

# BACKGROUND INFORMATION

## VIEW ON THE PRESENTATION

# ETHICS AND TECHNOLOGY; Accounting Profession in the Digital Age

By:

Sola Oyetayo, FCA

[sola@solaoyetayo.com](mailto:sola@solaoyetayo.com)

08022906636

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***“Ethics is knowing the difference between what you have a right to do and what is the right thing to do”***

***- Justice Potter Stewart (1915-1985) US Supreme Court Justice***



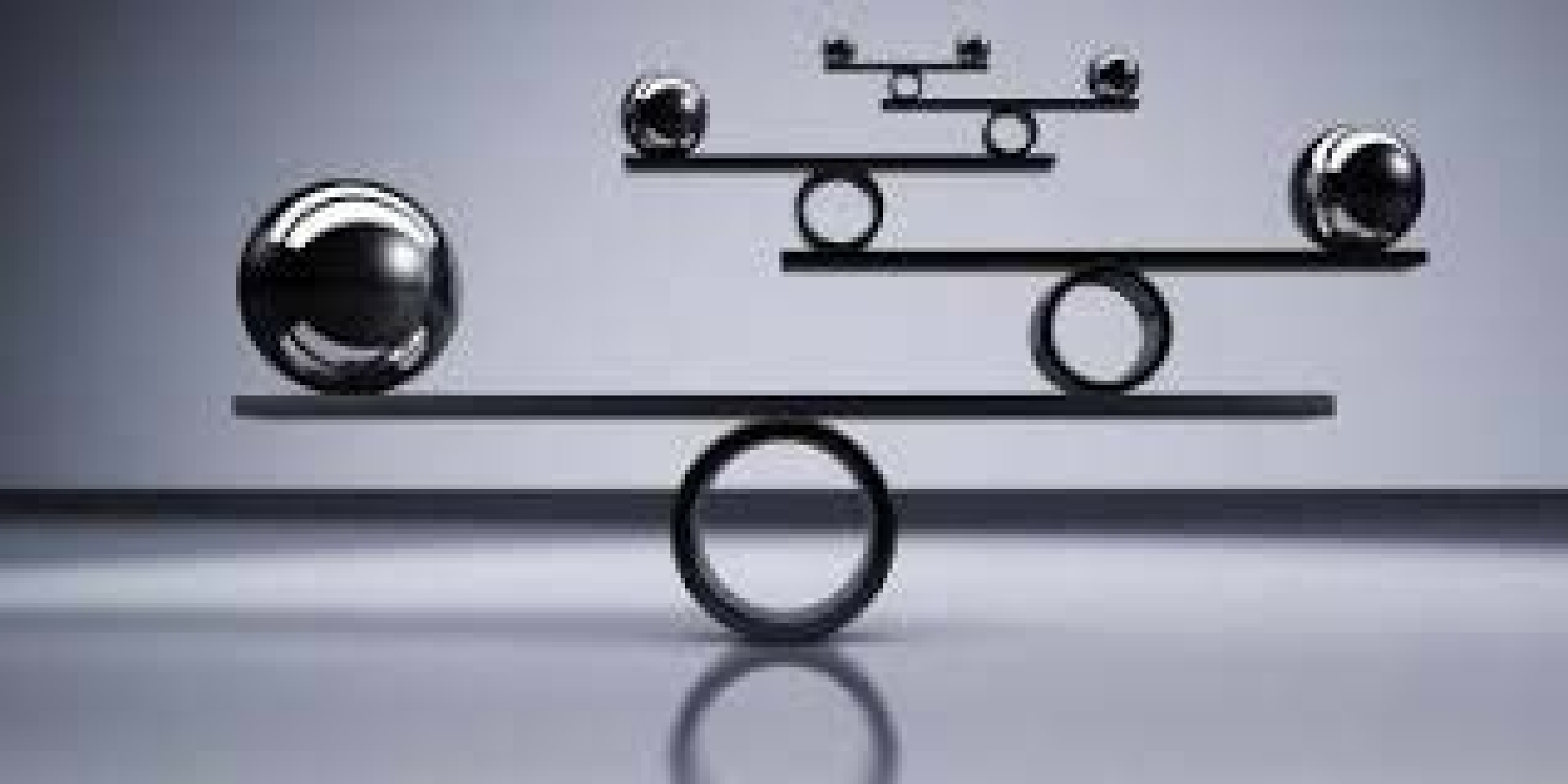
# Introduction

- Ethics also called moral philosophy, the disciplines concerned with that is morally good and bad and morally right and wrong
- A distinguishing mark of the accountancy profession is its acceptance of the responsibility to act in the public interest
- Accounting profession is guided by International Code of Ethics for Professional Accountants by International Ethics Standards Board for Accountant known as IESBA CODE

