgently Needed**

There are two issues that Shields feels are particularly urgent and need addressing by the IAASB. "First, the IAASB has long known that there are significant issues about the nature, timing and extent of procedures auditors should perform to obtain evidence regarding the reliability of data. This includes data used by management in preparing the financial statements, and any additional data that might be used by the auditor in obtaining audit evidence to support the auditor's opinion. This matter is particularly urgent because evolution in technology, including significant expansion in the nature and volumes of relevant data, presents significant new challenges for auditors. The IAASB will likely address this matter as part of its project to revise ISA 500 *Audit Evidence* but it will no doubt take a lot of time. CPA Canada is also initiating a project to develop non-authoritative guidance on this matter."

He also thinks that revisions soon need to be made to ISA 570 *Going Concern*. "This is urgent because it is now the primary source of what is called the audit expectations gap. Users of financial statements and the auditors' reports thereon feel that auditors should be doing a much better job of providing timely information on material uncertainties about an entity's ability to continue as a going concern. This is not a new issue, but is now getting a lot of attention. It may not be an exaggeration to say that timely action on this matter is important to maintaining the relevance of audits."

Shields does, however, believe that the IAASB is already taking useful initial steps in one area. Many audits are performed for entities that are not complex large public companies. Many auditors of these less-complex entities have expressed concerns that the IAASB is not meeting their needs. Revised ISAs often include a few paragraphs on what is called "scalability" (i.e., information on how to apply typically long and complex standards to audits of less complex (typically smaller) entities). However, in the view of many, this is far from adequate.

"This is a long-standing complaint," he says. "The IAASB is now being a lot more proactive in trying to identify and address specific concerns. Earlier this year, it issued a consultant paper *Audits of Less Complex Entities: Exploring Possible Options to Address the Challenges in Applying the ISAs* (Audits of less complex entities). The IAASB now has a project underway to address this matter. However, it is not clear that the IAASB will be able to take any meaningful actions in the near term, given the slowness of its process."

**Addressing Divergent Views**

In his October Speech, Seidenstein said he plans to concentrate on fixing some of these problems. "We must confront weaknesses in audit standards when identified, come to grips with the increasing complexity of our standards, modernize standards to account for the impact of technology, and carefully consider the demand for the audit of non-financial information. Second, we need to balance the diversity of stakeholder views on a wide range of public interest issues. One of the hallmarks of standard setting is the need to confront diverging views. For example, I take the issue of developing the right type of standards for lesser complex entities (LCEs). This is a hot button issue for many of our stakeholders. Many from the securities regulatory community do not see this project as an urgent priority, while others see it as one of the most pressing needs."

Seidenstein emphasized that the IAASB is in the process of completing a significant phase in its technical work. "Our current and most recent work comprise major standard-setting projects, aimed at improving the fundamentals of audit quality. I am committed to completing this work program. These projects will provide the foundation for future efforts. However, we also need to allow these projects to settle in and be prepared to support their effective implementation. Therefore, I do not see the IAASB replacing the completed projects one-for-one with projects aimed at major rewrites of existing standards. Instead, the IAASB will dedicate more capacity to support more rapid improvements and potentially interpretative activities, as we see the standards put to practice. We also need to turn more of our energies to dealing with the challenges facing audit and assurance standards, including the complexity of our standards, the impact of technology, and emerging issues of public interest, such as fraud and going concern."

Will this be enough? Shields doesn't think so. "There are recent signs that the IAASB is finally starting to develop standards that more appropriately stress the fact that most audits are conducted in a high-tech environment. But the IAASB's standard-setting process is far too slow. I don't think that the IAASB will ever be capable of properly responding on a timely basis to the impact of technology unless it makes fundamental changes to its process."

OIO

## Book Review: *The Disruption Mindset*

*By Jonathan Andrews*

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

"Disruption" may not be the most encouraging of words used in a business book. Organizations spend a great deal of time and resources to avoid anything likely cause a disruption. But, once into Charlene Li's *The Disruption Mindset*, the reader sees a positive, constructive, and disciplined side to "disruption."

Charlene Li, a graduate of Harvard College and Harvard Business School, is an author of five business books, one of which was a *New York Times* bestseller. Over the years, Li has observed several large organizations, such as Adobe, ING Bank, Nokia, Southern New Hampshire University and T-Mobile; the experiences gained have formed the basis for her sixth book: *The Disruption Mindset*, published by Ideapress Publishing in 2019.

