**ACCA Advocates: Machine Learning speech**

**SLIDE 1**

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**SLIDE 2**

**Introduction: Introduce yourself and your role/ title.**

I qualified as a Professional Accountant in [year] and ever since, I have been a passionate advocate for the accountancy profession, for my professional body ACCA, and for the opportunities it has given me.

ACCA has enabled me to have a great career and it’s really important for me to do what I can to give back.

One of the ways I can do this is by talking about the big issues that are changing our world and how we work and live, such as digital and technology.

Digital is arguably the biggest factor shaping the future of the profession and the roles members perform now and  in the future.

There are many different technologies impacting the profession: automation, robotics, cloud, cyber, social, AI and blockchain.

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**SLIDE 3**

So I’m here today to demystify the hype around Artificial Intelligence – AI, and to be an advocate for ACCA’s work in this area.

I’ll do this by posing the following questions which I hope will get you all thinking about AI and what it means to you:

* What is AI?
* Why does it matter to the profession?
* Can we trust AI and machine learning?
* AI and acting in the public interest: who is accountable?
* Is AI and machine learning a threat to the accountancy profession?
* How can we and do we prepare for this future?

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**SLIDE 4**

And I’ll be answering today’s questions with examples from our newly published report called *Machine learning: more science than fiction*.

The report explains really clearly what AI is, and how it relates to the business world and the profession. It cuts through the hype to reveal the tremendous opportunities this area has for our profession, and why emotional intelligence and ethical judgment remain vital.

Let’s set the scene.

As a professional body, ACCA has a keen interest in how tech is impacting the profession, and how it will continue to do so in the future.

This is something we can’t avoid. And neither should we, because the digital world is now part of the accountant’s world.

This world is one of constant change.

Perhaps nowhere has this pace of change been faster than with tech. 2019 is the 30th anniversary of the worldwide web, and we are entering the fifth generation of mobile technology. These things are now pervasive. I am sure that most of you right here and now will be connected and communicating while at this event.

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**SLIDE 5**

What is AI? What is machine learning?

AI is in the public consciousness and it has been for a long time. It was a phrase coined some 63 years ago in 1956.

AI itself is an encompassing term that embraces a number of technological advances.

There are various terms that are sometimes used to describe AI and advanced computing capabilities – things as machine learning, deep learning, natural language processing, AI, data analytics and robotic process automation. Some, but not all of these may qualify as being artificial intelligence.

One way to describe AI is the ability of machines to exhibit human-like capabilities – thinking, understanding, reasoning, or perception.

And to delve a little deeper, we also have ‘weak AI’ – such as Siri or Alexa - that are narrow in focus; and we have ‘strong AI’ - which is more problem solving and what I want to address today.

Machine learning is a subset of AI that’s generally understood as the ability of the system to make predictions or decisions based on the analysis of a large historical dataset.

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**SLIDE 6**

So why does this matter to the profession?

*Embracing the capabilities of machine learning may not just be about competitive advantage; it could be about necessity.*

And this matters, because AI and machine learning can add value to the work accountants do. It can help generate valuable insights to help with business decision-making, it can detect fraud, assess risks, understand complexities in taxation and create more effective non-financial reporting.

The capabilities that machine learning offers could assist the work of professional accountants in various ways – especially with interpreting and communicating data.

The profession needs to understand how AI and machine learning works, as it also influences the trust we have in the decisions of these systems and the contexts within which they operate.

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**SLIDE 7**

It also matters to the profession because with machine learning, ethical considerations are never far away.

Professional accountants need to consider and manage the potential risks that come from making decisions by algorithm.

With machine learning there is a risk of unintended consequences. But there are also opportunities ahead when professional accountants develop a core understanding of these types of emerging technologies, for example the profession can truly benefit from the ability of machine learning to support them with intelligent analysis of vast amounts of data.

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**SLIDE 8**

Can we trust AI and machine learning?

Machine learning is a powerful tool with huge potential, because it encompasses a staggering range of applications – recommendation search engines, fraud identification, detecting and predicting machine failure, optimising options-trading strategies, diagnosing health conditions, speech recognition and translation, enabling conversations with chat-bots, image recognition and classification, spam detection, predicting everything from how likely someone is to click on an advertisement, to how many new patients a hospital will admit, through to autonomous vehicles.

While professional accountants may not need to develop machine learning algorithms themselves, they do need to have a sense of what they are dealing with.

We have to trust the data, and trust the tech. Accountants need to have the ability to have a view on whether one can trust the decisions of these systems and the contexts within which they operate. Ethical decision making is necessary.

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**SLIDE 9**

Acting in the public interest: who is accountable?

There are ethical dimensions to AI and machine learning, for example the issue of ‘who is accountable?!’ for decisions based on machine learning, and recognising and managing bias based on the data that feeds algorithms. This is an issue which could take up a whole other speech, but thankfully our excellent report covers this area in detail.

But we need to address this question here and now because technology raises issues about public good and public value.

Professional accountants, particularly if operating within a commercial environment, may find themselves being pulled in different directions as a result.