## The CODE has four parts namely:

- **Part 1:** Complying with the Code, Fundamental Principles and Conceptual Framework
- **Part 2:** Professional Accountants in Business
- **Part 3:** Professional Accountants in Public Practice
- **Part 4:** International Independence Standards:
  - ❖ Independence for Audit and Review Engagements
  - ❖ Independence for Assurance Engagements Other than Audit and Review Engagement

# THE FUNDAMENTAL PRINCIPLES



# There are five fundamental principles of ethics for professional accountants:

- a) Integrity – to be straightforward and honest in all professional and business relationship
- b) Objectivity – not to compromise professional or business judgments because of bias, conflict of interest or undue influence of other
- c) Professional Competence and Due Care – to:
  - i. Attain and maintain professional knowledge and skill at the level required to ensure that a client or employing organisation receives competent professional service, based on current technical and professional standards and relevant legislation; and
  - ii. Act diligently and in accordance with applicable technical and professional standards.
- d) Confidentiality – to respect the confidentiality of information acquired as a result of professional and business relationship
- e) Professional Behaviour – to comply with relevant laws and regulations and avoid any conduct that the professional accountant knows or should know might discredit the profession

**IFAC recognises 5 ethics challenges that will intensify as pandemic wanes.**

**They are:**





# 1. Pressures from an Uneven Economic Recovery: Accountants Must Be Agile Yet Resolutely Committed to the Code of Ethics

The truth of the matter is even when an economy fully reopens, there is likely to be at least 12-18 months more of rebuilding and playing catch-up that still has to occur. During this time of profoundly uneven progression, professional accountants will be under huge strain.

We all face a new reality ahead. The pandemic created myriad opportunities for unethical behaviour. The uneven recovery might breed more of these opportunities. These might arise, for example, from increased estimation uncertainty because previous estimations established during the pandemic will be based on facts or assumptions that might no longer apply.

Agility will be a critical skillset in navigating the uncertain month's and even years ahead. Importantly, while remaining nimble, professional accountants must continue to adhere to the Code, including applying its conceptual framework in these atypical situations.



## 2. Demands for Greater Support and Efficiency: Auditors of financial statements must carefully consider Independence of Familiarity Issues

- Auditors of financial statements must balance a multitude of unexpected variables. Client demands will likely increase and fluctuate widely. Audit firms will be asked to do things, formally and informally, to support and advise their clients. It's imperative that auditors continue to acknowledge that the provision of a non-assurance service to an audit client, including advice or recommendations, might create independence issues and heighten ethics pressures.
- The ethical responsibility to comply with the Code's fundamental principles of integrity, objectivity, professional competence and due care, as well as professional behaviour must remain top of mind

- For professional accountants to maintain the highest standards of ethical conduct, and where applicable, be independent, they must remain alert to new information and changes in facts and circumstances. For example, think about public companies that link the finance team's compensation to the organization's performance. In such instances—especially at a time when these companies might be struggling financially—professional accountants (both in business and in public practice) must be keenly attuned to what motivates management, and how these motivations might bias key performance factors or indicators such as revenue forecasting, assumptions and estimates

### 3. Risks Regarding Rapid Digitalisation; Accountants Must be Alert to Cyber Crime

- The rapid speed of digitalization and tech adoption has raised questions about how accountants and firms are to identify, evaluate and address threats to compliance with the fundamental principles and independence that might be created by the development, use and implementation of technology. In Australia alone, 79% of small and medium businesses say they are expanding software purchases for a more digital future, according to a Gartner study. Nearly half say digital solutions upgrades are happening as a direct result of the pandemic. Even under the best circumstances, the acceleration of digital transformation presents risks. In crisis circumstances, those risks increase exponentially.

The pandemic saw cybercrimes and fraud increase globally as unusual and remote circumstances were taken advantage of and new ways to exploit a broader and deeper range of organizations and individuals were found.