Disruption in business is commonly based on the fragmentation of existing markets and the creation of new markets. This is achieved by introducing new products and services. At the outset, the author states her belief that many companies approach disruption the wrong way – she believes they have approached it backwards. Instead of disruption creating growth, i.e., by introducing new products and services, the author argues that growth should create disruption – this is the primary focus of the book.

*The Disruption Mindset* covers 198 pages, includes examples, effective quotes, case studies and has an introduction, six chapters and a conclusion.

**Introduction**

The author explains that disruption is far from straightforward. It's not simply a matter of introducing a new product at the right time, using the right strategy. Disruptive "transformation" of business requires transforming the whole organization and its culture, beginning with the mindset of the management team.

The author opines that three elements of disruptive transformation are:

1. Developing a strategy that is inspired by future customers.
2. Establishing a leadership that creates a movement of disruptors.
3. Creating a culture that thrives on disruption.

**Chapter 1**: "The Simple Secret of Successful Disruptive Strategies" reveals that disruptive strategies are based on just one thing – future customers. This may seem overly simplistic but, effectively rooting such an idea in reality, the author describes how T-Mobile and Facebook made it happen. Careful to draw attention to potential complications, the author draws

attention to the pitfalls of just focussing on future customers, the most obvious one being the risk of alienating existing ones.

**Chapter 2:** "Preparing for the Big Gulp Moment" draws attention to the need to prepare thoroughly when devising a disruptive transformation strategy. It is referred to as the "Big Gulp" moment! By this time, after rigorous research, buy-in obtained from others and a decision made to "burn the boats," the disruptive transformation can move forward.

**Chapter 3:** "Leading a Disruptive Moment" explains how to lead the organization into the new era of disruptive transformation. For the disruptive growth strategy to succeed, the movement has to understand the attributes of the follower that are needed. (Conversely, an understanding is also necessary of the different followers that are *not* needed, and the dangers of each.) To enable the movement to get underway, there has to be a comprehensive manifesto that results in action (the author goes into the detail of how to create such a manifesto). For the movement to achieve and sustain momentum, a consistent leadership presence is necessary to achieve and sustain momentum.

**Chapter 4:** "Developing Disruptive Leaders" begins with an example of Max Hollein of the Städel Museum in Frankfurt. Funds were needed to finance an essential expansion of the museum's facilities. Despite a sudden reduction in funding at the last minute, he still was able to raise the necessary funds. He achieved this by adopting disruptive transformation strategies in the form of energizing staff and setting audacious goals. Moving from an inspiring example, the author provides a balanced approach to this chapter by providing four archetypes of disruptive leadership that prospective disruptors need to be wary of. Since effective leadership is vital to a disruptive transformation movement, much of this chapter is devoted to the necessary mindset and behaviours of good leaders of disruptive transformation movements.

**Chapter 5:** "Disrupting Your Culture" describes how the execution of a digital transformation strategy can only be executed at a speed that the organizational culture allows. To improve the rate of execution, the underlying beliefs and behaviours that define how work gets done within the organization may need to be shifted. To help with this, the author provides details of the three beliefs necessary for organizations to thrive with disruption and change – openness, agency and action. To illustrate how some organizations transformed themselves, cases are provided for McKinsey, Nokia and Amazon.

**Chapter 6: "**The Flux Culture Operating System" begins with an example of how Microsoft decided to change the way it worked, by re-organizing rival business units in the same groups, effectively replacing divisive politics with teamwork. Moving on, the author refers to an organization's "operating system" – where all the desired disruptive behaviours can become the norm instead of the exception. In the author's view, the "operating system" of the organization consists of Structure (the backbone), Process (the lifeblood) and, finally, Lore (the soul). Each component is fully described. The irony is that for a disruptive transformation to work, a stable, i.e., non-disruptive, foundation of a cultural operating system has to be in place.

**Disruption as a Way of Life**

The book wraps up with the author concluding that the work of a disruptor is never complete. The companies that succeed realize that disruption, leadership and culture are not a short-term solution to a problem – disruption becomes a way of life. To illustrate this, the author describes how Southwest Airlines has been profitable (and disruptive) for 46 consecutive years, an astonishing fact in the airline industry. The author attributes this impressive record to the connection at Southwest Airlines between culture and strategy.

*The Disruption Mindset* is a book of note for organizations with one foot in the present and the other in the future. It is a well-laid out, easy-to-read publication. The author places the subject of business disruption well into perspective, challenging potential misunderstandings, and helps to shine a light into the future.

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