Machine learning has the potential to create unintended consequences which can compromise innocent stakeholders whether or not they are directly connected to the technology being employed.

When it comes to accountability, there may be wider questions beyond individual or company liability - autonomous vehicles are a very current example.

And on the hype surrounding AI, data irregularities and the consequent potential to deceive the public - which includes fee paying customers - with false promises could create modern day versions of age old scamming opportunities.

Disclosure and the level of transparency can have implications for wider public interest considerations.

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**SLIDE 10**

Are AI and machine learning threats to our profession?

I’m going to say a firm **NO.**

But we can’t ignore claims that have said POSSIBLY, MAYBE and EVEN YES.

Academics - and even the Governor of the Bank of England Mark Carney - have said technology is a threat to the professions.

But ACCA sees tech as a huge opportunity for the profession.

Technical and ethical skills will always matter for the accountancy profession. But now there are prospects for the profession use their strategic advice and guidance alongside technology to truly leverage the power of digital.

Accountants have many tools at hand to do this – AI, accounting software, automation and robotics, and big data.

Even sophisticated tech like AI cannot replicate the full understanding and integrated thinking of which people are capable. Tech can’t build client relationships or lead successful teams. Tech doesn’t have emotional intelligence or ethical judgment.

There isn’t - currently - the evidence to suggest that human oversight can be done away with completely. But we can’t be complacent and we need to prepare for the future ahead.

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**SLIDE 11**

How do we prepare for this future? Through what could be called the preparation equation.

A significant part of the preparation equation is education, skills and training.

We need to develop and nurture new skills in a machine learning environment. And professional accountants need an appreciation of how machine learning can affect their people and their organisations.

A few years ago, ACCA undertook a major research project called *Professional Accountants - the future*. This defined the four key drivers of change ahead – increased regulation and stronger governance; continued globalisation; higher expectations of business value and yes - advances in digital technology.

It’s these four things that are creating significant changes over the next decade and beyond for the profession.

This research helped us evolve the ACCA Qualification so that it ensures our trainees are work ready, who can be the strategic leaders who can use technology for its benefits and insights.

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**SLIDE 12**

So ACCA is preparing students for the digital age through its gold standard qualification.

Although digital is already examined, the digital content is being enhanced across many of the exams to keep students ahead.

As you can see from this slide, there is extensive coverage of digital topics across ACCA’s Strategic Professional exams – this means the qualification covers all relevant aspects of technology.

What this does is give students the knowledge needed to understand financial systems, blockchain, data analytics and their impact on finance departments.

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**SLIDE 13**

ACCA will always cover the technologies that keep ACCA students and members like me at the forefront of their profession.

Because digital is a vital professional quotient, the ACCA Qualification ensures that students are developed and assessed in digital issues from the very beginning of their journey all the way to membership and beyond.

It’s not just the digital content of the ACCA Qualification that’s being enhanced, it’s the way ACCA delivers exams too. Computer based exams (CBEs) now include Applied Skills variant exams and ACCA is also planning the introduction of CBEs for its Strategic Professional exams, starting March 2020.

But what about me? What do members get? To enhance the wider professional skills of ACCA members like me, ACCA is also introducing a new Data Analytics unit into its Ethics and Professional Skills module.

Two new technical performance objectives have been added to the Practical Experience Requirements (PER): advisory services and data analytics. And ACCA is keeping the emphasis on the use of technologies in achieving PER by updating the wording of the performance objectives.

And for members like me, ACCA ensures that the CPD I undertake on an annual basis includes a range of CPD opportunities, professional insights research on digital issues, and other resources such as events and coverage in our publications.

And I’m really proud that ACCA has forged close working relationships with key tech partners such as Xero and Alibaba – here is ACCA signing an agreement with Xero recently.

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**SLIDE 14: Conclusion**

Professional accountants need to remain engaged in tech developments as AI and its component parts evolve. I’ve made a commitment to do so myself.

While some may want to delve deeper into the mechanics behind AI, this may be less appropriate for other roles.

At a minimum, all finance professionals should keep an awareness of how AI is evolving and be alert to how developments could overlap with their role. This is a basic level need that I feel we all need to embrace.

This can range from how their job can incorporate AI to be more efficient and serve clients better; through to identifying how AI is being adopted and utilised by their clients.

The discussions around machine learning and AI will continue. It’s a topic that will only grow in relevance. Some will embrace it. Others will fear it. But only the reckless will avoid finding out more about it.

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This is a truly transformative time, and one which we know offers many opportunities ahead for the profession to continue to add strategic value. The challenges and the opportunities ahead are about how the profession uses technology to be the strategic leaders who are trusted and in demand, the experts who can balance the digital world with the real one.

It is about balance. And my view is that if there is one profession who can get this balance right, and really embrace the true power of digital, it’s accountancy.

**(MOVE ONTO QUESTIONS IF THERE IS TIME)**

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**SLIDE 16 = QUESTIONS**

**SLIDE 17 = CLOSING SLIDE**

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**1800 WORDS = 15 minutes approx**