In the U.S., cybercrime reports nearly doubled in 2020, according to the Federal Bureau of Investigation. The U.K. saw at least a 30% increase. In parts of Latin America, cybercrimes spiked 60% in the early months of COVID when compared to the same period in 2019. This stark trend is unlikely to abate during the recovery phase, highlighting the continuing challenges to adhering to the fundamental principles of integrity, objectivity, professional competence and due care and confidentiality, especially as companies might have skipped steps or cut corners on cyber security and related measures to keep doing business in the remote environment. Professional accountants and firms should consider whether circumstances may warrant the use of specialists during this time to assist in identifying, evaluating and addressing new risks, such as cyber threats.





The profession will need to further invest in professional competencies regarding technology and information systems. Related to that are concerns around capabilities and learning for new talent, who might be at a disadvantage stemming from a lack of in-person interaction with more senior colleagues.



## 4. Burnout and Mental Health of Teams and Talent: Accountants must strive for resiliency and solutions

There is growing concern around mental wellness and the state of mind that is required to think critically, rather than just accept information at face value. More than a year into the pandemic, individuals are under immense stress and many are suffering emotionally. In 2020, various studies showed that many adults in jobs that did not normally require them to work outside of their homes reported symptoms of depression and anxiety.





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The accountancy profession must be cognizant of the mindfulness required to act competently, with integrity and due care, and to be objective in exercising judgments without being compromised by bias. As such, professional accountants must be conscious of issues colleagues could be facing—and not talking about—that might impact judgments and ethical decision making.

## 5. PREDISPOSITION TO FOCUS ON THE PAST: Accountants must recognise the shift and focus on the future



One of the biggest challenges professional accountants face amidst the pandemic recovery will be continuing to seek out a better understanding of the issues that still lie ahead and what the ethics consequences of them might be. For example, the pace of digital transformation and use of technology such as machine learning automation in products and services has been unprecedented. In addition to the challenges related to cyber security and fraud mentioned above, it is imperative that the profession stay on top of responsible automation.

***“Aim above morality. Be not simply good: be good  
for something”***

***- Henry David Thoreau (1817-1962) American Poet***



# IMPACT OF TECHNOLOGY ON THE ACCOUNTING PROFESSION

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Accountants have always exploited emerging technologies to help them to complete their tasks more accurately, quickly or simply from the incised clay tablets of the Sumerian scribes, through the adding machines of the 19<sup>th</sup> century, to the calculators and computers of the 20<sup>th</sup> Century.

The accounting profession is rapidly transforming partially due to productivity optimisation available through newer technologies.

The role shift of the modern accountant to a business advisor requires new skill-sets, including professional scepticism, judgment and critical thinking skills.

# MOBILITY

People are increasingly interconnected in their personal and professional lives and recent tablet and smartphone incarnations, fonepads and phablets, have potential to enhance communications connectivity.



Accountants are increasingly dependent on their mobile devices to access data. Mobile connectivity also bridges accountants and their clients. Companies like Xero are helping to launch the mobile age of accounting. Their mobile apps help accounting firms manage their business while on-the-move. Firms can reconcile, send invoices, add receipts and create expense claims from smartphones or tablets.

Accountants are exploiting mobile technologies to deliver productivity and efficiency gains, bring businesses close to their clients, and stay connected to them whether they are in the office or travelling.

Numerous mobile devices are being combined with cloud services to provide anywhere anytime access to specialist software and the associated business and finance data.

Business and practices are developing their own mobile device applications to attract publicity and new clients and to better service existing customers.

# CLOUD



The internet has evolved from a platform that connect millions of computers, into the network of interactive computing platforms now know as 'the cloud'. It can deliver IT resources (such as software applications, computing power and data storage) flexibly and efficiently online, as a service.



These resources can be scaled up and down to meet demand, and accessed anytime, anywhere, from fixed and mobile devices.

This opens up a new way for accountants to work with their clients. Now, there is more time to engage with the client and focus on business strategy instead of getting burdened with detailed processes.

Accounting systems were among the first software to become available online where they (and their associated data) have been joined by a growing range of business 'software as a service' (SaaS). From budgeting to spreadsheets.



# SOCIAL COLLABORATION

Social media has come a long way in the 20 years that have passed since people first started using the internet to create, share and exchange information and ideas, but the biggest changes have emerged over the past few years



Social media has become an essential tool for firms wanting to engage with their current and potential clients while expanding their brand reach.

Accountants will need to embrace the rapid advances in accounting technology if they want to remain relevant in the accountant industry. This includes staying up-to-date with technologies trends, optimising and adapting current accounting software to meet the needs of their firm, and being open to acceptance and learning advancing technologies

The professional lives of accountants are being reshaped by social collaboration and the new possibilities it create. Crowdsourcing is being used to accelerate and improve the development of products and services, and crowdfunding is bringing starts-ups and project together with sources of finance. The US Securities and Exchange Commission recently announced that social media outlets such as Facebook and Twitter can be used to make disclosures to investors as long as they have previously been advised that this is a possibility. Social tools are being integrated into systems such as customer relationship management and enterprise resource planning to provide new ways for finance to collaborate with its 'customers' in other parts of the enterprise and outside it.



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# DIGITAL SERVICE DELIVERY

Digital services are transforming business, practice, central and local government, charities and other third sector organisations, by exploiting new IT architectures and technologies to deliver web-based business processes, e-commerce, and cloud-based software and services using the internet and intranets. Many digital services include key features such as self-help and self assessment solutions for service users, and use technologies such as chat bots to handle initial enquiries and requests for support (rather than, or in addition to email), offer interactive live chat from websites and portals, and communicate using social medial channels such as Facebook and Twitter.

Accountants are using digital services to provide resources and to access resources. Accountancy practices are offering self-service features, such as online data vaults that clients can use to access statutory and management reports and other material the firm has worked on. Banking, shopping, booking flights and more is being made more efficient for customers and more cost-effective for providers. Regulatory services are increasingly delivered digitally: the eXtensible Business Reporting Language (XBRL) is being exploited to streamline and automate processes by regulators.

The SEC has just registered the first Fintech- Digital Broker called Chaka.



# BIG DATA

The world creates 2.5 quintillion ( $10^{18}$ ) bytes of data each day in the form of barcodes, phone signals, digital images, transactional databases, personal location records, statutory reporting systems, online searches, radio-frequency identification tags, social data, video clips, website visits, and more.

Converging technology trends, the shift from analogue to digital, widespread mobile device adoption, internet-connected systems and 'exhaust data' from physical objects (the internet of things) are constantly creating vast amounts of structured and unstructured data. The ability to collate, manage and analyse it effectively can lead to better decisions and generate a competitive advantage for business, and the technology to do this is becoming more accessible and affordable.



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Amazon, IBM and Google are among the organisations using big data to business advantage by targeting sales efforts and personalising products, driving efficiency and quality, and producing higher levels of customer satisfaction and experience. Researchers are exploiting big data in aerospace, broadcast, genetics, manufacturing, retail and transport. Vendors of software for business intelligence, enterprise resource planning, sales management and more are adding the capability to analyse vast amounts of data ‘in-memory’, and cloud-based platforms are emerging to provide on-demand access to the tools that organisations and individuals need to tap into the ‘internet of things’ and unlock the power of big data.

# PAYMENT SYSTEM



The internet has become both a centre and a platform for commerce and this is reshaping payment systems across the world. Changes include moves to phase out cheques and a decline in the rate at which the use of credit and debit cards increases. But the most significant change to payment systems has been the rise of electronic banking – and numerous associated payment platforms. Services offered by traditional banks are increasingly accessed online from internet-connected fixed and mobile devices; statutory payments must increasingly be made electronically; payment options using mobile phones are proliferating; businesses and consumers have a myriad of ways to make and accept payments for goods and services.



E-commerce features are increasingly being built into software and e-banking is following: even entry-level accounting systems now automate links with bank accounts. Consumers and businesses are exploiting pre-paid smart cards and mobile phones as 'electronic wallets'. Affordable access to mobile phones has enabled new players to introduce m-banking services in developing economies. Alternative online payment platforms are using virtual currencies such as Bitcoin

Not all emerging 'financial services' are regulated: governments have been slow to act.

The world has become reliant on computers and digital personal and business information. This has exposed individuals, organisations and entire countries to significant threats, and these must be managed as new forms of cyber-terrorism, cyber-crime and cyber-fraud that are emerging. With products and services increasingly provided, sourced and accessed online, the security of sensitive personal and corporate data and systems is vital if cyber attacks are not to damage operations and reputations. Theft of digital information has become the most commonly reported fraud, surpassing physical theft, and recent research indicates that the relative insecurity of small and medium-sized enterprises is making them a growing focus for cyber attacks.

# CYBER SECURITY

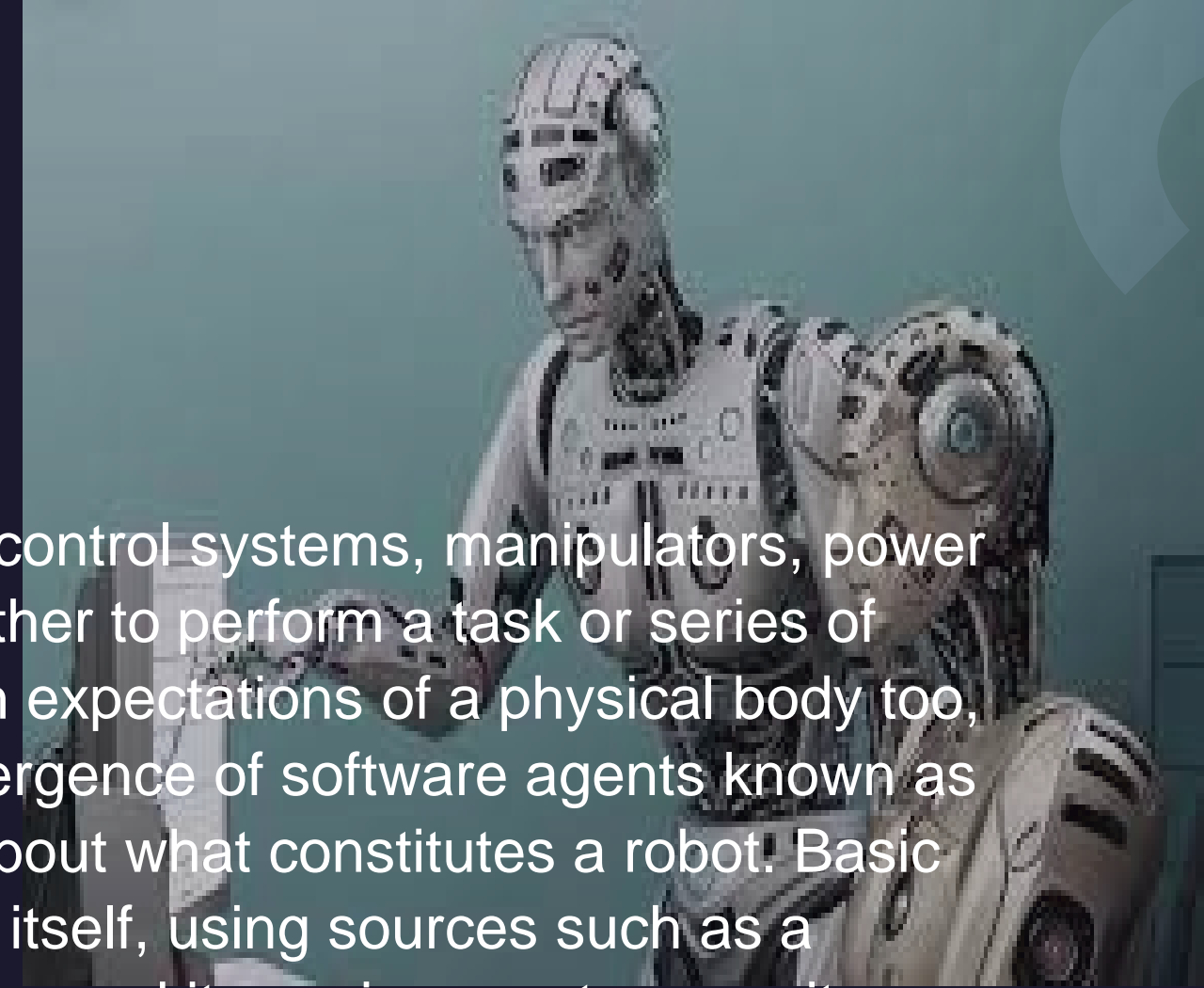


As internet use has increased, the tools to manage cyber security and to protect against deliberate attacks and accidental loss of data have become widely available – and affordable. Those at risk have boosted spending on cyber security and introduced policies and procedures, but these must be regularly reviewed to ensure their effectiveness against new threats. Large organisations were more likely to take steps to mitigate cyber-crime risks, and initiatives appear to be prompted by a feeling that risks are becoming more plentiful, threatening and costly.

Ransomware : Major issue : Colonial Pipeline and JBS Attacks.  
Impending War between US and Russia- likely cause Digital Attacks.

# ROBOTICS

A robot is a system that contains sensors, control systems, manipulators, power supplies and software, which all work together to perform a task or series of tasks. Science fiction has equipped us with expectations of a physical body too, and many robots do have one, but the emergence of software agents known as 'bots' has created some room for debate about what constitutes a robot! Basic characteristics include the ability to: power itself, using sources such as a battery, light, electricity and biofuel; move around its environment; sense its surroundings; digest information and make decisions.



Forget the androids in Terminator and Star Wars. Being humanoid in appearance or behaviour is not necessarily helpful to the vast majority of robots, which are being designed and used to do work that is too boring, dangerous, or demanding for humans, and work that requires levels of precision and consistency of standards that are beyond most people. As they have become more cost-effective the use of robots has become commonplace in industries ranging from medicine and manufacturing to structural engineering and space exploration. Online 'bots' are being used to offer advice on finance, pensions, and insurance.

# AUGMENTED VIRTUAL REALITY

Reality is not what it was. Augmented reality (AR) can enhance our perceptions of the real environment by overlaying images of it with sensory input such as sound, graphical overlays, video and various other types of data. Technology can also simulate our physical presence in virtual reality (VR) worlds where we can interact online: some of our experiences of virtual worlds can be largely visual and aural with simple interfaces such as keyboard, mouse and headphones, or they can be much more immersive, using devices such as wired gloves and head-mounted displays to overlay and augment our perceptions.



Nanotechnology is being used to make tiny objects (100 millionth of a millimetre or less) that can augment reality: such as contact lenses with overlays and a Braille keyboard with refreshable soft cells that will improve interaction with computers. Apple is among those developing technology to make our mobile use of AR more interactive. VR has become essential in industries such as automotive, oil and gas, to the visualisation of complex processes. Accountants are using the virtual world Second Life to recruit trainees, attract clients and develop new lines of business, and holding meetings in online role-playing games such as World of Warcraft.

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# ARTIFICIAL INTELLIGENCE



Artificial Intelligence is automating complex and repetitive tasks and processes, with extreme accuracy, reducing operating costs and increasing efficiency. These are some of the emerging technologies supporting the transitional role of today's accountant into a more critical thinking role.



Artificial intelligence (AI) describes a machine or software that can demonstrate behaviour indistinguishable from that of the human brain. This is not yet possible but there are many examples of software that can demonstrate limited 'intelligence' (depending on how you define this). Most of us have used software that can emulate the decision-making processes of an expert: lots of software now has expert knowledge built in and the capacity to 'learn' how to improve its own processes and performance. The internet is awash with software agents (bots) that mimic human behaviour as they make independent decisions, learn and interact with each other.



Accountants increasingly rely on the expert knowledge built into software in a range of scenarios. Auditors use smart software to automate parts of the auditing process, and there are other specialist applications to help with compliance in areas ranging from financial reporting to international tax. E-commerce businesses are using AI chat bots to gain attention, engage users, and to act as sales people, as well as FAQs and support agents: the bots use sophisticated algorithms to interpret natural language questions and then deliver answers using online chat or computer-generated voice – they even integrate back into accounting, CRM, and inventory systems.

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# WHAT FUTURE HOLDS FOR YOU WITH TECHNOLOGY

\* AUTOMATION

\* TRANSFORMATION

\* UPSKILLING

\* SPECIALISATION

\* UPGRADE TO ACA

\* NEW ROLE/FUNCTIONS

\* AGILITY

\* EMBRACE TECHNOLOGY



# CONCLUSION

“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change”.

– Charles Darwin | English Naturalist and Geologist

# REFERENCES

- IFAC: Building Trust & Ethics
- CPA: Ways Technology Is Transforming Accounting
- ACCA: Technology Trends

*Thank  
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